

41st International Symposium on Combustion

Technical Program Presentation Schedule

Oral Presentation Key:
Day-Room-Presentation Number

Examples:
1-A-01
Monday-Room A-Presentation 1

2-C1-03
Tuesday-Room C1-Presentation 3

Poster Presentation Key:
Day-Colloquium-Poster Number #Position Number

Examples:
1-01-01 #001
Monday- Fundamental Processes: Chemical Kinetics -Poster 1 #
Position Number (1)

2-08-03 #132
Tuesday- Enabling Models, Methods, Tools & Technology: Numerical
techniques -Poster 3 # Position Number (132)

Week at a Glance

Opening Ceremony Hottel Lecture W. H. Green 08:30-10:00		Plenary Lecture J. Kasahara 9:00-10:00		Plenary Lecture Z. Chen 9:00-10:00		Plenary Lecture B. Cuenot 9:00-10:00		Plenary Lecture A. Trouve 9:00-10:00	
Coffee Break/WiPP 10:00-10:30		Coffee Break/WiPP 10:00-10:30		Coffee Break/WiPP 10:00-10:30		Coffee Break/WiPP 10:00-10:30		Coffee Break/WiPP 10:00-10:30	
Poster Paper Session Event Hall 10:30-12:20		Poster Paper Session Event Hall 10:30-12:20		Poster Paper Session Event Hall 10:30-12:20		Poster Paper Session Event Hall 10:30-12:20		Oral Paper Sessions 10:30-12:30	Wildfires and Fires in Wildland Urban Interfaces
Lunch Break 12:20-13:40		Lunch Break 12:20-13:40 Women in Combustion Lunch		Lunch Break 12:20-13:40		Lunch Break 12:20-13:40		Lunch Break 12.30-13:40	
Oral Paper Sessions 13:40-15:40	Topical Review C. Hasse	Oral Paper Sessions 13:40-15:40	Topical Review A. Poludnenko	Excursion		Oral Paper Sessions 13:40-15:40	Top Review A. Parente, S. Deng, Z. Chen	Oral Paper Sessions 13:40-15:40	Topical Review X. Huang
	Future Fuels for Energy Conversion		Advances in Detonative Propulsion				AI & ML for Combustion		Wildfires and Fires in Wildland Urban Interfaces
Coffee Break 15:40-16:10/WiPP		Coffee Break 15:40-16:10/WiPP				Coffee Break 15:40-16:10/WiPP		Coffee Break 15:40-16:10/WiPP	
Oral Paper Sessions 16:10-17:50	Future Fuels for Energy Conversion	Oral Paper Sessions 16:10-17:50	Advances in Detonative Propulsion			Oral Paper Sessions 16:10-17:50	AI & ML for Combustion	Oral Paper Sessions 16:10-17:30	
ECRM		Fireworks/Reception				Awards Banquet		Farewell Reception	

Minisymposia at the 41st International Symposium on Combustion

Main Hall

At the 41st ISOC, we are introducing a new format for discussing emerging topics in combustion research: focused minisymposia. Each event will take place alongside oral sessions, with four topics planned for this edition.

The topics for the Kyoto conference are a) Future fuels; b) Detonative propulsion; c) AI & ML in combustion science; and d) Wildfires and fires in wildland-urban interface. Each topic is planned by two or more organizers, invited by the PCCs to formulate the discussion in any form they see fit. As a result, each topic will have a slightly different format, focus of discussion, and number of participants.

Mini-Symposium on Future Fuels for Energy Conversion

Monday, 27 July 2026

Organizers

Paul Papas (RTX Technology Research Center, USA)

Mara de Joannon (Institute of Science and Technology for Sustainable Energy & Mobility, Italy)

Invited Speakers

Toshiro Fujimori (IHI Corporation; Japan)

Keith McManus (GE Aerospace; USA)

Stephen Dooley (Trinity College Dublin; Ireland)

Christine Rousselle (University of Orléans; France)

Johan Hult (Everllence; Denmark)

Hikaru Katano (Mitsubishi Heavy Industries; Japan)

Panelists

Jacqueline Chen (Sandia National Laboratories, USA) - Panel Moderator

Agustin Valera Medina (Cardiff University, UK) - Panel Moderator

Ghenadie Bulat (Siemens Energy; UK)

Johan Hult (Everllence; Denmark)

Keith McManus (GE Aerospace; USA)

Cheng Yibing (Foshan Xianhu Laboratory; China)

Abstract

The Future Fuels for Energy Conversion Mini-Symposium, to be held on July 27, 2026, during the 41st International Symposium on Combustion in Kyoto, Japan, aims to provide a focused forum for advancing the understanding and application of emerging fuels in practical energy conversion systems. As global energy demands grow alongside the need to reduce carbon emissions, future fuels such as hydrogen, ammonia, synthetic fuels (including sustainable aviation fuels, SAF), and metal fuels are increasingly viewed as critical solutions for hard-to-electrify sectors, including transportation, power generation, and industrial heating.

The objectives of the mini-symposium are to identify key scientific and technical challenges, highlight recent advances in combustion science and technology, and foster dialogue among academia, industry, and government. Through invited presentations and panel discussions, the

mini-symposium seeks to define research needs and future directions that support the deployment of future fuels in commercial energy systems.

Key Highlights: Presentations by leading experts in the field; interactive panel discussions on science relevant to applications and future directions for industry; networking opportunities with peers. The mini-symposium will be open to all participants at the 41st International Symposium on Combustion.

Program

13:40 – 14:20 Topical Review: Christian Hasse (TU-Darmstadt)

"Emerging Energy Carriers with focus on Metal Combustion"

14:20 – 14:25 Opening Remarks

14:25 – 14:45 Toshiro Fujimori (IHI Corporation; Japan)

"Ammonia Power Generation Technology Development and Challenges in Combustion Technology"

14:45 – 15:05 Keith McManus (GE Aerospace; USA)

"Gas Turbine Fuels – Current and Future Trends"

15:05 – 15:25 Christine Rousselle (University of Orléans; France)

"Hydrogen and Ammonia Challenges for Application in Internal Combustion Engines"

15:25 – 15:45 Johan Hult (Everllence; Denmark)

"Future Fuels in the Marine Industry"

15:45 – 16:10 Coffee Break

16:10 – 16:30 Stephen Dooley (Trinity College Dublin; Ireland)

"Challenges in the OEM Qualification of New Synthetic Aviation Turbine Fuels"

16:30 – 16:50 Hikaru Katano (Mitsubishi Heavy Industries; Japan)

"Carbon Neutral Technologies for Gas Turbines"

16:50 – 17:20 Panel Session #1 (Transportation: IC engines, Marine, Aviation)

Moderator: Agustin Valera Medina (Cardiff University; UK)

Panelists:

Jacqueline Chen (Sandia National Laboratories)

Johan Hult (Everllence; Denmark)

Keith McManus (GE Aerospace Research; USA)

17:20 – 17:50 Panel Session #2 (Large Power Generation & Heating)

Moderator: Jacqueline Chen (Sandia National Laboratories; USA)

Panelists:

Ghenadie Bulat (Siemens Energy; UK)

Agustin Valera-Medina (Cardiff University; UK)

Cheng Yibing (Foshan Xianhu Laboratory; China)

17:50 – 17:55 Concluding Remarks

Fundamental Challenges and Applications of Detonative Propulsion Systems

Tuesday, 28 July 2026

Organizers

Jason Burr, Air Force Research Laboratory, USA

Jonathan Sosa, Naval Research Laboratory, USA

Abstract

This Mini Symposium aims to provide a focused forum on the advancement of detonative-based propulsion systems. With a growing need for revolutionary gains in thermal efficiency and performance beyond the limits of current technology, propulsion concepts based on detonation, such as Rotating, Pulse, and Oblique Detonation Engines, offer a transformative pathway for the future of aerospace travel and power generation.

Through invited talks and panel discussions, this session will gather leading experts to define the fundamental challenges, identify promising research opportunities, and discuss the practical applications of these systems. The goal is to establish a clear roadmap of the research and development required to mature detonation-based technologies for deployment in next-generation propulsion and energy systems.

Program

13:40 – 14:20 Topical lecture: Relating high-speed flow and detonations

Presenter: Alexei Poludnenko, UConn

30 minutes talk + 10 minutes Q&A

14:20 – 14:25 Transition from podium to panel-style seating

14:30 – 15:10 Panel Discussion: Applications of Detonation Engines

Moderator: Jon Sosa, Naval Research Laboratory, USA

14:25 – 14:35 “RDRE Development at AFRL: Harnessing Detonations for Propulsion”, Jason Burr, Air Force Research Laboratory, USA

14:35 – 14:45 “RDEs – Overcoming Lab to Field Challenges”, Kapil Singh, GE Aerospace Research, USA

14:45 – 14:55 “Toward Predictive Rotating Detonation Gas Turbines: From Observation to Understanding”, Myles Bohon, TU Berlin, Germany

14:55 – 15:10 “State of Detonative Propulsion”, Greg Meholic, Aerospace Corp., USA

15:10 – 15:40 Panel Discussion on Applications & Current Status

15:40 – 16:10 Coffee Break

16:10 – 17:10 Panel Discussion: Fundamental Research Challenges and Needs

Moderator: Jason Burr, Air Force Research Laboratory, USA

16:10 – 16:22 “Diagnostics for detonations: Recent advancements and future needs”, Aaron Skiba, Air Force Research Laboratory, USA

16:22 – 16:34 “Theoretical advances in RDEs”, Ken Matsuoka, Nagoya University, Japan

16:34 – 16:46 “What equilibrium misses in multiphase detonation”, Nick Kateris, Imperial College, UK

16:46 – 16:58 “Modeling and experimental advances for detonative propulsion”, Jeong-Yeol Choi, Pusan National University, South Korea

16:58 – 17:10 “Fundamental studies in detonations”, Rachel Hytovick, University of Central Florida, USA

17:10 – 17:50 Panel Discussion on Research Challenges and Needs

AI and Machine Learning in Combustion Science

Thursday, 30 July 2026

Organizers

Alessandro Parente (ULB, Belgium)

Sili Deng (MIT, USA)

Zhi Chen (PKU, China)

Panel Participants

Karthik Duraisamy (University of Michigan)

Sili Deng (MIT)

Zhi Chen (PKU)

Hessam Babaei (U. Pittsburgh)

Alessandro Parente (ULB)

Daniel Mira (Barcelona Supercomputing Center)

Venkat Raman (University of Michigan)

Abstract

Combustion sciences have vastly benefited from the use of data for developing models, with chemical kinetics serving as a prime example for this line of research. With the recent advances in artificial intelligence, large language models, agentic frameworks and the broader data-driven modeling, the field is ready for a transformative phase. The focus of this minisymposium is to discuss the state of AI/ML and its application to topics in combustion and energy sciences.

Program

13:40 – 14:20 Topical Review, A. Parente, S. Deng and Z. Chen

14:20 – 14:35 “AI-enabled Combustion Research”, Venkat Raman (U. Michigan)

14:35 – 15:00 “AI for scientific discovery”, Karthik Duraisamy (U. Michigan)

15:00 – 15:20 “From Low-Rank Models to Tensor Networks: New Frontiers in Scientific AI”, Hessam Babaei (U. Pitt)

15:20 – 15:40 “Data and computing for ML/AI”, Daniel Mira (Barcelona Supercomputing Center)

15:40 – 16:10 Coffee Break

16:10 – 16:20 “Agentic AI for Combustion”, Zhi Chen (PKU)

16:20 – 16:30 “Hybrid intelligence: From physics-informed learning to digital twins”, Sili Deng (MIT)

16:30 – 16:45 “Large language models, chemistry and the use of AI”, Hai Wang (Stanford U.)

16:45 – 17:50 Panel Discussion moderated by Venkat Raman

Combustion in Wildfires and Fires in Wildland-Urban Interface

Friday, 31 July 2026

Organizers

Xinyan Huang (The Hong Kong Polytechnic University, China)

Sara McAllister (US Forest Service, USA)

Panel Participants

Natalia Flores Quiroz, Stellenbosch University, South Africa (nataliaflores@sun.ac.za)

Rory Hadden, The University of Edinburgh, UK (rory.hadden@ed.ac.uk)

Albert Simeoni, Worcester Polytechnic Institute, USA (asimeoni@wpi.edu)

Sayaka Suzuki, Institute of Science Tokyo, Japan (suzuki.s.dq@m.titech.ac.jp)

Arnaud Trouvé, University of Maryland, College Park, USA (atrouve@umd.edu)

Matthias Ihme, Stanford University, USA (mihme@stanford.edu)

Abstract

This Mini Symposium aims to provide a focused forum for advancing the understanding of combustion fundamentals in wildfire and improving the fire safety in the wildland-urban interface. Recent global wildfires and fires in wildland-urban interface (WUI) have demonstrated the complexity in combustion process and the significance of fire consequences. This mini-symposium will include, but not be restricted to

- Combustion processes related to wildland fuels and firebrands
- Ignition of both vegetative and human-made fuels in WUI
- Physical modelling of wildfire and WUI fire behavior
- New technologies to mitigate WUI fires
- Ecological benefits of wildland fire
- Research framework to address wildfire management needs

Program

10:30 – 10:35 Introduction: Xinyan Huang (HKPU) and Sara McAllister (US Forest Service, USA)

10:35 – 10:50 Matthias Ihme, Stanford University, USA, “High-resolution modeling and experimental imaging to improve wildfire prediction and ember transport physics”

10:50 – 11:05 Albert Simeoni, Worcester Polytechnic Institute, USA, “How Do Wildfires Transition Into Urban Fires and What Can Be Done About It?”

11:05 – 11:20: Sara McAllister, US Forest Service, USA, “The wildfire problem - an ecological perspective”

11:20 – 11:35 Natalia Flores Quiroz, Stellenbosch University, South Africa, “Vegetation, Exposure, and Vulnerability in Large Outdoor Fires in South Africa”

11:35 – 12:20 Panel Discussion 1: Combustion in Wildfires

Panelists: Arnaud Trouvé, Matthias Ihme, Albert Simeoni, Natalia Flores Quiroz

Moderator: Sara McAllister, US Forest Service, USA

12:20 – 12:30 Transition to lunch

12:30 – 13:40 Lunch

13:40 – 14:20 Topical Lecture: Xinyan Huang, The Hong Kong Polytechnic University, China, “A Review of Interactive Smoldering-Flaming Fires at Wildland-Urban Interface”

14:20 – 14:35 Sayaka Suzuki, Institute of Science Tokyo, Japan, “Why firebrand showers matter at wildland-urban interface and beyond?”

14:35 – 14:50 Rory Hadden, The University of Edinburgh, UK, “Firebrands in Lab and Field”

14:50 – 15:20 Panel Discussion 2: Combustion and Fires in Wildland-Urban Interface

Panelists: Rory Hadden, Albert Simeoni, Sayaka Suzuki, Sara McAllister

Moderator: Xinyan Huang, The Hong Kong Polytechnic University, China

15:20 – 15:30 Mini-Symposium Summary, Sara McAllister, US Forest Service, USA

MONDAY AT A GLANCE

8:30-10:00	Main Hall	Welcome, Opening Ceremony Hottel Lecture - William Green <i>Chairs: O. Fujita; V. Raman</i>								
10:00-10:30	Break (30 Minutes)									
10:30-12:20	Poster Paper Presentations (Event Hall)									
12:20-13:40	Lunch									
Room	Main Hall	A	B-1	B-2	D	E	C-1	C-2	157	H
13:40-15:40	Topical Review: C. Hasse <i>Chairs: P. Papas; M. de Joannon</i> Mini Symposium: Future Fuels for Energy Conversion	Concurrent Sessions								
		Fundamental Processes: Chemical Kinetics	Fundamental Processes: Flame dynamics and transport processes	Fundamental Processes: Detonations and high-speed combustion	Applications- Fire and safety	Fundamental Processes: Heterogeneous combustion and processes	Applications- High-speed propulsion and energetics	Fundamental Processes: Turbulent flames	Enabling Models, Methods, Tools & Technology - Modeling approaches	Enabling Models, Methods, Tools & Technology - Numerical techniques
15:40-16:10	Break (30 Minutes)									
Room	Main Hall	A	B-1	B-2	D	E	C-1	C-2	157	H
16:10-17:50	Mini Symposium: Future Fuels for Energy Conversion	Concurrent Sessions								
		Fundamental Processes: Chemical Kinetics	Fundamental Processes: Flame dynamics and transport processes	Fundamental Processes: Detonations and high-speed combustion	Applications- Fire and safety	Fundamental Processes: Heterogeneous combustion and processes	Applications- High-speed propulsion and energetics	Applications - Low-speed propulsion	Enabling Models, Methods, Tools & Technology - Modeling approaches	Enabling Models, Methods, Tools & Technology - Numerical techniques
18:30	Early Career Researcher Mixer									

Monday		<i>Chairs: A. Aspen; A. Dreizler; K. Matsuoka; Y. Konno</i>
Colloquium		1 - Fundamental Processes: Chemical Kinetics
1-01-01:	#001	Pathways to soot: Tracking carbon flux from Ethynyl-Substituted PAHs in premixed and Non-Premixed flames H. Lv; P. Liu; T. Hu; Y. Song; J. Wan; K. Cheng; F. Zhou; J. Zou; W. Liu; C. Zheng; W. L. Roberts; X. Gao
1-01-02:	#002	Measurement of ignition delay time of NH ₃ /O ₂ /Ar and NH ₃ /Air by shock tube with constrained reaction volume method A. Sharma; Y. Morimoto; Y. Wakata; A. Hayakawa; H. Nakamura; Y. Fujimoto; S. Obayashi; T. Yatsufusa; D. Shimokuri
1-01-03:	#003	Molecular identification of highly oxygenated organic molecules and its rapid growth during the oxidation of n-alkane L. Zhu; C. Cui; Y. Deng; W. Yuan; Z. Wang; M. Zeng; B. Yang; Z. Zhou; F. Qi
1-01-04:	#004	An experimental and kinetic modeling study of the unsymmetrical dimethylhydrazine (UDMH) combustion X. Bai; Y. Gao; X. Ren; R. He; F. N. O. Bruce; S. Cheng; H. J. Curran; Y. Li
1-01-05:	#005	1,1-Diethoxypropane combustion: Shock tube experiments and kinetic modeling M. Z. A. khan; T. Dinelli; C. Cao; T. A. Kashif; M. Adil; M. Mehl; M. Pelucchi; A. Farooq
1-01-06:	#006	Experimental and kinetic modeling of JP-10 ignition in nitrous oxide Y. Cheng; Q. Mao; Y. Liao; K. Pang; S. Pang; W. Cui; B. Shi; S. Wang
1-01-07:	#007	Kinetic studies of prompt NO formation of methane at elevated pressures using a novel high pressure well stirred turbulent combustor K. Ri; B. Mei; L. Ji; Y. Cao; T. Fujimori; K. Maruta; Y. Ju
1-01-08:	#008	Experimental study and kinetic modeling of ammonia oxidation at high pressures using a micro flow reactor with a controlled temperature profile K. Tamaoki; T. Tezuka; S. Colson; S. Ito; M. Uchida; H. Nakamura
1-01-09:	#009	Theoretical prediction of supercritical rate constants: Combining ab initio kinetics and equation of state B. Sirjean; F. C. Destro; F. Paes; P.-A. Glaude; R. Fournet; G. Batalha de Souza
1-01-10:	#010	Low-Temperature co-oxidation kinetics of NH ₃ /1,2-DME: Chemistry driven by a promising reactive polyether C. Qin; B. Liu; Z. Jia; W. Zhou; Z. Wang; L. Zhang
1-01-11:	#011	Experimental and modeling study of the chemistry of trans-decalin doped in a slightly sooting, non-premixed, laminar planar mixing layer flame (PMLF) M. K. Ashour; C. P. Bjork; R. Whitesides; C. Saggese; S. W. Wagnon; F. Carbone
1-01-12:	#012	Insights into CO vibrational relaxation in shock tube measurements using a state-to-state kinetic model P. Zhang; Q. Wang; M. Papp; B. Su; B. Yang; T. Turányi
1-01-13:	#013	Refining the low-temperature oxidation chemistry of butanone via ozone addition: A combined synchrotron VUV-PIMS and kinetic model study J. Shi; S. Chen; C. Xie; Q. Zhu; Z. Wang; L. Zhu
1-01-14:	#014	Dynamics-Based detection of aromatic species and soot nucleation pathways using reactive molecular dynamics D. Sahu; R. Maddipati; D. Boddapati; P. Motamarri; K. Aditya
1-01-15:	#015	High-Pressure study of the interactions between ammonia and nitric oxide in a flow reactor Y. Liu; Z. Luo; E. Hu; G. Yin; Z. Huang

1-01-16:	#016	Kinetic modeling and experimental study on the effect of HBr on CO and NO emission in a CO/NH3 co-combustion system Q. Chen; Y. Wang; J. Zhao; S. Li; X. Wei
1-01-17:	#017	A comprehensive PAH mechanism for ammonia-hydrocarbon co-combustion Q. Wang; J. Guo; H. G. Im; S. M. Sarathy
1-01-18:	#018	Towards Cycloalkane-Rich synthetic jet fuel combustion chemistry: Decalin as a representative fuel S. S. Goldsborough; N. naser; G. M. fironi; R. L. mccormick; T. chatterjee; C. saggese; S. W. wagnon
1-01-19:	#019	Experimental study of high-temperature oxidation of dimethylcyclohexane isomers with CO time histories C. A. Kamal; M. D. Hageman; M. S. Knadler; A. M. Ferris
1-01-20:	#020	Oh + ether reactions: Overall rate coefficients and Site-Specific kinetics of DME, DMM, and 1,2-DME S. chen; J. zou; Z. Wang; A. Farooq
1-01-21:	#021	Measurements and kinetic modeling of ammonia fuel blends in a unique unstrained diffusion flame burner E. Antar; P. Versailles; E. Robert
1-01-22:	#022	Reactions of HCN with substituted PAHs: A theoretical calculation and kinetic modeling analysis Y. Yang; W. Han; L. Yang
1-01-23:	#023	Propanal oxidation at engine-relevant conditions: Autoignition and species evolution in an RCM J. Caravaca-Vilchez; K. A. Heufer
1-01-24:	#024	Effects of pressure on the chemical sooting structure of equi-diffusive counterflow diffusion flames R. Sawanni; Ö. Gülder
1-01-25:	#025	Pressure and temperature dependence of methane pyrolysis and hydrogen production in a micro flow reactor M. R. Razavi; O. L. Gulder
1-01-26:	#026	Effects of H2 and CO on Urea-Based selective Non-Catalytic reduction C. Pastor-Morell; E. T. Andresen; L. J. Karlsmos; H. Hashemi; H. Wu; P. Glarbor
1-01-27:	#027	Reactions of chemically activated oxosilanol formed via SiO2 + H2 M. Döntgen
1-01-28:	#028	Kinetics of methyl radical formation during dimethyl ether pyrolysis Z. Wang; D. Liu; A. Farooq
1-01-29:	#029	High-Temperature Gas-Phase functionalization of soot in a Post-Flame tubular reactor: Oxidation and amination A. Caputo; B. Apicella; A. Maaoui; M. M. Oliano; C. Russo; M. Sirignano

Colloquium		2 - Fundamental Processes: Flame Dynamics and Transport Processes
1-02-01:	#030	Soot maturity evolution in a periodically-forced diffusion flame via neural network assisted inversion N. Gutierrez; N. Mancilla; G. Severino; M. Littin; J. Igor; A. Garcia; F. Escudero; J. J. Cruz; J. Yon; R. Demarco; A. Fuentes
1-02-02:	#031	Analysis of buoyant flame propagation and curvature-strain coupling in humid hydrofluorocarbon refrigerant mixtures Z. Li; H. Chu; G. T. Linteris; R. Glaznev; J. Beeckmann; M. Gauding; H. Pitsch
1-02-03:	#032	A joint Numerical–Experimental analysis of NO formation in laminar fully premixed Hydrogen–Air flames C. Romero González; É. Espada; S. Wang; C. Betrancourt; C. Mirat; L. Zimmer; B. Fiorina
1-02-04:	#033	Influence of propane blending and oxygen index on soot propensity of renewable carbon neutral LPG flames I. Verdugo; P. Martin; P. E. Pinto; F. Escudero; R. Demarco; A. Fuentes
1-02-05:	#034	Experimental study and physical analysis on detachment of ammonia-methane non-premixed jet flames in preheated air coflow Q. Wang; N. Hashimoto; X. Liu; R. Iwanaga; Y. Konno; O. Fujita
1-02-06:	#035	Propagation of laminar flames of gasoline-type fuels at engine conditions K. Van; K. Van; S. Oh; J.-W. Park; Y. Pei; F. Egolfopoulos; F. Egolfopoulos
1-02-07:	#036	Head-On quenching of CH ₄ and H ₂ flames at cold walls: Importance of transport models and water condensation M. Laignel; K. Bioche; L. Voivenel; G. Lartigue; V. Moureau
1-02-08:	#037	A 2D framework for analyzing thermo-diffusive instabilities in lean CH ₄ /H ₂ bunsen flames A. Somma; T. Niccolai; A. Scholtissek; F. Ferraro; A. Cuoci
1-02-09:	#038	Intramolecular hydrogen bonding affects laminar flame propagation: A case study of PODE3 and its branched isomer Q. Fang; J. Fang; W. Li; Y. Zhang; S. M. Sarathy; Y. Li
1-02-10:	#039	Unveiling thermodiffusive effects in H ₂ /air flames with High-Resolution rayleigh thermometry N. Villenave; S.-Y. Lee; C. Chauveau; F. Halter
1-02-11:	#040	A DNS study of strain effects on hypersonic ignition of MMH/NTO H. Cao; W. Han; Y. Tang; L. Yang
1-02-12:	#041	Oscillation modes of premixed gas combustion on the flat burner E. Gubarev; E. Sereshchenko; S. Minaev; V. Gubernov
1-02-13:	#042	Dominant diffusion flame stabilized by heat source in Counter-Current flow between two plates S. Mokrin; A. Demin; E. Dats; S. Minaev
1-02-14:	#043	Understanding the impact of hydrogen on soot formation in High-Pressure methane diffusion flames S. Kazemi; A. Nobakht; M. R. Kholghy; A. E. Karataş
1-02-15:	#044	Interaction between flow strain and plasma assisted flames: Transport effects and stretch tolerance Y. Ban; F. Zhang; S. Zhong; Y. Pei

1-02-16:	#045	Influence of oxygen-enrichment on the propagation of hydrogen premixed flames E. M. Fortes; E. J. Perez-Sanchez; T. Grenga; D. Mira; E. M. F. Soplanes
1-02-17:	#046	A computational study of aluminum droplet combustion and the transition between diffusion and kinetic regimes P. Joshi; K. Van; F. N. Egolfopoulos
1-02-18:	#047	Pressure effects on soot formation and maturity in Propane-Ammonia diffusion flames A. Nobakht; F. Cepeda; A. E. Karatas; A. E. Kataris
1-02-19:	#048	Ultra-Lean diffusion-controlled 2D premixed hydrogen/air flames C. Chi; Z. Chen; D. Thevenin
1-02-20:	#049	Effects of diethyl carbonate on the flammability limit of lithium-ion battery vent gases J. Liu; W. Liang; C. K. Law
1-02-21:	#050	The role of detailed kinetics in the double flame structure of nitromethane droplet combustion A. Frassoldati; A. Cuoci; A. Stagni
1-02-22:	#051	H2 enrichment of CH4/air tubular flames L. Beard; A. Gleitman; R. Pitz
1-02-23:	#052	Mechanistic origin of the sudden reversal of soot formation in Oxygen-Enriched ethylene flames A. Chiu; A. E. Karatas; N. Eaves
1-02-24:	#053	Buoyancy effects on edge flames in mixing layers Z. Lu; M. Matalon
1-02-25:	#054	INTENTIONALLY BLANK
1-02-26:	#055	Thermal-Radiation Effects in Steam-Diluted Hydrogen Flames: From Unsteady 1D Propagation to a 2D Expanding Flame DNS J. Ben Zenou; R. Vicquelin
Colloquium		3 - Fundamental Processes: Turbulent flames
1-03-01:	#056	Experimental and data-driven analysis on combustion characteristics of high-pressure hydrogen jet into noble gas F. Zhao; L. Huang; Z. He; N. Wang; S. Li; S. Huang; R. Chen; D. Hung; T. Li
1-03-02:	#057	The role of shock-obstacle interactions in initiating self-ignition of pressurized hydrogen released via a tube G. Jiang; Y. Jiang; Q. Duan; S. Zhang; K. Jin; H. Xiao; Q. Wang; J. Sun
1-03-03:	#058	Experimental study of the strain resistance of turbulent multi-regime flames with hydrogen replacing methane T. Li; H. Chen; S. Shi; D. Geyer; B. Zhou; A. Dreizler
1-03-04:	#059	Stability and flame length control in piloted turbulent partially premixed cracked NH3-air flames H. Tang; A. Macfarlane; M. Dunn; A. Masri; G. Magnotti

1-03-05:	#060	Flame propagation and lighting sequence in a cluster of hydrogen LDI burners C. Li; C. Schumann; J. Massey; Y. Tanaka; N. Swaminathan
1-03-06:	#061	Investigation of the local mixing layer thickness and degree of mixture inhomogeneity in turbulent flames M. S. Mansour; M. K. Hasanin; M. F. Zayed; M. S. Senosy; A. R. Masri
1-03-07:	#062	Three-Dimensional insights of turbulent flame speed and morphology for ammonia/hydrogen premixed flames N. Monnier; S. Zitouni; P. Brequigny; C. Mounaïm-Rousselle
1-03-08:	#063	The role of flow reynolds number on high pressure turbulent burning velocities for ammonia/hydrogen/air and iso-octane/air expanding flames V. T. Mai; J.-H. Wang; S. Shy
1-03-09:	#064	Numerical investigation of turbulent hydrogen-air jet flame in hot cross-flow L. Renzulli; M. Impagnatiello; N. Noiray
1-03-10:	#065	Near flammability limit flame response to high karlovitz number turbulence L. Chen; Y. C. Liu
1-03-11:	#066	On markstein numbers in lean H ₂ -air turbulent premixed flames with different equivalence ratios and turbulence intensities N. Chakraborty; H. Kavari
1-03-12:	#067	Multiregime combustion characteristics of Bluff-Body stabilized flames in a supersonic coflow D. Purushotham; J. C. Oefelein
1-03-13:	#068	Characterization of the Soot-Flowfield relationship under Post-Inception (Moderately sooting) conditions in turbulent, non-premixed jet flames J. Pu; J. A. Sutton
1-03-14:	#069	Transport equation for premixed flame curvature conditioned to reaction zone in turbulent flow A. Lipatnikov; V. Sabelnikov
Colloquium		4 - Fundamental Processes: Detonations and high-speed combustion
1-04-01:	#070	The role of Darrieus–Landau instability in the fast flame acceleration and DDT S. Miri; K. Cheevers; R. Murugesan; V. Premnath; D. Rajan Rajagopalan Kannan; J. Jeevarajan; B. Maxwell; M. Radulescu
1-04-02:	#071	Blockage effects and scaling of Methane-Air Deflagration-to-Detonation transition Z. J. Wideman; E. J. Stewart; N. Punithan; C. R. Hicks; T. Karasu; S. I. Jackson; E. S. Oran
1-04-03:	#072	Sub-Continuum vortex structures in shock triple points and their implications on detonation simulations A. S. Jayaraman; E. S. Genter; J. E. Lipman; R. F. Johnson; H. Wang
1-04-04:	#073	Effect of fuel concentration on hybrid Al–H ₂ –Air detonations: A numerical study S. S. Adavi; F. Chim; L. Vizzini; S. Guhathakurta
1-04-05:	#074	Towards predicting Deflagration-to-Detonation transition in smooth channels T. Alzer; J. Melguizo-Gavilanes; I. Wlokas; A. Kempf

1-04-06:	#075	Turbulent flame-shock interaction at the end of a square shock tube M. Moran; Z. Jerad; N. Chaumeix; G. Ciccarelli
1-04-07:	#076	Detonation onset mechanisms and fundamental combustion properties in unobstructed channels C. C. Mejia-Botero; F. Viot; L. F. Figueira da Silva; J. Melguizo-Gavilanes
1-04-08:	#077	Segmentation and statistical analysis of the detonation cellular structure in a thin channel Z. Yang; R. Cai; B. Zhang
1-04-09:	#078	Micro-Jetting dynamics in narrow channel and fully Three-Dimensional hydrogen detonations R. Dushe; S. Ramachandran; S. Yang
1-04-10:	#079	Effect of ozone sensitization on hotspot formation in deflagration-to-detonation transition in obstacle laden channel A. Karthik; A. Dahake; A. Singh
Colloquium		5 - Fundamental Processes: Heterogeneous combustion and processes
1-05-01:	#080	Study on combustion kinetics of coal and ammonia co-firing using a counterflow TGA M. Chen; Q. Ding; J. Wang; T. Wang; L. Su; J. Liu; Y. Zhang; J. X. Wen
1-05-02:	#081	High-Fidelity numerical simulations of counterflow flames with AlH ₃ particles F. Zhou; H. Wang; J. Zhang; L. Huang; K. Luo; J. Liu; J. Fan
1-05-03:	#082	Detailed analysis and flamelet modeling of NO _x formation in a turbulent pulverized coal/ammonia co-combustion flame with differential diffusion Z. Wang; A. Shamooni; T. Zirwes; O. Stein; C. Hasse; X. Wen
1-05-04:	#083	Experimental elucidation of the Combustion-Mode transition in a liquid Oxygen–Solid fuel duct M. Yamaguchi; S. Suzuki; T. Son; S. Takahashi; M. Kumagai; H. Nagata
1-05-05:	#084	Development of laser absorption spectroscopy for NO in combustion gases for metal flames K. Mangalvedhe; E. Antar; A. Durocher; T. Yu; J. Berghthorson
1-05-06:	#085	Probing soot nanoparticle evolution in hydrogen-added counterflow diffusion flames M. Bauer; J. A. Dardin; M. Seitz; D. Trimis; F. P. Hagen
1-05-07:	#086	A practical electrochemical-thermal screening method for designing electrically controlled solid propellants R. Rajak; D. Lim; J. X. Lim; G. Kanagaraj; J. J. Yoh
1-05-08:	#087	Fuel property influence on lean blowout characteristics of liquid hydrocarbon fuels N. Guntapalli; P. John; M. Gurunadhan; O. Owoyel; S. Menon
1-05-09:	#088	Extinction limits of Stagnation-Point diffusion flames between hydrogen peroxide decomposition gas and a solid polymer fuel H. Sakurai; K. Ri; H. Miyasaka; H. Nagata
1-05-10:	#089	Hypergolic ignition of sodium borohydride-polyethylene fuel under hydrogen peroxide sprays S. Levi; D. Peles; S. Nath; K. Mizrahi; J. K. Lefkowitz

1-05-11:	#090	Heterogeneous autoignition of an isoparaffinic Alcohol-to-Jet fuel droplet cloud with preferential evaporation M. Blandino; D. Cavalieri; J. Liberatori; P. P. Ciottoli
1-05-12:	#091	Impact of Iso-Butanol addition on soot and PAH formation in gasoline surrogate turbulent diffusion flames H. Q. DO; E. Therssen; L.-S. Tran; X. Mercier
1-05-13:	#092	Modelling of soot particle size distributions in laminar premixed propene flames J. Qiu; L. Tian; A. Spencer; P. Lindstedt
1-05-14:	#093	Impact of two-phase interaction on multi-stage autoignition of ammonia/n-heptane blends Y. Hu; E. Gutheil; R. Kurose; Y. Jiang
1-05-15:	#094	Instantaneous two-line OH-LIF temperature imaging in spray-flame synthesis of nanoparticles S. Karaminejad; T. Dreier; T. Endres; C. Schulz
1-05-16:	#095	Ultra-Lean methane as a kinetic promoter of early oxidation in Fe-Based oxygen carriers X. Dong; J. Li; F. Liu; L. Yang
1-05-17:	#096	Flame structures and emissions of stratified-cofired liquid ammonia spray flames in a double-swirl burner M. Ahmed; W. Roberts; A. Elbaz
1-05-18:	#097	Exploration of the role of SiO ₂ in the carbothermic reduction of tripotassium phosphate Q. Li; E. L. Olsson; H. Wu
1-05-19:	#098	Numerical investigation of differential diffusion and thermal expansion on iron flame propagation at microgravity conditions X. Wen; F. Yang; C. Hasse
1-05-20:	#099	Investigation on spray combustion of liquid ammonia and polyoxymethylene dimethyl ether solution fuel in a rapid compression machine Z. yang; Q. zhang; Y. qi; Z. lin; Y. wu; Z. wang
Colloquium		6 - Enabling Models, Methods, Tools & Technology: Diagnostics and experimental methods
1-06-01:	#100	Event-Based diagnostics of flame dynamics C. Fu; L. Fan; Y. Ding; Y. Wang; L. Maya; P. Vena; B. Savard; Y. Gao
1-06-02:	#101	Instantaneous refractive index compensation on stereo-velocity measurement in turbulent combustion Y. Zheng; Y. He; L. Feng; S. Xu; N. Liu; M. He; H. Liu; Y. Liu; W. Cai; M. Li
1-06-03:	#102	Pressure effects on flame shapes and pollutant emissions in an RRQL NH ₃ combustor R. Cole; A. S. Nayak; C. Avila Jimenez; D. R. Noble; D. Wu; B. Emerson; T. Lieuwen
1-06-04:	#103	A single-laser, multi-parameter, in-situ laser absorption sensor for real-field diagnostics in harsh combustion environments Y. Mi; Z. Liu; W. Wang; T. Liu; H. An; C. K. Law; X. Chao
1-06-05:	#104	Composition analysis and combustion model study of HEFA sustainable aviation fuels Y.-F. Wan; Z.-H. Jin; H.-X. Han; W. Li; L. Zhao; Z.-Y. Tian

1-06-06:	#105	Ultrafine soot characterisation in methane Non-Premixed flames via 2D-2C-TiRe-LII and numerical simulation Z. Fenga; S. Ren; C. T. Chong; J. Zhang; B. Tian
1-06-07:	#106	Size- and time-resolved pyrometry of single burning micron-sized metal particle: High accuracy and wide temperature range using a single consumer camera L. Cen; Y. Qian; X. Mi; Z. Li; X. Lu
1-06-08:	#107	Calibration-Free measurement of atomic ratios in flames using laser-induced breakdown spectroscopy Z. Li; Z. Yang; J. Zhou; S. Tang; C. Lou
1-06-09:	#108	An optical study on spray and combustion characteristics of oxymethylene dimethyl ether (OMEx)/n-dodecane blends using an ECN spray d injector Z. Sun; G. Donkers; N. Dam; B. Somers; N. Maes
1-06-10:	#109	Chemiluminescence signature of NH ₃ -rich products combustion C. Avila Jimenez; S. Gubbi; R. Cole; D. Wu; B. Emerson
1-06-11:	#110	Identification method of flame transfer function based on acoustic measurements S. Liao; E. Liang; M. Zhu
Colloquium		7 - Enabling Models, Methods, Tools & Technology: Modeling approaches
1-07-01:	#111	Chemiluminescence-Driven machine learning models for combustion sensing in cyclonic reactors V. Rosati; V. Castro; G. B. Ariemma; G. Sorrentino; P. Sabia; R. Ragucci; M. de Joannon
1-07-02:	#112	Conditional generative adversarial networks for large-eddy simulation of lean hydrogen flames L. Nista; C. D. K. Schumann; M. Vivenzo; T. Grenga; J. F. MacArt; A. Attili; H. Pitsch
1-07-03:	#113	Flamelet LES of a turbulent premixed NH ₃ /H ₂ /N ₂ -air jet flame with differential diffusion and stretch B. Gao; R. Schultheis; T. Li; A. Dreizler; C. Hasse; X. Wen
1-07-04:	#114	Extinction and reignition simulations of a base bleed unit under muzzle flow conditions G. Guermonprez; T. Gaillard; J. Dupays; R. Demarthon; M. Zeidler
1-07-05:	#115	Robust identification of deterministic parameters of thermoacoustic modes in turbulent annular combustors Y. Peng; G. Wang; L. Xu; D. Zhao; F. Qi
1-07-06:	#116	Study of dense ethanol spray flames using hybrid VOF–Lagrangian–FGM framework Z. Alam; T. Johnny; A. De; G. Singh; A. R. Masri
1-07-07:	#117	A reaction-network-informed neural operator for generalizable combustion chemistry integration H. Li; N. Li; Y. Xu; R. Mao; Z. X. Chen
1-07-08:	#118	An error-controlled chemistry coordinate mapping approach for numerical simulation of turbulent combustion Y. ZHOU; S. Xu; L. Xu; X.-S. Bai
1-07-09:	#119	Novel chemistry model calibration routine for flame acceleration and detonation transition S. Goswami; P. Dawe; X. Fang

1-07-10:	#120	Sparse lagrangian MMC-LES of shock-supersonic shear layer flame interaction using an energy-consistent filtered Rankine-Hugoniot approach V. Kubendran; G. S. Walia; M. J. Cleary
1-07-11:	#121	Flamelet LES of coaxial dual-swirl hydrogen flames with differential diffusion and heat losses X. Wen; X. Ye
1-07-12:	#122	Zero-Shot prediction of thermoacoustic instabilities via CNN-based phase-space learning R. Agarwal; M. A. Mohamad
1-07-13:	#123	Modelling emissions from ammonia combustors with the incompletely stirred reactor network method B. Harikrishnan; E. Mastorakos
1-07-14:	#124	A generalized eddy dissipation concept (EDC) model and prediction of a lifted methane-air flame D. He; Y. Zhan; H. Zhang; J. Lyua
1-07-15:	#125	Large-Eddy simulation of boundary layer flashback in H ₂ /CH ₄ swirling flames using a curvature-based flamelet model Y. Yan; X. Wen
1-07-16:	#126	Deep learning manifolds for ethylene-air autoignition J. Jacobowitz; Y. J. Ikeda; J. F. MacArt
Colloquium		8 - Enabling Models, Methods, Tools & Technology: Numerical techniques
1-08-01:	#127	Rfno-Pinn: A Physics-Informed neural operator for predicting Multi-Species combustion dynamics Y. Zheng; L. Xu; X. Wu; Y. Zhou; D. Zhou; X. Lu; X.-S. Bai
1-08-02:	#128	Data assimilation of premixed flame in porous-media burners using ensemble kalman filter K. Li; Y. Xia; Y. Zheng; S. Xu; W. Cai; C. Liu
1-08-03:	#129	An anisotropic thickened flame model for Non-Perfectly premixed flames R. Vadi; S. Castellani; A. Ballotti; A. Andreini
1-08-04:	#130	Autoregressive latent diffusion model for predicting the transient dynamics of piloted NH ₃ /H ₂ /N ₂ jet flames S. Wu; W. Liang; K. Luo
1-08-05:	#131	A conditional exponential presumed subfilter PDF model for Soot–Turbulence–Chemistry interactions in large eddy simulations T. Yan; D. Zhou; X. Lu
1-08-06:	#132	Hole-Inone: Hole-Aware optimization of tree-based AMR for reactive flows under GPU regimes X. Wang; W. Zhao; X. Cai
1-08-07:	#133	Bayesian uncertainty quantification of the ignition behavior of a HEFA-SPK surrogate J. Liberatori; S. Iavarone; R. Vicquelin
1-08-08:	#134	An optimization approach for smoke point prediction of aviation fuels M. I. Radaideh; M. I. Radaideh; A. Violi

1-08-09:	#135	An approximate graph elicits detonation lattice V. Sharma; V. Raman
Colloquium		9 - Enabling Models, Methods, Tools & Technology: Enabling concepts
1-09-01:	#136	Decoupling the inevitable: Suppressing carbon deposition via temporally disconnected pathways in calcium-looping dry reforming of methane R. Fang; T. Zhou; H. Wu; T. Wang; M. Zhang; Y. Song; X. Meng; Y. Feng; H. Yang
1-09-02:	#137	A two-stage catalytic methane pyrolysis system for turquoise hydrogen production with integrated steam regeneration of activated carbon catalyst T. KHALID; G. U. INGALE; M. ABBAS; A. S. NIMBALKAR; N. V. QUYNH; J. K. KANG; G. Y. PARK; Y. J. LEE; U. LEE
1-09-03:	#138	Coupled LBM-MPM simulation of Pressure-Coupled combustion response in solid propellants G. Xu; Y. Jiang; J. Lyu; L. Liu; P. Liu; W. Ao
1-09-04:	#139	Catalytic partial oxidation of n-butane over rhodium for syngas production M. Liu; F. Zhang; L. Qin; C. K. Law; R. Sui
1-09-05:	#140	A reinforcement-learning framework for the control of fuel-vapour stratification via oscillating electric fields N. A. K. Doan; N. S. Lalli; B. Mohammadikalakoo; A. Giusti
1-09-06:	#141	Nanosecond pulsed discharge ignition of NH ₃ –air mixtures: ignition behavior, kernel growth, and temperature dynamics from IR thermography <i>S. Shen; W. Senior-Tybora; J. Lefkowitz</i>
1-09-07:	#142	Quantitative thermal imaging and radiative modelling of a Non-Transferred CO ₂ plasma jet A. Gunnarsson; K. Andersson
1-09-08:	#143	Effect of gliding arc plasma on the combustion characteristics of co-firing of NH ₃ and metal powders Z. Wang; B. Aravind; J. Steer; S. Mashruk; A. Valera-Medina
Colloquium		10 - Applications: Energy and material conversion and heating processes
1-10-01:	#144	Experimental study of oxygen-enriched staged ammonia swirl combustion under high-pressure, megawatt-class conditions Z. Liu; S. Chen; J. Du; C. Cheng; J. Fang; S. Bin; J. Jiang; W. Li; X. Shi; Y. Li
1-10-02:	#145	Experimental study on staged combustion characteristics of pure ammonia and Ammonia/City-Gas Co-Firing in a 100 kW-Class furnace S. Sawada; K. Konishi; F. wakashiro; N. Nakatsuka; T. Hori; R. Magoshi; F. Akamatsu
1-10-03:	#146	Numerical study on liquid ammonia/air flashing spray flames using a three-hole nozzle injector in a swirling burner for thermal application K. K. A. Somarathn; H. Yamashita; Y. R. Chen; H. Ito; T. Kudo; A. Hayakawa; H. Kobayashi; K. D. K. A. Somarathne
1-10-04:	#147	Comparative study on enhanced ammonia swirl combustion by preheating and partially pre-cracking strategies under equivalent energy input Y. Zhang; X. Shi; T. Lian; S. Liu; R. Qiu; W. Li; Y. Li
1-10-05:	#148	Analysis of NO ₂ production in a dual swirl non-premixed hydrogen burner A. TEIXEIRA; H. Magnes; T. F. Guiberti; L. Selle; T. Schuller
1-10-06:	#149	Stability and emission characteristics of a Scaled-Down industrial Dual-Swirl Non-Premixed burner operated with 100% hydrogen A. Katoch; M. Chishty; P. Medwell; G. Nathan; A. Chinnici

1-10-07:	#150	Formation and burning velocity measurement of a Self-Sustained Mg/CO ₂ Two-Phase jet flame T. Yokomori; L. Grenier; M. Tateishi; Y. Abiko; T. Tomidokoro
1-10-08:	#151	Temperature-Dependent characteristics of carbon derived from plastic pyrolysis for circular economy applications V. M. Pohl; O. Deutschmann; P. Lott
1-10-09:	#152	Stability, structure, and emissions of NH ₃ /CH ₄ swirling flames in non-premixed and co-fired mode A. M. Elbaz; Z. O. Hassan; W. L. Roberts
1-10-10:	#153	Flame synthesis of High-Quality carbon nanotubes on Ni/CeO ₂ : A multiscale mechanistic study from support calcination to catalytic growth L. yan; H. zhou; R. hong; X. zhang; H. chu
Colloquium		11 - Applications: Low-speed propulsion
1-11-01:	#154	Detailed simulations of an Ultra-Compact trapped vortex combustor with liquid fuel spray M. Rieth; H. Shim; J. Yoon; C. O'Brien; B. Soriano; E. Mayhew; T. Lee; J. Temme; C.-B. Kweon; J. H. Chen
1-11-02:	#155	Linking spatially resolved knock onset measurements and 0-D predictions in an optical Heavy-Duty natural gas engine Z. Li; G. Roberts; F. Lei; C. Rouselle; J. Zador; E. Eagle; M. P. Musculus; R. Rajasegar
1-11-03:	#156	Characterization of thermodiffusive instabilities across various hydrogen engine conditions based on numerical and experimental investigations D. Golc; H. Chu; B. Brand; S. Esposito; T. Lehmann; T. L. Howarth; J. Beeckmann; H. Pitsch
1-11-04:	#157	Stabilization of hydrogen flame through bluff body integrated with transverse fuel injections Y. Su; B. Wang; Y. Liu; Q. An; Y. Lin; C. Zhang; C. Wang; Y. Wang
1-11-05:	#158	Pollutant emission and flame characterization of a novel CH ₄ /H ₂ Multi-Fuel injector A. Garcidueñas-Correa; K. Dave; F. De Domenico; A. Gangoli Rao; L. Palanti; L. Mazzei; C. Bianchini
1-11-06:	#159	Ignition mechanism and regime characterization of hydrogen jet-assisted liquid ammonia combustion J. Li; S. Gu; X. Mao; H. Wei; G. Shu; J. Pan
1-11-07:	#160	Combustion process evolution of the liquid ammonia spray under Hydrogen-Rich jet flame ignition J. Wang; L. Xia; T. Gong; Y. Wang; H. Wang; Z. Zheng; M. Yao
1-11-08:	#161	The effects of direct injection on spark-ignited hydrogen combustion engines M. Peters; M. Dogrudil; P. Ye; J. Erhard; A. Dreizler; B. Böhm
1-11-09:	#162	Effects of pilot fraction and dwell time on ignition performance of an IPK fuel J. Kim; E. Mayhew; V. Coburn; J. Temme; C.-B. Kweon
1-11-10:	#163	Lean blowout mechanisms of stratified swirl flames J. Wang; J. Zhang; L. Yu; X. Liu; Q. An

Colloquium		12 - Applications: High-speed propulsion and energetics
1-12-01:	#164	Experimental method for measuring local heat transfer coefficients in a water-cooled cylindrical copper rotating detonation engine S. Inamori; A. Nakama; N. Itouyama; K. Matsuoka; J. Kasahara; A. Matsuo; I. Funaki; K. Higashino
1-12-02:	#165	Non-Uniform pressure in phase-shifting square symmetric lattice injector detonation engine V. Joseph; J. Kasahara; K. Matsuoka; N. Itouyama; A. Matsuo; I. Funaki; K. Higashino
1-12-03:	#166	A frequency detuning framework for mode selection in kerosene/air rotating detonation engine Q. Sun; H. Sun; Y. Zhou; Y. Dang; J. Z. Ma; Z. Chen; J. Wang
1-12-04:	#167	On-Demand modulation of solid propellant burning rate via the magneto-thermal effect M. Yang; H. Wang; X. Zhang; M. Wang; C. Tang; C. Xu; Y. Zhang; Z. Huang
1-12-05:	#168	Performance and pressure gain characteristics of a kerosene/air RDE with an aerospike nozzle H. Sun; Q. Sun; X. Zhang; Y. Wang; J. Z. Ma; Z. Chen; J. Wang
1-12-06:	#169	Assessment of flamelet-based modeling for large eddy simulations of doubly transcritical methane/oxygen flames D. Schintu; D. Cavalieri; L. Duhem-Duvilla; G. Ribert; F. Creta; P. E. Lapenna
1-12-07:	#170	Large-Eddy simulation of dual mode scramjet combustion in the X3/R shock tunnel C. Hash; J. Edwards; M. Trudgian; A. Veeragavan; T. Lee
1-12-08:	#171	Stabilization method of detonation wave propagation in a reflective shuttling detonation combustor T. Nagaoka; K. Matsuoka; H. Watanabe; N. Itouyama; J. Kasahara
1-12-09:	#172	Multiscale analysis of pyrolysis characteristics in polymeric solid fuels A. Alqassier; E. Kim; L. Yun; S. Hong; H. S. Sim
1-12-10:	#173	Effects of additive manufacturing print directionality and prescribed channels on detonation wave propagation D. N. Collard; J. A. Martin; G. A. Montoya; S. F. Son
1-12-11:	#174	Reduced-Order modeling and LES of a multiple LOx/CH4 coaxial injection combustor under acoustic modulation M. Christely; T. Schmitt; S. Ducruix
1-12-12:	#175	Synchronous CH*/OH* chemiluminescence imaging of detonation dynamics in a Methane-Fueled rotating detonation engine A. James; A. K. Agrawal
1-12-13:	#176	Combustion mode reorganization via rotating detonation: Enabling deflagration in a scramjet Y. Zeng; S. Liu; J. Li; H. Peng; G. Wang; J. Yu; H. Wang; L. Liu; M. Sun; W. Liu
Colloquium		13 - Applications: Fire and safety
1-13-01:	#177	Pressure-Dependent combustion, pyrolysis, and char evolution in montmorillonite-reinforced flame retardant polyethylene H. Xu; H. Lv; H. Yu; F. Chu; Z. Wang; W. Hu; L. Song; Y. Hu
1-13-02:	#178	Mechanism of spontaneous ignition of high-pressure hydrogen release in arc-shaped confined space L. Gong; C. Li; B. Ren; S. Gu; X. Xiang; Y. Zhang; J. Sun

1-13-03:	#179	Flame evolution and heat transfer mechanisms of fast-moving hydrogen blended jet fires in a tunnel N. ZHU; F. TANG; X. FAN; C. SHI; Y. ZHANG; F. REN; L. HU
1-13-04:	#180	Influence of pressure and gravity-induced residence time on smoke-point transition in a laminar spreading flame Y. Li; A. Guibaud; J.-L. Consalvi; J.-M. Citerne; J. L. Torero; G. Legros
1-13-05:	#181	Effect of evaporation mode transition on heat transfer and ignition delay of fuel droplets T. weixin; C. Wang; J. Ji; J. Zhu; S. Yu; X. Li
1-13-06:	#182	Flame height and oscillation mode transition of dual linear fires under sub-atmospheric pressures Y. Yuan; Y. Chen; J. Lv; S. Liu; S. H. Chung; L. Hu
1-13-07:	#183	INTENTIONALLY BLANK
1-13-08:	#184	Overload ignition and its limit of electrical wires under standard and normoxic low-pressure conditions Y. Gu; Y. Ma; Z. Guo; Y. Huang; L. Hu
1-13-09:	#185	Experimental characterization of the cold boundary layer surrounding fire whirls B. Li; S. Bagchi; A. Saha; A. L. Sanchez; F. A. Williams
1-13-10:	#186	Ejected flame outflow from a compartment opening: Piv measurements and analysis W. Gao; Z. Yan; J. Lei; Y. Jiao; N. Liu
1-13-11:	#187	Temperature evolution in over-ventilated compartment fires: A model integrating time-varying wall heat transfer X. Sun; Y. Han; F. Ren; L. Hu
1-13-12:	#188	Ignition, combustion characteristics and safety implications of magnesium chips S. Eckart; G. Gregori; B. De Liso; G. Pio
1-13-13:	#189	Flame geometry characteristics and soot variation of thermal impinging flow induced by rectangular fires in an inclined tunnel T. Xu; M. A. Delichatsios; X. Peng; F. Tang
1-13-14:	#190	Investigation of ignition characteristics of AC electric arc in diesel fuel at different voltages and distances based on heat-transfer analysis Y. Hu; X. Chen; B. Bo; J. Wang
1-13-15:	#191	Attention on fire: An attention-enhanced deep learning model for flame radiation prediction Y. Fang; Z. Yang; C. Lou; C. Tao
1-13-16:	#192	Cellular instability transition in near-ceiling diffusion buoyant flames: Flame structure and heat transfer X. Fan; F. Tang; N. Zhu; M. McNamee
1-13-17:	#193	INTENTIONALLY BLANK
1-13-18:	#194	Characterization of mass burning rate for turbulent wind-driven flames with varying unheated segments A. Srivastava; B. Sandeep; A. V. Singh
1-13-19:	#195	Effects of equivalent free and forced convection flows on excess pyrolyzate and radiation-free diffusion flame length at varying pressure A. Bonhoure; A. Guibaud

1-13-20:	#196	Effect of wind speed on the thermal characteristics of a firebrand pile O. Eissa; M. Ghodrat
1-13-21:	#197	Opposed-Flow flame spread over discrete fuels separated by metallic insulators K. Krieger; F. Meyer
1-13-22:	#198	Compact Physics-Informed modeling of heat exposure in Full-Scale vehicle Free-Burn experiments P. Dehghani; A. Barowy
1-13-23:	#199	Circular spread of point ignited flames in microgravity L. V. Germersheim; F. Meyer
1-13-24:	#200	Experimental study on flame characteristics of fire whirls induced by underwater flammable gases leakage X. Peng; F. Tang; A. Palacios

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TUESDAY AT A GLANCE

8:30-10:00	Main Hall	Morning Announcements Plenary Lecture - Jiro Kasahara <i>Chairs: M. Bohon; S. Jackson</i>								
10:00-10:30	Break (30 Minutes)									
10:30-12:20	Poster Paper Presentations (Event Hall)									
12:20-13:40	Lunch Women in Combustion Luncheon - Pre-registration Required									
Room	Main Hall	A	B-1	B-2	D	E	C-1	C-2	157	H
13:40-15:40	Topical Review: A. Poludnenko <i>Chairs: J. Burr; J. Sosa</i> Mini Symposium: Advances in Detonative Propulsion	Concurrent Sessions								
		Fundamental Processes: Chemical Kinetics	Fundamental Processes: Flame dynamics and transport processes	Enabling Models, Methods, Tools & Technology- Enabling concepts	Applications- Fire and safety	Fundamental Processes: Heterogeneous combustion and processes	Enabling Models, Methods, Tools & Technology- Diagnostics and experimental methods	Fundamental Processes: Turbulent flames	Enabling Models, Methods, Tools & Technology - Modeling approaches	Enabling Models, Methods, Tools & Technology - Numerical techniques
15:40-16:10	Break (30 Minutes)									
Room	Main Hall	A	B-1	B-2	D	E	C-1	C-2	157	H
16:10-17:50	Mini Symposium: Advances in Detonative Propulsion	Concurrent Sessions								
		Fundamental Processes: Chemical Kinetics	Fundamental Processes: Flame dynamics and transport processes	Enabling Models, Methods, Tools & Technology- Enabling concepts	Applications- Fire and safety	Fundamental Processes: Heterogeneous combustion and processes	Applications- High-speed propulsion and energetics	Fundamental Processes: Turbulent flames	Enabling Models, Methods, Tools & Technology - Modeling approaches	Applications- Energy and material conversion and heating processes
18:50-19:30	Culture Night - Followed by Fireworks									

Tuesday		<i>Chairs: Y. Li; T.A. Kashif; Y. Ma; M. Ullman</i>
Colloquium		1 - Fundamental Processes: Chemical Kinetics
2-01-01:	#001	A functional-group-based framework for modeling diesel fuel combustion in a micro flow reactor C. Cao; M. Sarathy; H. Nakamura; K. Nishimura; S. Brunialti; Q. Wang; Q. Zhu; X. Zhang; K. Kanayama; M. Sato; T. Tezuka
2-01-02:	#002	Gas-Phase chemistry and soot formation during shock-tube pyrolysis of methane at high fuel loadings M. Adib; G. Clark; J. Jahanzamin; C. Li; J. W. Streicher; E. Dames; S. Dasappa; M. R. Kholghy; R. K. Hanson
2-01-03:	#003	Spectroscopic and morphological analysis of carbonaceous nanoparticle formation during methane pyrolysis in a shock tube E. Busillo; A. Nobili; M. Sy; J. Subburaj; T. Faravelli; P. D. De Filippis; B. D. De Caprariis; M. Pelucchi; A. Farooq
2-01-04:	#004	Experimental and modeling investigation of e-diesel and fossil diesel oxidation: A comparative study Y. Chang; L. Chen; S. Huang; Y. Huo; B. Liu; S. Xie; S. Ning; Z. Wang; M. Jia
2-01-05:	#005	Insight into oxidation behavior and soot formation of sustainable aviation fuels M. V. Manna; F. Migliorini; P. Sabia; G. Fabbio; R. Dondé; S. D. De Iuliis; M. D. de Joannon; R. Ragucci
2-01-06:	#006	On the interdependence of the low-temperature chemistry of alkanes, alkenes, alcohols and aldehydes S. Dong; X. Jiang; Y. Zhu; Q. Wang; J. Liang; Z. Wang; X. Cheng; H. J. Curran
2-01-07:	#007	Spin channels of asymmetric metal coordination structures with dense distribution for heterogeneous oxidation X.-Y. Zhou; X. Zhang; X.-H. Li; H.-L. Qin; Y.-W. Wu; B. Zhang; L. Zhao; Q. Lu
2-01-08:	#008	Synergistic effects of DEE on combustion chemistry in C ₂ H ₄ inverse diffusion sooting flames: An experimental and numerical study B. Wu; T. Li; H. Ren; K. Yang; J. Xu; Y. Ying; D. Liu
2-01-09:	#009	Unraveling low-temperature chain-branching chemistry in toluene oxidation W. Yuan; Y. Ma; P. Liu; J. Gao; J. Yang; M. Zeng; G. Yu
2-01-10:	#010	Oxidation and kinetic interaction of ammonia and methyl formate mixtures up to 100 atm Y. Cao; B. Mei; M. Adil; L. Ji; W. Xu; Y. Ju
2-01-11:	#011	Understanding co-pyrolysis chemistry of p-cymene/oxymethylene ether-3 blend with concerns on polycyclic aromatic hydrocarbons formation pathways M. Yang; H. Ren; G. Luo; S. Huang; Z. Zhou; F. Zhang
2-01-12:	#012	An experimental and modeling study of the oxidation of methane under CO ₂ and H ₂ O dilution L. M. Dinh; N. D. Ebouo; F. Battin-Leclerc; A. Stagni; T. Faravelli; O. Herbinet
2-01-13:	#013	INTENTIONALLY BLANK
2-01-14:	#014	Ozone-Initiated Low-Temperature oxidation of 1,3 dioxane C. S. Lewin; H. Wang; J. Zou; A. Mendy; O. Herbinet; J. Bourgalais; F. Battin-Leclerc
2-01-15:	#015	Optimization of diethoxymethane combustion chemistry: New insights from molecular-beam mass spectrometry and kinetic modeling S. Jacobs; T. Bierkandt; P. Oßwald; T. Methling; M. Köhler

2-01-16:	#016	Unravelling the pyrolysis chemistry of a HEFA-SPK under normal-to-high pressures: Insights into effects of fuel molecular branching degree Q. Zhang; Q. Fang; B. Tong; J. Fang; W. Li; Y. Li
2-01-17:	#017	A systematic methodology for balancing accuracy and complexity in multi-component surrogate fuel design Y. Cheng; Q. Mao; Z. Ma; X. Wang; B. Shi
2-01-18:	#018	Unveiling the pyrolysis mechanism of 2-Azido-N, n-dimethylethylamine via synchrotron VUV-PIMS and kinetic modeling Q. Zhu; W. Pan; Q. Xu; L. Zhu; Z. Wang
2-01-19:	#019	Towards a High-Accuracy kinetic database informed by theoretical and experimental data: Reexamining key Hydrogen-Oxygen reactions J. Pankauski; J. Lee; C. LaGrotta; M. Burke
2-01-20:	#020	Investigation on the combustion kinetics of nitroalkanes/ammonia: Hydrogen abstraction reactions from C1-C5 nitroalkanes by NH ₂ radicals M. Liu; R. Fan; C.-W. Zhou; Z.-Y. Tian
2-01-21:	#021	Tracing oxygen incorporation in flame-formed soot from oxygenated fuels M. Sirignano; V. Esposito; B. Apicella; C. Russo
2-01-22:	#022	Theoretical kinetics of propargyl + aromatics: Abstraction from and addition to benzene, toluene, naphthalene, and 2-Methyl-Naphthalene M. Döntgen; A. Heufer; M. Pelucchi; L. Pratali Maffei
2-01-23:	#023	A high-pressure jet-stirred reactor study of di-iso-pentyl ether oxidation and detailed kinetic modelling Z. Serinyel; G. Dayma; G. Cenedese; P. Dagaut
2-01-24:	#024	INTENTIONALLY BLANK
2-01-25:	#025	Experimental and kinetic study on the role of NO _x on the low-temperature oxidation of pentane isomers Z. Ren; Z. Huang; D. Han
2-01-26:	#026	Structure effects in the thermal decomposition of hexadienes Z. Wang; D. Liu; A. Farooq
2-01-27:	#027	Theoretical kinetics of HO ₂ + buten-4-ol-3 radicals and improved predictions for 1,3-butadiene combustion J. Bai; C.-W. Zhou; L. Zhou
2-01-28:	#028	Kinetic study on the soot formation mechanism in a methane microwave plasma M. D. Di Teodoro; C. Cavallotti
Colloquium		2 - Fundamental Processes: Flame Dynamics and Transport Processes
2-02-01:	#029	Propagation of hydrogen flame at engine conditions K. Van; S. O; A. Hu; J.-W. Park; Y. Pei; F. N. Egolfopoulos; W. Bristow
2-02-02:	#030	Evaluating simple models for knock timing and autoignition mode prediction with 2D DNS of n-heptane combustion in an enclosure A. Jain; S. Bansal; A. Ganguly; A. Dubey; Y. Morii; K. Maruta
2-02-03:	#031	Effect of pressure on NH ₂ * profiles in spherical, laminar NH ₃ /H ₂ /N ₂ flames U. L. Costa; Y. Almarzooq; A. P. Hardaya; M. Hay; W. D. Kulatilaka; E. L. Petersen

2-02-04:	#032	Dual-Mode coupling of hydrodynamic and thermoacoustic instabilities in a self-excited diffusion flame array K. Wu; Y. Zhang; B. Pang; J. Liu; L. Yang; J. Li
2-02-05:	#033	Self-Contained composition-space modeling of premixed deflagration and autoignition fronts F. Rong; M. Schneider; C. Hasse; B. Savard; H. Olguin; A. Scholtissek
2-02-06:	#034	Experiment and modeling of lubricating Oil-Induced Pre-Ignition in Ammonia/Hydrogen mixtures Z. Lian; L. Wang; S. Gu; H. Wei; J. Pan
2-02-07:	#035	Flame propagation limit and consumption speed of hydrogen-air flame in narrow channels C. Mejia-Botero; L. PRATABUY--TRAN-QUANG; Z. CHEN; P. Boivin; C. Almarcha
2-02-08:	#036	Unveiling hysteresis of dynamical modes in Triple-Flame systems H. Wang; T. Yang; Y. Chi; Z. Zhang; P. Zhang
2-02-09:	#037	External disturbances on nonlinear hysteresis of thermoacoustic instabilities in a partially premixed swirled flame P. Wang; K. Wu; Z. Wang; L. Yang; J. Li
2-02-10:	#038	A consistent filtered formulation for flame propagation with generic progress variables: Application to lean Hydrogen-Air flames C. Matteucci; D. Cavalieri; D. Schintu; P. E. Lapenna; F. Creta
2-02-11:	#039	Quantitative NO-LIF measurement of Fuel-NO production in NH3-H2 flames S. Yang; M. Han; F. Guethe; J. Berghthorson
2-02-12:	#040	Suppression of high-frequency thermoacoustic oscillations in a hydrogen jet flame via impinging jets P. zur Nedden; O. Montagne; C. O. Paschereit; A. Orchini
2-02-13:	#041	Propagation and corner dynamics of colliding and annihilating premixed flames M. D. Walker; S. L. Rzepka; C. K. Law; M. E. Mueller
2-02-14:	#042	Entropy generation rates in acoustically perturbed hydrogen flames D. Zhumabayeva; F. Young; U. Ahmed; R. S. Cant
2-02-15:	#043	Characteristics of polyhedral hydrogen-ammonia bunsen flames A. Saha; A. Hsing; J. G. Rivera Lizarralde; M. Sanchez-Sanz
2-02-16:	#044	Effect of acoustic forcing on the symmetry breaking of premixed flames in narrow channels C. Miao; H. Li; L. Benteux; D. M. Valiev
2-02-17:	#045	Chemical structure of laminar ammonia-hydrogen flames from premixed to diffusion regimes via multicomponent PLIF G. Wang; H. Xiao; T. F. Guiberti
2-02-18:	#046	The effects of oxygen doping and partial premixing on the structure, soot, and propagation of a planar mixing layer flame (PMLF) M. K. Ashour; C. P. Bjork; F. Carbone
2-02-19:	#047	Laminar flames confined in mesoscale rectangular aerogel channels Z. T. Negrette; M. Short; S. I. Jackson

2-02-20:	#048	Thermoacoustically-Induced flashback of pure hydrogen flames in a trapped vortex combustor Q. Wang; A. Gruber; N. A. Worth
2-02-21:	#049	Cell size distributions of hydrogen-air flames during propagation in Hele-Shaw burners C. Mejia-Botero; L. PRATABUY-TRAN-QUANG; C. Almarcha
2-02-22:	#050	Deep learning segmentation of Thermo-Diffusively unstable premixed spherical flames O. Birelli Schmid; C. Altantzis; C. E. Frouzakis
2-02-23:	#051	Effect of magnetic force on intrinsic instabilities in lean hydrogen flames V. Mysore Natesh; I. Langella
2-02-24:	#052	Flame dynamics and markstein numbers in Hele-Shaw cells and porous media under darcy's law P. Rajamanickam; J. Daou
2-02-25:	#053	Pressure scaling of laminar flame transfer function V. mouratian; M. Bothien
2-02-26:	#054	Dynamic behaviors of burning n-decane droplet suspended on NiCr wire under applied DC electric field Y. H. Jung; S. H. Kim; W. J. Lee; C. S. Yoo; J. Park; S. H. Chung
2-02-27:	#055	Impact of oxygenated aromatics on soot spatial distribution in n-heptane flames at elevated pressures Y. Wu; S. Hu; H. Li; L. Zhou
2-02-28:	#056	Dilution limits of N2 and CO2 for dual lean premixed methane/air tubular flames L. Beard; R. Pitz
Colloquium		3 - Fundamental Processes: Turbulent flames
2-03-01:	#057	On the scaling and shape of turbulent premixed jet flames A. Maffei; T. L. Howarth; M. Cafiero; F. Cameron; M. Gauding; J. Beeckmann; H. Pitsch
2-03-02:	#058	Comparison of flame-flame interaction statistics in planar and jet configurations with varying length scales S. Trivedi; H. F. Ahmed; A. Attili; M. Rieth; J. H. Chen; R. S. Cant
2-03-03:	#059	Extinction resilience of partially cracked turbulent ammonia bluff-body stabilized flames B. Xu; T. Su; N. A. Worth; J. van Oijen; R. Bastiaans
2-03-04:	#060	Validation of leading-point-concept-based approach to predicting an increase in turbulent burning rate due to diffusional-thermal effects Y. Wang; V. T. Mai; Z. Chen; S. Shy; A. N. Lipatnikov
2-03-05:	#061	Impacts of interactions of spark channel and turbulence on flame kernel development under engine conditions H. Bai; H. Chu; F. Ramognino; L. Sforza; H. Pitsch
2-03-06:	#062	Spherical turbulent flame propagation limits in ammonia, methane, hydrogen, dimethyl ether premixed flames with oxidizer of oxygen-nitrogen Y. Xia; X. Liu; N. Hashimoto; A. Hayakawa; H. Kobayashi

2-03-07:	#063	On displacement speed correlations for statistically planar turbulent premixed flames of NH ₃ and H ₂ fuel blends G. OZEL EROL; R. Khamedov; F. Hernández-Pérez; H. G. Im; N. Chakraborty
2-03-08:	#064	Why lean hydrogen flames propagate faster in intense turbulence under gas turbine conditions? Y. Yuvraj; A. Mukherjee; S. Saifullah; S. Chaudhuri
2-03-09:	#065	Turbulent flux of the combustion progress variable and its transport in small lewis number premixed flames: An experimental study A. Rostami; M. Nahvi; S. Kheirkhah
2-03-10:	#066	Turbulence effects on extinction/acceleration of premixed lean NH ₃ /H ₂ /air flame kernels C. Chi; M. Ihme; D. Thevenin
2-03-11:	#067	Direct numerical simulations of piloted bunsen flames of thermodiffusively-unstable fuel blends: Dual-Flame nature and variations with height A. Moitro; E. F. Hunt; A. J. Aspden
2-03-12:	#068	Numerical prediction of the flame transfer function for a turbulent hydrogen flame S. Dupre; Z. Lim; A. S. Morgans
2-03-13:	#069	Further assessment of damkohler's second postulation in high karlovitz number turbulent premixed flames S. S. Dammati; F. N. Egoľfopoulos; A. Y. Poludnenko
2-03-14:	#070	Burning limits and the role of small scale turbulence in high karlovitz number premixed flames P. Kumar; O. M. L. Gulder
Colloquium		4 - Fundamental Processes: Detonations and high-speed combustion
2-04-01:	#071	Three observations on cell formation in confined detonations A. Oladipo; S. S. Abisleiman; V. Sharma; J. Singh; V. Raman; S. Dwivedi; T. Hedman
2-04-02:	#072	Stabilized detonation triggered by a single ignition kernel in hypersonic ramp flow X. Shao; L. Shi; Z. Jiang; Z. Zhang; H. Teng; C.-Y. Wen
2-04-03:	#073	Experimental study of deflagration to detonation transition under elevated pressures X. Yu; S. Asma; N. Sandhu; L. Jin; M. Zheng
2-04-04:	#074	Impact of preferential diffusion on Deflagration-to-Detonation transition of hydrogen T. Zirwes; C. Grab; J. Melguizo-Gavilanes; A. Kronenburg
2-04-05:	#075	Experimental and numerical study on the High-Pressure detonation wave dynamics and fouling removal mechanism Q. Chen; J. Zhao; S. Li; X. Wei
2-04-06:	#076	Ddt run-up distance of stoichiometric hydrogen-methane-oxygen: Measured via high-speed visualization T. Elia; M. Moran; G. Ciccarelli
2-04-07:	#077	The influence of High-Sound-Speed confinement on detonation propagation in high explosives M. Short; C. Chiquete; S. J. Voelkel

2-04-08:	#078	The role of an inert layer in gas detonations within circular arc geometries S. J. Voelkel; M. Short; C. Chiquete
2-04-09:	#079	The burning mechanism of non-reacted pockets of gas in cellular detonations F. Zangene; W. Morin; M. I. Radulescu
2-04-10:	#080	Multivariate distribution analysis of detonation cell irregularity D. J. Lont; S. I. Jackson
2-04-11:	#081	Direct numerical simulation of a turbulent detonation in the wrinkled-reaction-zone regime B. Breer; G. Blanquart
Colloquium		5 - Fundamental Processes: Heterogeneous combustion and processes
2-05-01:	#082	H ₂ -Assisted combustion characteristics and emission control mechanism of stratified liquid ammonia and diesel sprays W. Chen; P. Dong; K. Nishida; W. Long; Z. Zhang; J. Cui; Q. Wang; H. Tian
2-05-02:	#083	Extending spalding's model for aluminum combustion with heat, mass and momentum transfer correlations L. Pillemont; O. Simonin; B. Bédard; G. Gai; D. Gauchard; A. Estève; C. Rossi
2-05-03:	#084	Constructing CuCe/SAPO-34 with enhanced activity for ammonia combustion via rapid joule heating R. Kang; L. Lu; X. Yi; W. Liang; F. Bin; X. Wei
2-05-04:	#085	Effects of pressure and diluents on the size properties of soot formed in methane-inverse diffusion flames R. Serrano-Bayona; T. Mitra; F. Campuzano; F. Aydin; P. Liu; W. L. Roberts
2-05-05:	#086	Thermal evolution of iron particles in combustion and iron oxide particles in hydrogen plasma reduction S. Bathaei; J. Thiel; M. Böke; N. Jüngst; A. von Keudell; C. Schulz
2-05-06:	#087	Unraveling the pyrolysis kinetics of ammonium perchlorate (AP) using synchrotron radiation photoionization mass spectrometry Z. Zhu; J.-Y. Lyu; X. Bai; Z. Wang; S. Cheng; H. Curran; Y. Li
2-05-07:	#088	Ab initio calculations and kinetic study of gas-phase pyrolysis of FOX-7 (1,1-diamino-2,2-dinitroethylene) J.-Y. Lyu; X. Bai; Q. Zhu; G. Xu; Y. Li; W. Yang
2-05-08:	#089	Deciphering the microscopic mechanism of cross-coupling interactions between cellulose and lignin during biomass pyrolysis Z. Zhang; J. Hu; H. Li; Z. Wang; H. Zhang; S. Wang
2-05-09:	#090	The synergistic effect mechanism of HCN formation during coal/NH ₃ co-pyrolysis D. K. Hong; H. Geng; S. Li; C. Wang
2-05-10:	#091	Visual characterization of aluminum combustion in air until 50 bar: New insights into regime transition and AlN formation H. Keck; S. Gallier; C. Chauveau; F. Halter
2-05-11:	#092	Numerical study on the interactions between two approaching droplets in air crossflow Y. Bai; C. Chu; Y. Chen; X. Xia

2-05-12:	#093	Heterogeneous combustion of HMX-containing AP/HTPB propellants with detailed kinetics P. Bernigaud; L. François; D. Davidenko
2-05-13:	#094	Combustion mechanism of magnesium tetraboride A. Molina; M. J. Camarena; E. Shafirovich
2-05-14:	#095	Quantum chemical kinetic modeling of condensed phase guanidinium nitrate: A detailed mechanism validated by laser Pyrolysis/FTIR J. Patel; A. Chowdhury; N. Kumbhakarna
2-05-15:	#096	A chemically detailed model for the combustion of a single magnesium particle in air, CO ₂ and H ₂ O Z. Wang; S. Cheng; F. Sewerin
2-05-16:	#097	Impact of secondary air injection jets on flow field, soot profile and PAH distribution in jet A-1 spray flames R. Maurya; D. Cormier; Ö. Gülder
2-05-17:	#098	Carrier-Phase LES of iron-powder combustion in a jet-in-hot-coflow burner - insights on flame structure and ignition characteristics S. S. Hemamalini; X. Mi
2-05-18:	#099	Spatial-Temporal resolved investigation on ignition characteristics of isolated Micro-Aluminum particles D. Qin; Z. Hu; J. Li; Z. Liu
2-05-19:	#100	Solvent-Controlled synthesis routes in a premixed stagnation flame of high-entropy-oxide nanoparticles L. A. Li; G. Yina; M. Chang; I. Rahinovic; B. Zhou
2-05-20:	#101	Modeling ammonia droplet burning in microgravity with detailed kinetics and non-ideal thermodynamics A. Cuoci; A. Frassoldati
2-05-21:	#102	Evaluation of iron flame discreteness in monoatomic gases based on single particle combustion behaviour H. Heng; H. Keck; C. Chauveau; F. Halter; J. Bergthorson
Colloquium		6 - Enabling Models, Methods, Tools & Technology: Diagnostics and experimental methods
2-06-01:	#103	Dual-Wavelength neural reconstruction of soot volume fraction, temperature and maturity in inverse and normal diffusion flames V. Yap; J. Gallardo; M. Littin; F. Escudero; J. Yon; A. Fuentes; R. Demarco
2-06-02:	#104	Local flame structures in turbulent multi-regime H ₂ /CH ₄ -air flames with varying H ₂ content S. Shi; T. Li; J. Knubel; R. Schultheis; R. S. Barlow; D. Geyer; A. Dreizler
2-06-03:	#105	Flame diagnostics based on measurement of diffusive-thermal oscillations characteristics A. Moroshkina; V. Rogozhnikov; E. Sereshchenko; V. Mislavskii; S. Minaev; V. Bykov; V. Gubernov
2-06-04:	#106	Quantitative electric field diagnostics in Plasma-Flame interaction via Machine-Learning-Assisted inverse E-FISH M. Alicherif; E. Sugeng; Z. Yang; T. L. Chng; D. A. Lacoste
2-06-05:	#107	Synergistic potassium diagnostics: Laser absorption and surface ionization in a High-Temperature reactor V. Andersson; E. Thorin; T. Allgurén; F. M. Schmidt; K. Andersson

2-06-06:	#108	A new deep learning method for temperature determination from CPP-fs-CARS spectra C. BONNEFOY; A. POUX; B. BARVIAU; F. GRISCH
2-06-07:	#109	Turbulent flame speeds in premixed hydrogen combustion measured using tomographic imaging H. Chen; S. Hochgreb; A. Dreizler; T. Li
2-06-08:	#110	Atmospheric flame thermometry using the femtosecond laser-induced grating scattering technique L. Chen; Z. Hao; Z. Zhu; Z. Liu; B. Hu; P. Din
2-06-09:	#111	Tomographic imaging of reactive hydrogen and spatial resolution study C. T. Foo; A. Müller; K. Mohri
2-06-10:	#112	Flame ice cold-trap for characterization of trace soot precursors in laminar flames F. G. Juarez; H. Bayat; J. Camacho
2-06-11:	#113	Ultra-high-speed chemiluminescence tomography of spinning-mode detonation waves A. K. Singh; M. Gomez; K. Y. Cho; S. W. Theuerkauf; A. W. Skib; S. J. Grauer
2-06-12:	#114	On the efficacy of anisole as a tracer for hydrogen A. Sridhara; A. Zubairova; C. Brackmann; M. Richter
Colloquium		7 - Enabling Models, Methods, Tools & Technology: Modeling approaches
2-07-01:	#115	Uncovering flame physics with machine learning: Application to the reaction rate in hydrogen flames A. Attili; L. Nista; T. Baffetti; G. Arumapperuma; S. Al Kassar; L. Berger; C. Schumann; T. Grenga; H. Pitsch
2-07-02:	#116	Efficient modelling of non-gray radiation in a swirl turbulent ammonia flame using compensatory Physics-Informed neural networks H. Di; Z. An; R. Mao; C. Wang; X. Liang; Z. X. Chen; R. Kurose
2-07-03:	#117	A molecular descriptor-driven machine learning framework for mixed plastic pyrolysis: Reactivity prediction and mechanistic insights X. Hu; J. Xu; K. Xu; L. Jiang; Y. Wang; S. Su; S. Hu; J. Xiang
2-07-04:	#118	On the optimization of reaction progress variables in reacting flows using machine learning Y. Zhuang; S. Xu; S. Zhong; Y. Zheng; N. Liu; W. Cai
2-07-05:	#119	Les-Crn investigation of pressure effects on NOx in ammonia/hydrogen combustion R. Lamioni; L. Mazzotta; R. Meloni; G. Babazzi; A. Valera-Medina; C. Galletti
2-07-06:	#120	Bayesian kinetic coreset (BKC): Representative data subset for combustion kinetic model optimization C. Liu; C. Tao; C. Li; Z. Liu; C. K. Law; Y. Bin
2-07-07:	#121	A coupled 1D Jet-Reactor framework for simulating ammonia and Ammonia-Hydrogen jet ignition in hot co-flow conditions T. Strickland; D. Lopez-Pintor; R. Dibble; J. Maria Garcia-Oliver; R. Rajasegar
2-07-08:	#122	Numerical investigation of the combustion of charged kerosene sprays in a jet-flame configuration N. S. Lalli; M. Blandino; R. Malpica Galassi; P. P. Ciottoli; A. Giusti

2-07-09:	#123	Developing multi-field sparse reconstruction digital twins: A study in ammonia combustor L. Wang; J. Chen; A. Piscopo; A. Parente; S. Deng
2-07-10:	#124	Data-Driven detection of flame shape transitions in a two-stage lean premixed aeronautical combustor E. Mateo; A. Renaud; B. Podvin; S. Iavarone
2-07-11:	#125	Modeling of head-on quenching by wall thermal characteristics for hydrogen/air flames M. Baek; M. Choi; H. Kim; D.-H. Shin
2-07-12:	#126	Modelling PAH in LES of turbulent Non-Premixed flames using convolutional neural networks G. Arumapperuma; D. Bakkalian; A. Attili
2-07-13:	#127	The effect of pressure on NOx formation and flamelet modeling for thermodynamically unstable premixed NH3/H2 flames with wall interaction N. Chen; T. Zirwes; X. Wen
2-07-14:	#128	Incomplete micro-mixing in Jet-Stirred reactors revisited. Part 1: Modeling framework S. S. Goldsborough; J. S. Santner; R. Whitesides
2-07-15:	#129	Function-Onfunction regression for predicting fuel distillation curves from absorption spectra A. Moro; K. Brezinsky; P. T. Lynch
Colloquium		8 - Enabling Models, Methods, Tools & Technology: Numerical techniques
2-08-01:	#130	Transformer-Based prediction of octane numbers incorporating reaction kinetic features H. An; J. Zhang; P. Han; D. Han; Z. Huang; H. G. Im
2-08-02:	#131	Sensor placement optimization for turbulent non-premixed cracked ammonia flame C. Zhang; S. Wu; W. Liang; B. Yang; K. Luo
2-08-03:	#132	Pareto efficient combustion modeling for heat release and wall heat flux prediction in a scramjet combustor M. Bonanni; N. Perakis; A. Norris; M. Ihme
2-08-04:	#133	Optimizing progress variable for supercritical flames using an encoder residual artificial neural network R. Zuo; M. Zhou; G. Ribert; X. Wang
2-08-05:	#134	Interpretable and Data-Efficient learning of reactive flow with operator splitting-informed dual networks K. Li; Y. Weng; D. Zhou; X. Lu
2-08-06:	#135	Physics-Informed Thermo-Kinetic learning for Data-Efficient prediction of battery thermal runaway across chemistries Z. Cheng; W. Mei; J. Sun; Q. Wang
2-08-07:	#136	Effect of crevice volume and wall quenching on NH3 and NOx emissions in Ammonia-Hydrogen fired engines T. Franken; M. Pasternak; R. B. Siddareddy; F. Mauss

Colloquium		9 - Enabling Models, Methods, Tools & Technology: Enabling concepts
2-09-01:	#137	Mechanism of gliding-arc-assisted combustion in a tandem dual-cavity scramjet combustor Z. Zhang; S. Shao; M. Sun; Y. Ban; Z. Chen; T. Tang; Y. Tian; F. Zhang; J. Wu; J. Zhu
2-09-02:	#138	Plasma-Driven NH3 reforming: Numerical and experimental analysis with integrated CRDS M. Bernard; B. C. Harrod; G. Faingold; S. Shen; V. Blanchard; N. Druker; B. C. Windom; A. P. Yalin; J. K. Lefkowitz
2-09-03:	#139	Effect of microsecond-pulsed tip-to-plane plasma on non-premixed swirling biogas/air flames T. BOUSHAKI; A. Ghabi; A. Morel; M. Hassene; H. Idrissi; B. Sarh; E. Robert; P. Escot Bocanegra
2-09-04:	#140	Large-Eddy simulation of plasma-assisted ammonia turbulent premixed flame: Nox emissions N. Barléon; H. Gillingham; T. Naess; N. N. Shohdy; T. Lesaffre; D. A. Lacoste
2-09-05:	#141	Cavity-Stepped arc plasma enhanced flameholding under near-blowout conditions in a scramjet combustor Y. Tian; M. Wan; M. Sun; C. Kong; J. Zhu
2-09-06:	#142	Measuring reaction enthalpies of a perovskite oxygen carrier for chemical looping combustion X. Wu; D. Wang; J. Ma; H. Zhao
2-09-07:	#143	Laser ablation ignition targeting a heated metal surface for Ammonia-Air mixtures: Experimental and numerical investigation T. Wakasugi; D. Tsuru; R. Kai; H. Watanabe
2-09-08:	#144	Low-Carbon heat generation using a fluidized bed catalytic reactor-based self-decarbonizing combustor K. S. Akojwar; S. A. Pawar; M. He; S. Chaudhuri
2-09-09:	#145	Oxygen carrier aided gasification of biomass for enhanced syngas production Q. Zeng; P. Wang; C. Zheng; H. Zhao
Colloquium		10 - Applications: Energy and material conversion and heating processes
2-10-01:	#146	Impact of NH3 and H2 addition on soot formation in High-Temperature air / methane combustion field Q. Wang; N. Hashimoto; K. Tsuchida; X. Liu; Y. Xia; H. Nakamura; Y. Konno; O. Fujita
2-10-02:	#147	Catalyst-Free NH3 synthesis via a dielectric barrier discharge reactor under ambient conditions J. Sun; L. Taphorn; K. Yamada; A. Cost; Y. Li; Y. Ju; T. Li
2-10-03:	#148	Tracing the gas-solid evolution of oxygen carrier aided combustion via experimental and CFD study in a industrial-scale biomass CFB boiler G. Sun; L. Li; S. Zhang; H. Tang; D. Lu; L. Duan
2-10-04:	#149	Ethanol sensing with SnO2-doped NiO nanoparticles synthesized via flame spray pyrolysis S. He; F. Xie; Z. Chen; Z. Xu; H. Zhao
2-10-05:	#150	On the limits of stability of CO2 diluted turbulent oxyflames for CCUS applications L. Pirateque-Henao; B. Lecordier; C. Lacour; A. Cessou; D. Honoré
2-10-06:	#151	Highly-Dispersed Pt/CeO2 catalyst for low-temperature CO oxidation prepared by flame-spray pyrolysis T. Nagasawa; P. Li; N. Toma; H. Kosaka

2-10-07:	#152	Effect of fuel equivalence ratio on the oxygen evolution performance of co-based catalysts prepared by flame spray pyrolysis Z. Xin; S. Wu; H. Yang
2-10-08:	#153	Spatial repartition of unburned fuel emissions from methane jet flames in laminar and turbulent crossflows M. Lenninger; G. Lartigue; T. Schuller
2-10-09:	#154	Nox emission from hydrogen-enriched natural gas combustion: Effects of premixing between fuel mixture and air N. Bebinger; K. T. Jeon; J. G. Lee
2-10-10:	#155	Pilot-Scale study on the effects of natural gas and hydrogen co-firing in a cement kiln S. Shimoda; I. Kuroiwa; K. Tanaka; K. Kitazawa; J. Terasakia; H. Matsuura
Colloquium		11 - Applications: Low-speed propulsion
2-11-01:	#156	Influence of H ₂ addition on emission characteristics of SAF/Jet-A1 blend in a low-swirl combustor F. Picca; S. Singh; F. Sasso; E. A. Scelzo; M. Commodo; F. Hagen; S. Harth; D. Trimis; A. D'Anna; H. Bockhorn
2-11-02:	#157	Premix-Tomicromix transition for hydrogen flames at engine-relevant conditions A. Durocher; M. Fri; J. Sirois; C. Charreton; D. May; S. Yun; P. Vena
2-11-03:	#158	Effects of high-frequency sweeping injection on flame structure and fuel distribution of bluff-body stabilized spray flames J. Wang; X. Cai; K. Li; Y. Liu; S. Wang; C. Tang; J. Wang; Z. Huang
2-11-04:	#159	Optical diagnostics and chemical kinetic analysis on neat methanol glow-plug assisted compression ignition X. Zhang; C. Jin; Z. Ming; H. Liu; M. Yao
2-11-05:	#160	Effects of effusion cooling on flame-wall interaction: A DNS study M. Broumand; J. Son; S. Kashanj; S. Yun; Z. Hong
2-11-06:	#161	A study of flame-flame interactions in wet ammonia/n-heptane dual-direct injection engines M. W. U. R. Siddiqui; A. Haider; S. Karimkashi; J. Hyvnen; V. Vuorinen
2-11-07:	#162	Spatiotemporal dynamics of thermoacoustic instability in a dual-swirl combustor T. Yamamoto; T. Sumiyoshi; T. Tamura; Y. Nabae; H. Gotoda
2-11-08:	#163	Evolutionary control of self-excited thermoacoustic instabilities in an axially staged hydrogen combustor B. Yin; A. Ånestad; E. ÅEsy; N. Worth; L. Li
2-11-09:	#164	Plif exploration of near-wall CO emissions during a flame-cooling air interaction P. XAVIER; A. Blaise; G. Godard; F. Grisch
2-11-10:	#165	Moderating the burn rate in a hydrogen spark-ignition engine with ammonia A. Sherwood; Y. Yang; M. Brear

Colloquium		12 - Applications: High-speed propulsion and energetics
2-12-01:	#166	Experimental and numerical investigation for reaction propagation in laser-ignited B/CuO thermite pellets D. Xu; S. Zhang; T. Wen; W. Han; Y. Tang; Y. Jiang
2-12-02:	#167	High-Speed measurement of shock wave propagation and OH* chemiluminescence during explosive ignition for hydrazine/nitrogen tetroxide propellants N. Sako; K. Goto; Y. Daimon; T. Haga; H. Negishi
2-12-03:	#168	Hysteresis in thermoacoustic combustion instability for hydrogen-rich combustion in a model ramjet combustor S. Nakaya; K. Omi; H. Taguchi; M. Tsue
2-12-04:	#169	Scaling law for oblique-detonation-wave/boundary-layer interaction length X. Tong; Y. Wang; Q. Wen; Z. Chen
2-12-05:	#170	Laser ignition of a CH ₄ -O ₂ model rocket combustor at sub-atmospheric pressure A. M. Warner; R. M. Strelau; R. M. Gejjii; C. D. Slabaugh
2-12-06:	#171	Effects of the back-propagation on the total pressure gain of the rotating detonation combustor Z. Jiao; K. Wang; X. Wang; W. Fan
2-12-07:	#172	Large eddy simulations and data analytics of rotating detonation combustion Y. Lim; T. Nilsson; C. Fureby
2-12-08:	#173	INTENTIONALLY BLANK
2-12-09:	#174	Experimental study on the self-excited combustion instabilities in a coaxial GOX/GCH ₄ bi-swirl injector R. R. Konat; I. R. P. Krishna; R. Sadanandan
2-12-10:	#175	3d simulation of helical rotating detonation combustors: Propagation and propulsion analysis J. Hu; B. Zhang
2-12-11:	#176	Ultrasonically enhanced liquid jet injection for improved atomization and combustion performance D. Cruz; C. Clark; S. Salaudidin; K. Nguyen; J. Friend; K. Ahmed
Colloquium		13 - Applications: Fire and safety
2-13-01:	#177	Pyrolysis of pine needle during lightning discharge: Experimental analysis and numerical simulation H. Zhu; Y. Liu; J. Lei; N. Liu; H. Zhang; X. Xie; L. Zhang; C. Ma
2-13-02:	#178	Smoldering fires of organic wastes induced by disposed pouch lithium-ion batteries: Effects of state of charge and capacity Y. Chen; Y. Zhang; L. Zhang; Y. Su; W. Xie; S. Lin; X. Huang
2-13-03:	#179	Effects of ullage height on the radiation characteristics of pool fires Z. Yin; M. Jangi; C. Liu; P. Huang; L. Yu; H. Jin
2-13-04:	#180	Coupled mechanism of charring and crack growth in the bending failure of timber beams under localized fire W. Chu; J. Fang; R. Zhou; D. Ran; Y. Hu; Y. Wang

2-13-05:	#181	Train fires in the high-altitude tunnel under longitudinal ventilation: Burning rate evolution and a calculation model Y. Chen; A. Jiao; J. Han; J. Luo; W. Ma; C. Fan
2-13-06:	#182	Near-Field hydrogen fluoride detection in overcharged 18650 Lithium-Ion cells during thermal runaway A. F. Alsewailem; J. Subburaj; V. Gupta; M. J. Dunn; A. R. Masri; A. Farooq
2-13-07:	#183	Dual kinetic effects of dimethyl methylphosphonate on dimethyl carbonate oxidation in a jet-stirred reactor B. Liu; R. Bo; S. Guo; Y. Guo; Y. Wu; H. Zhao
2-13-08:	#184	Transition from smouldering to flaming combustion of pine needle fuel beds under natural convection: A computational study Y. Qiao; J. Yang; H. Chen; N. Liu; H. Zhang; J. Zhang
2-13-09:	#185	Experimental study of mass pyrolysis rate and flame merging of tandem unequal pool fires under crosswinds L. Deng; M. A. Delichatsios; C. Shi; P. Hu; X. Peng; F. Tang
2-13-10:	#186	Characterization of flame merging, geometry, and radiation in multiple fires by computed tomography Z. Lu; J. Lei; Y. Yuan; W. Gao; N. Liu
2-13-11:	#187	Flame dynamics and radiation emissivity of pool fires under the influence of ullage height B. Li; Z. Zha; J. Ji; X. Huang; A. Usmanic
2-13-12:	#188	In situ generation of alginate gel foam via heat-accelerated calcium ion release for lithium-ion battery fire suppression and prevention X. Yu; S. Lu; M. Xu; K. Li; M. P. Wan; Z. Yang
2-13-13:	#189	Experimental study on facade-ejected flame from a dual-opening compartment under crosswind conditions X. Sun; Y. Han; X. Wang; N. Zhu; L. Hu
2-13-14:	#190	A dual-criterion model for predicting LDPE electrical wire flammability limits in diluent gas environments Y. Ma; S. Ding; Z. Guo; Y. Gu; L. Hu
2-13-15:	#191	Flame morphology of rectangular fires in crosswinds: Experiments and FireFOAM simulations F. Tang; S. Tao; Y. Chen; K. Fukumoto; J. Wen
2-13-16:	#192	Experimental study on the oscillation behaviors of diffusion jet flame under hypergravity L. Fu; J. Lv; X. Shi; L. Hu
2-13-17:	#193	Resolving oxygen mass transfer coefficient of smolder-ing combustion by evolving models switched from the intrinsic kinetic to the oxygen-transport limiting re-gimes C. Zhao; T. Ye; Z. Yu; Z. Song
2-13-18:	#194	Analytical modeling framework of battery thermal runaway ignition induced by short circuits S. Da; Y. Tang; C. Li; W. Han
2-13-19:	#195	Effect of crosswinds on the burning characteristics of natural gas fire from underwater gas leak F. Tang; X. Peng; J. X. Wen
2-13-20:	#196	Quantitative multispectral imaging of combustion products in a laminar diffusion flame M. M. Flores; R. Falkenstein; A. Hamins

2-13-21:	#197	Investigation on the ceiling jet behavior of inclined timber ceiling with the impingement of an incipient fire source Z. Qi; H. Hu; J. Ji
2-13-22:	#198	Directional pulsation characteristics of buoyant diffusion flames in crossflow using three dimensional modal decomposition S. Simons-Wellin; P. Bevington; P. E. Hamlington
2-13-23:	#199	Effect of ammonia addition on the formation of nitrogen-containing polycyclic aromatic hydrocarbons during toluene oxidation N. Tanishita; S. Sasaki; S. Hiyama; K. Moriya; Y. Sakai; K. Tanaka
2-13-24:	#200	Downstream heat flux behavior in turbulent wind-driven boundary-layer flames A. Srivastava; B. Sandeep; A. V. Singh

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WEDNESDAY AT A GLANCE

8:30-10:00	Main Hall	Morning Announcements Plenary Lecture - Zheng Chen <i>Chairs: H. Im; K. Maruta</i>
10:00-10:30	Break (30 Minutes)	
10:30-12:20	Poster Paper Presentations (Event Hall)	
12:20-13:00	Lunch	

Excursions

All buses depart at 13:00

Hieizan Enryakuji Tour



Toei Kyoto Studio Park Tour



Excursions

Nijo Castle & Kawamura Noh Theater "The Enjoy Noh Program"



Buses will arrive to dinner at 17:00

- For those who are not attending the dinner, buses will depart Funatsuru Kyoto Kamogawa Resort at 17:30

Dinner will be held at the Funatsuru Kyoto Kamogawa Resort



Wednesday		Chairs: Y. Yang;
Colloquium		1 - Fundamental Processes: Chemical Kinetics
3-01-01:	#001	Theoretical and kinetic study of h-atom abstraction reactions from alkyl cyclohexanes by NH ₂ radical Q.-M. Ding; X. Ding; Z. Li; H. Liu; Z. Zhang; S. Huang; S. Cheng; Y. Cui; C.-W. Zhou; H. J. Curran
3-01-02:	#002	Effect of triethylamine on ignition delay of its mixtures with an endothermic fuel of exo-THDCPD as an additive J. Seong; J. Choi; H. S. Han; J. Son; E. Choi; H. S. Sim; D. Park; B. Jeong; C. H. Sohn
3-01-03:	#003	Decoding the chemical evolution in incipient soot using ultra-high-resolution mass spectrometry T. Mitra; A. Faccinetto; V. Samaras; M. Commodo; P. Minutolo; X. Mercier; A. D'Anna; W. L. Roberts
3-01-04:	#004	An experimental and kinetic modelling study of ammonia blends with n-Decane as a diesel fuel surrogate H. S. SARAEE; Y. Zhu; S. Zhou; M. Raza; P. Wang; J. Liu; K. Senecal; H. Curran
3-01-05:	#005	Pyrolysis study of trimethyl phosphate: Impact of unimolecular decomposition reactions K. Kanayama; C. M. Grégoire; T. Tezuka; R. Matsumoto; K. Maruta; E. L. Petersen; O. Mathieu; H. Nakamura
3-01-06:	#006	Homo-Lumo gaps of polycyclic aromatic hydrocarbon pi-Radicals and their dimers A. Nobili; N. Kateris; A. S. Jayaraman; L. Pratali Maffei; W. Zhang; E. S. Genter; H. Wang
3-01-07:	#007	Towards fuel-bound sulfur chemistry: Insights from comparative heterocycle experiments and modeling M. Mehl; M. Pelucchi; Z. Serinyel; G. Dayma; H.-Q. Do; B. Lafort; S. S. Goldsborough
3-01-08:	#008	Experimental and kinetic study on pyridine oxidation at 24 atm S.-W. Yao; L.-N. Wu; X.-P. Yu; J.-M. Lei; J.-H. Yang; H.-Z. Lu; Z.-Y. Tian
3-01-09:	#009	Combustion kinetics of o-cresol: Integrating High-Level theoretical kinetics and laminar burning velocities measurements J. Guo; L. Zhong; Z. Wang; S. Li; D. Wei; S. Tang; J. Wang; Q.-D. Wang
3-01-10:	#010	Kinetics of the reaction between propan-2-yl radical and molecular oxygen: Experiments and master-equation simulations A. J. Eskola; J. S. Ruotsalainen; T. T. Pekkanen; A. S. Zalte; M. P. Rissanen; W. H. Green
3-01-11:	#011	Quantifying Facility-Induced variability and uncertainty in RCM sampling B. Ran; Y. Wu; Y. Li; S. S. Goldsborough; S. Cheng
3-01-12:	#012	A systematic theoretical study of Ipso-Addition rate constants involved in PAH growth T. Fages; R. Fournet; B. Sirjean; R. Veillet; P.-A. Glaude
3-01-13:	#013	Two-Dimensional quantum dot theory for polycyclic aromatic hydrocarbon molecules, ions and radicals N. Kateris; A. Nobili; M. Raghuraman; A. S. Jayaraman; H. Wang
3-01-14:	#014	INTENTIONALLY BLANK
3-01-15:	#015	The role of H ₂ as a collider in ammonia kinetics A. K. Borkowski; A. W. Jasper; P. Glarborg; S. J. Klippenstein; R. Sivaramakrishnan

3-01-16:	#016	New insights into the combustion reaction kinetics of ethylene/nitrous oxide green propellant at intermediate temperatures H. Zhang; D. Liu; Y. Zhu; M. Gong; L. Zhang; X. Zhang
3-01-17:	#017	Unraveling the positive ion chemistry in ammonia-methane flames A. V. Cherepanov; V. G. Kiselev; A. A. Chernov; A. G. Shmakov; D. A. Knyazkov
3-01-18:	#018	Experimental measurements and kinetic modelling of propylene carbonate flames at O ₂ reduced and CO ₂ diluted conditions L. Dai; C. Tao; C. Zhang; Q. Wang
3-01-19:	#019	Stochastic modeling of PAH growth along diffusion flame streamlines E. McCaughey; P. Elvati; A. Violi; J. H. Miller
3-01-20:	#020	Revisiting transport properties and the implications to combustion modeling - a hydrogen case study R. Xu; B. Yu; F. N. Egolfopoulos; H. Wang
3-01-21:	#021	Pressure-Dependent kinetics of cyclopentene consumption A. V. Copan; A. S. Carroll; B. Rotavera
3-01-22:	#022	Towards quantifying uncertainties due to 'missing chemistry' E. Kane; J. Lee; M. Burke
3-01-23:	#023	Unifac functional groups are not a sufficient basis for generating universal fuel surrogates A. Abraham; K. Brezinsky; P. T. Lynch
3-01-24:	#024	Mapping kinetic bottlenecks in soot precursor growth via graph analysis of stochastic trajectories M. Raymond; P. Elvati; A. Violi
3-01-25:	#025	Non-Linear aromatic/cycloalkane blending effects on soot characteristics of surrogate aviation fuel blends L. Krebbers; A. M. Ferris
3-01-26:	#026	Ab initio Sub-Mechanism development for cyclopentene oxidation A. W. Hill; D. A. Moore; S. G. Lewis; A. V. Copan; B. Rotavera
3-01-27:	#027	Combined in-situ and ex-situ approach for elucidating the role of PAH molecules, clusters and radicals in soot inception B. Apicella; A. Faccinetto; C. Russoa; X. Mercier
3-01-28:	#028	Autoignition of oxygenated gasoline under EGR and hydrogen enrichment: Experiments and kinetic modeling K. Aljohania; A. Farooq
3-01-29:	#029	Investigation of ignition delay times of Oxygen-Enriched methane mixtures using a rapid compression machine S. Spanó; Y. Murakami; F. Foucher; A. Parente; A. Coussement; F. Contino; H. Jeanmart
3-01-30:	#030	Formation of aromatics in a 2,5-dimethylfuran-isooctane laminar premixed flame K. SOOD; S. GOSSELIN; S. SUZUKI; L. GASNOT; L.-S. TRAN

Colloquium		2 - Fundamental Processes: Flame Dynamics and Transport Processes
3-02-01:	#031	Non-Monotonic liftoff height and blowout behaviors of laminar coflow-jet flames in sub-atmospheric pressures S. Tao; Y. Chen; C. Liu; M. Wang; J. Fang; J. Park; S. H. Chung; L. Hu
3-02-02:	#032	Laminar flame speed of Shock-Heated Cyclohexane/Airgon mixtures in the negative temperature coefficient regime J. zou; X. Zhang; M. Wang; T. A. Kashif; J. Subburaj; X. Gao; A. Farooq
3-02-03:	#033	A numerical investigation of hydrogen flame instabilities at high pressures and temperatures K. Van; K. Van; S. Oh; W. Bristow; J.-W. Park; Y. Pei; F. Egolfopoulos; F. Egolfopoulos
3-02-04:	#034	Flame propagation speed of Ammonia/Hydrogen mixtures at high temperature and pressure: Experimental and kinetic analysis L. Wang; Z. Lian; X. Mao; C. K. Law; H. Wei; J. Pan
3-02-05:	#035	Influence of burner surface temperature inhomogeneities on oscillation characteristics of premixed flames P. Golda; P. Shrotriya; V. Bykov; R. Schießl; U. Maas
3-02-06:	#036	On the importance of 2D modeling for burner-stabilized ammonia flames A. Cuoci; P. Desgroux; N. El Baba; A. Frassoldati; N. Lamoureux
3-02-07:	#037	Study on flame stability and extinction limit of Powder-Gas hybrid combustion Y. JIANG; A. KAMIYA; A. TAYAMA; D. MATSUGI; Y. NAKAMURA
3-02-08:	#038	Effects of pressure on flame structure of NH ₃ /H ₂ under high-temperature coflow conditions Z. Chang; H. Wang; L. Lin; K. Luo; J. Fan
3-02-09:	#039	Ignition delay time of n-heptane under strained flow field in a counterflow configuration M. K. Yoon; A. K. Alwahaibi; F. L. Dryer; S. H. Won
3-02-10:	#040	Effect of ammonia addition on flashback characteristics in laminar premixed hydrogen-air flames X. Yang; M. Wang; L. Li; X. Liu
3-02-11:	#041	Transient dynamics of extinction and reignition events in bluff-body stabilized premixed flames U. Medina; F. E. Hernandez Perez; T. Tomidokoro; H. G. Im
3-02-12:	#042	Distinctive behaviour of triple flames in unstrained versus strained mixing layers R. daou; S. Xie; J. Daou; Z. Chen
3-02-13:	#043	Remote ignition mechanisms in Methane/Air mixtures behind reflected ShockWaves T. A. Kashif; J. Subburaj; A. Farooq
3-02-14:	#044	Thermal expansion effects on edge flames in a merging shear flow X. Hou; Z. Lu; M. Matalon
3-02-15:	#045	Cellular deflagration and explosion of ozone sensitized methane and ethylene flames inside a spherical vessel F. Khan; M. Adil; W. L. Roberts

3-02-16:	#046	Numerical study of inverse H2O2 droplet combustion in methane-nitrogen atmospheres under microgravity A. Cuoci; A. Frassoldati
3-02-17:	#047	Experimental study of lewis number effects on the premixed flame quenching in narrow channels A. Nolte; K. A. Heufer
3-02-18:	#048	Dynamic quenching limit for premixed flames in channels X. Hu; D. M. Valiev
3-02-19:	#049	Ignitions by conventional and nanosecond repetitively pulsed discharges in quiescent and flowing mixtures at sub-atmospheric pressure V. T. Mai; S. Shy
3-02-20:	#050	Boundary layer flashback of cool and hot DME/air flames in channels L. Benteux; D. M. Valiev
3-02-21:	#051	Mapping soot formation and sudden reversal in Oxygen-Enriched ethylene laminar flames at elevated pressures A. Nobakht; A. E. Karatas; A. E. Kataris
3-02-22:	#052	Multiplicity of stable non-axisymmetric solutions for edge flames in circular channels C. Jimenez; V. Kurdyumov
3-02-23:	#053	Flickering induced local quenching phenomena of lean premixed flame formed in a coaxial burner Y. Yahagi; Y. Hasegawa
3-02-24:	#054	Flame propagation characteristics of decomposed ammonia mixtures in a rapid compression machine J. H. Bicksler; B. C. Windom
3-02-25:	#055	Propagation and structure of laminar Methane-Air flames under supergravity conditions W. Liang; C. K. Law
3-02-26:	#056	Extinction behavior in laminar counterflow spray flames F. Sato; X. Zhao
Colloquium		3 - Fundamental Processes: Turbulent flames
3-03-01:	#057	Scaling laws for thermodiffusively unstable lean premixed turbulent Hydrogen-Air flames M. Gauding; T. Lehmann; T. Howarth; L. Berger; M. Rieth; A. Gruber; J. H. Chen; W. Song; M. Day; E. Hunt; A. Aspden; H. Pitsch
3-03-02:	#058	Flame interactions in two-stage swirling combustion with partially cracked ammonia J. Li; M. Peng; S. Boset Rojas Chavez; S. Kumar Soni; S. Xie; A. Hayakawa; A. Valera-Medina; H. Zhang
3-03-03:	#059	A direct numerical simulation study on NO and N2O formation in a temporally evolving ammonia jet flame under ammonia-diesel dual-fuel engine conditions Z. Jin; T. J. P. P. Karpowski; S. Xu; H. Nicolai; V. Schuh; D. Zhou; C. Hasse; X. Lu
3-03-04:	#060	Scalar field characterization of turbulent premixed partially cracked ammonia swirl flames S. B. ROJAS CHAVEZ; H. Hu; P. Ma; J. Li; S. Kumar Soni; S. Xie; H. Zhang

3-03-05:	#061	Modeling and application of a curvature-based subgrid scale wrinkling factor for turbulent lean hydrogen-air flames D. Cavalieri; G. Troiani; D. Cecere; D. Schintu; P. E. Lapenna; F. Creta
3-03-06:	#062	On the saturation of thermodiffusive effects in turbulent partially cracked ammonia premixed flames R. Intranuovo; S. Zitouni; F. G. Schiavone; P. Bréquigny; C. Mounaim-Rousselle; D. Laera
3-03-07:	#063	Numerical simulation of flame lift-off dynamics in a hydrogen dual-swirl burner T. Riou; M. Vilespy; H. Magnes; T. Poinso; G. Daviller; L. Selle
3-03-08:	#064	Effect of difference-frequency velocity fluctuations on the nonlinear response of a swirling flame J. ZHANG; L. LI; J. ZHENG; L. XU; F. QI; Y. GUAN
3-03-09:	#065	A DNS study of ignition characteristics and flame structures in reacting subsonic and supersonic turbulent mixing layers C. Wang; H. Wang; E. R. Hawkes; K. Luo; J. Fan
3-03-10:	#066	Direct numerical simulations of soot evolution in turbulent non-premixed flames at elevated pressures J. Lin; T. Yan; D. Zhou; X. Lu
3-03-11:	#067	Direct numerical simulation of MILD combustion: Mixing and autoignition from Non-Premixed streams L. Frascino; G. Scialabba; H. Chu; H. Pitsch
3-03-12:	#068	Flow configuration and pressure effects on turbulent premixed hydrogen jet flames T. Howarth; T. Lehmann; M. Gauding; H. Pitsch
3-03-13:	#069	Edge flame dynamics in hydrogen/n-dodecane dual-fuel turbulent mixing layers S. Gu; E. R. Hawkes; A. Wehrfritz; H. Wang
3-03-14:	#070	Bluff-Body stabilized non-premixed NH ₃ jet flames under hot and diluted coflow conditions L. Ren; A. Alfazazi; S. Kumar; B. B. Dally
3-03-15:	#071	Statistical analysis of the resolved strain rate state in large eddy simulations of a swirling premixed flame A. Ercole; D. Lörstad; C. Fureby
Colloquium		4 - Fundamental Processes: Detonations and high-speed combustion
3-04-01:	#072	Identification of dominant mode interactions in detonation Re-Initiation within an obstructed combustor using extended dynamic mode decomposition X. Wang; C. Ren; L. He; R. Hong; R. Deiterding; X. Cai
3-04-02:	#073	Numerical modeling of vibrational nonequilibrium in Hydrogen-Oxygen detonations S. M. Hussain; A. Dahake; A. S. Karthik; R. K. Singh; A. V. Singh
3-04-03:	#074	Near-Limit dynamics of hydrogen-oxygen detonations in narrow channels T. Westenhofer; B. Devine; S. Krock; X. Shi
3-04-04:	#075	Molecular level analysis of induction zone length in hydrogen-air detonations using direct simulation monte carlo S. Trivedi; J. K. Harvey; J. H. Chen

3-04-05:	#076	A thermodynamics-based assessment of detonation onset via DDT in closed channels: The role of entropy generation and thermicity F. Illacanchi; A. Z. Mendiburu; C. Celis
3-04-06:	#077	The role of post-shock energy content in detonation triple-point generation: A geometric modeling study R. Paknahad; J. Crane
3-04-07:	#078	The effect of activation energy on the initiation and persistence of gaseous detonation propagation in curved geometries C. Chiquete; M. Short
3-04-08:	#079	Coupling processes for lagrangian droplets in high-speed flows L. Angelilli; V. Raman
3-04-09:	#080	Development and structural evolution of detonation wave in spatially arranged n-heptane droplets Q. MENG; C. WEN
3-04-10:	#081	Hypersonic Shock-Induced liquid fuel evaporation in monodispersed n-Dodecane clouds P. Becraft; S. Schroeder; L. Patel; S. Salauddin; A. Morales; J. Sproull; K. Ahmed
Colloquium		5 - Fundamental Processes: Heterogeneous combustion and processes
3-05-01:	#082	General surface activation function model for variable kinetic parameters in material conversion Y. Liu; Z. Shi; Y. Jia; T. Zhao; J. Tao; K. Li; Z. Wang; X. Wang; Y. Chen; B. Yu; P. Fu; H. Zhou
3-05-02:	#083	Laminar burning velocities of iron dust flames across sub- to super-air oxygen concentrations and varying stoichiometry M. Seitz; M. P. Deutschmann; J. H. Müller; L. Mögerle; B. Stelzner; F. P. Hagen; H. Nirschl; D. Trimis
3-05-03:	#084	Flame characteristics of a turbulent iron particle-laden jet issued into a hot co-flow B.-D. Nguyen; A. Scholtissek; J. Hebel; C. Geschwindner; B. Böhm; A. Dreizler; C. Hasse
3-05-04:	#085	Soot formation and evolution in Ammonia-Coal co-firing process P. Ma; Q. Huang; T. Si; Y. Yang; K. Wang; S. Li
3-05-05:	#086	Investigation of ignition parameter effects on kerosene single droplet ignition under high-altitude relight conditions X. Meng; Y. Lai; Z. Zhang; X. Liu; F. Shen; Y. Zhang
3-05-06:	#087	Ammonia combustion in a radial-inflow porous media burner: Effects of varied topological gradation G. M. Nayak; M. Bernard; V. Erenburg; B. Cukurel; J. K. Lefkowitz
3-05-07:	#088	A multi-physics model with inverse parameter estimation for thermal degradation in sandwich panels with rigid polyurethane foam cores X. Wang; Y. Miao; H. Jin; L. Yang; X. Ju
3-05-08:	#089	The oxidation of iron powders in the temperature range 500-900 C: impact of surface porosity J. Jean-Philippe; E. Doyle; A. Fahmy; S. Coulomb; J. M. Bergthorson
3-05-09:	#090	Synergistic mechanism of NO generation during co combustion of blended-coal and ammonia D. Hong; R. Chen; C. Wang

3-05-10:	#091	Droplet dynamics of burning twisted Ti/Fe micro-wires H. Liu; Z. Hu; P. Zhang
3-05-11:	#092	Experimental and numerical analysis of aluminum droplet ignition in solid-propellant flames R. Devillers; T. Decker; S. Gallier
3-05-12:	#093	Virtual chemistry for spray reactive flows M. Preteseille; N. Darabiha; B. Fiorina
3-05-13:	#094	Size-Resolved burn time of iron particles down to 3 um via in-situ microscopic digital in-line holography L. Cen; Y. Qian; X. Lu
3-05-14:	#095	Spark ignition combustion of direct injected flash boiling hollow cone spray L. Wang; K. Nonavinakere Vinod; T. Fang
3-05-15:	#096	Combustion characteristics of a H2O2 droplet heated in a fuel gas atmosphere D. Matsugi; T. Wada; Y. Nakamura
3-05-16:	#097	Transient modeling of the ignition modes and combustion characteristics for ammonia- single coal particle co-combustion C. Yang; Y. Zhou; A. Peng
3-05-17:	#098	Effect of oxygen concentration on the combustion behavior of single iron particles A. Ueda; F. Halter; W. Kim
3-05-18:	#099	Autoignition and combustion of monodisperse ammonia droplet clouds S. Li; H. Zhang
3-05-19:	#100	Impact of multi-component evaporation on nanoparticle synthesis in DNS of spray combustion A. Abdelsamie; D. Thévenin
3-05-20:	#101	Flashback mechanisms of catalytic combustors in hydrogen hybrid power system applications W. Jiang; J. Pen
Colloquium		6 - Enabling Models, Methods, Tools & Technology: Diagnostics and experimental methods
3-06-01:	#102	Direct acoustic effects on impinging flame dynamics, soot formation and characteristics via a novel probe Z. Su; Y. Ying; H. Ren; R. Yu; K. Yang; M. Chen; G. Zhang; D. Liu
3-06-02:	#103	Transferable DL for in-situ validated LIF segmentation B. Jose; D. Greenblatt; R. P. Lindstedt; A. Breicher; D. Geyer; O. Lammel; F. Hampp
3-06-03:	#104	U-Netbased method for instantaneous flame front detection M. Li; Y. Zheng; S. Xu; N. Liu; S. Hochgreb; W. Cai
3-06-04:	#105	Burst-Mode laser system for High-Speed OH-PLIF with application to a model Gas-Turbine combustor B. McGann; C. Carter; T. Lee; M. D'Agostino; B. Leonov

3-06-05:	#106	Non-Intrusive silica-wall thermometry via laser-induced defect fluorescence in swirling flames H. Xiao; L. Li; G. Wang; F. Qi
3-06-06:	#107	Simultaneous rayleigh and raman scattering in hydrogen detonations Y. Shi; K. P. Chatelain; B. Wang; D. A. Lacoste
3-06-07:	#108	Measurement of binary diffusion coefficients of organic gases in nitrogen: Methane, ethanol and propane Y. Gui; S. Shao; Y. Jiang; X. You
3-06-08:	#109	A generalizable deep learning model for thermoacoustic instability real-time prediction: Fpga implementation and cross-engine validation Z. wang; H. wen; L. lu; W. nie; L. wu; J. li
3-06-09:	#110	Laser-Based speciation of 1,4-pentadiene thermal decomposition behind reflected shock wave M. Sy; D. Liu; A. Farooq
3-06-10:	#111	A 3D Tomo-PIV approach for Cross-Interface imaging in confined space C. Ling; Y. Wu; Z. Shi
3-06-11:	#112	Experiments and simulation on the spatially-resolved NO*, NH*, and OH* chemiluminescence in NH3-H2 counterflow diffusion flames X. Zhu; G. Issayev; D. Mengü; T. F. Guiberti
3-06-12:	#113	In-Situ high-temperature raman spectroscopy: Methodology and application in coal pyrolysis Y. Wu; M. Jiang; J. Xu; K. Xu; L. Jiang; S. Su; Y. Wang; S. Hu; J. Xiang
Colloquium		7 - Enabling Models, Methods, Tools & Technology: Modeling approaches
3-07-01:	#114	Tensor train representation of High-Dimensional unsteady flamelet manifolds S. Demir; P. Guthrey; J. Burmark; M. Blomquist; B. T. Bojko; R. F. Johnson
3-07-02:	#115	A convolutional autoencoder and neural ODE framework for surrogate modeling of transient counterflow flames M. Y. Baykan; W. Liu; T. Zirwes; A. Kronenburg; H. G. Im; D.-H. Shin
3-07-03:	#116	Local multi-fidelity surrogates for data-efficient parametric studies of combustion problems Q. Lu; L. Zhang; S. Ding; Z. Weng; W. Ding; X. Wang
3-07-04:	#117	Feasibility of the HHL quantum algorithm for the combustion chemistry solver X. Huang; S. Kim; A. Equbal; Y. Han; J. I. Ryu
3-07-05:	#118	Reduced-Order modelling of unsteady hydrogen-ammonia combustion using modal decomposition A. Piscopo; A. T. Inciardi; S. Iavarone; W. De Paepe; A. Parente
3-07-06:	#119	A semi-supervised learning technique for Hydrogen-Ammonia chemical kinetic mechanism simplification O. Bucca; P. P. Ciottoli; F. Creta; M. Valorani; R. Malpica Galassi
3-07-07:	#120	Sparse sensing reconstruction in MILD combustion using Flamelet-Generated manifold V. Rosati; B. Cassese; G. Sorrentino; M. D. de Joannon; R. Ragucci
3-07-08:	#121	INTENTIONALLY BLANK

3-07-09:	#122	A DFT-based Multi-Scale kinetic model for tandem heterogeneous C-ICCU reaction Y. Yang; C. Li; C. Wu; Z. Li
3-07-10:	#123	A Physics-Constrained machine learning approach for Complex-Fuel reaction kinetics modeling Q. Gao; Y. Chang; M. Jia
3-07-11:	#124	Species-Specific compliance indicator for diagnosis of combustion model fidelity B. Andersen; J. Z. Ho; M. Ihme
3-07-12:	#125	An inherently multi-phase manifold model for spherically symmetric droplet combustion P. A. Satterthwaite; M. E. Mueller
3-07-13:	#126	Deep-Learning approach to time-to-event prediction of thermoacoustic instability in an annular combustor G. Ponchet de Langlade; M. A. Mohamad
3-07-14:	#127	Physics-Informed neural network WSGG model for radiative heat transfer in H ₂ O-CO ₂ -NH ₃ gas mixtures relevant to ammonia combustion J. Wang; W. Chen; T. Ren
3-07-15:	#128	Filtering-Based inverse mapping closure for non-premixed combustion simulation H. Lu; J. He; L. Wang
Colloquium		8 - Enabling Models, Methods, Tools & Technology: Numerical techniques
3-08-01:	#129	1d DNS investigation of knock behavior in Ammonia-Hydrogen Spark-Ignition engines F. HURULT; T. FUKUYA; A. TSUNODA; H. MORIYAMA; F. FOUCHER; C. MOUNAIM-ROUSSELLE; Y. MORII; K. MARUTA
3-08-02:	#130	Leveraging physics-informed low-dimensional manifold for deep neural network to simulate oblique detonation T. Wang; Q. Wen; J. Sun; J. Z. Ma; Z. X. Chen; Z.-Q. J. Xu; T. Zhang; J. Wang; Z. Chen
3-08-03:	#131	A dynamic combustion model for large-eddy simulation of supersonic turbulent combustion M. Zhu; C. Wu; D. Xu; B. Liu; S. Zhu; J. An; F. Qin; G. He
3-08-04:	#132	A unified foundational framework for knowledge injection and evaluation of large language models in combustion science Z. Yang; R. Mao; T. Wu; H. Li; Z. X. Chen
3-08-05:	#133	Coupled VOF-LPT and two-phase MMC-LES simulation of dense spray flames S. K. Gautam; G. Singh; S. De; A. Masri
3-08-06:	#134	Recursive Micro-Mixing modeling incorporating a Multi-Layer partitioned approach Y. Wang; F. Wang; J. Jin; D. Wei
3-08-07:	#135	Self evolving neural network methodology for chemical kinetics reduction S. Nasir; C. Huang
3-08-08:	#136	A physics-constrained hybrid machine learning approach with a residual data augmentation strategy for modeling chemical kinetics O. Ukorigho; O. Owoyele

3-08-09:	#137	Capture evolution of minor species in reacting flows by fourier neural operators with a hybrid attention mechanism D. zhou; Y. weng; X. lu
Colloquium		9 - Enabling Models, Methods, Tools & Technology: Enabling concepts
3-09-01:	#138	Isomer-Specific plasma-assisted low-temperature oxidation kinetics study: Allene and propyne H. Chen; Z. Li; C. Liu; C. Tu; L. Zhao; M. Xu; N. Hansen; B. Yang
3-09-02:	#139	Atomic insights into magnetic field effects on aluminum combustion X. Lv; J. Zhao; M. Zhan; W. Ao
3-09-03:	#140	Spatiotemporal evolution of NH radicals in nanosecond pulsed plasma-assisted decomposition of NH3 C. Dong; Z. WANG; T. Yu; B. Zhou
3-09-04:	#141	Investigation of thermal cracking and hydrogen enrichment for ammonia reactivity boosting in a reverse-flow combustor M. S. E. SALAH; M. M. Kamal; L. Tarabet; A. Parente
3-09-05:	#142	Kinetic insight into plasma-assisted oxidation of ethanol based on SVUV-MBMS diagnostic Z. li; H. chen; C. liu; C. tu; L. zhao; M. xu; B. yang
3-09-06:	#143	Numerical analysis of ammonia dehydrogenation in porous media combustion R. Puri; T. Zirwes; O. T. Stein
3-09-07:	#144	Nanosecond-Duration Pulsed Discharges (ns-PD) for Enhanced Ignition of n-Butane at Elevated Pressures K. Bopaiah; N. Tsolas
3-09-08:	#145	Bridging State-to-State kinetics and phenomenological models for simulating Plasma-Assisted flames M. Gravili; G. Rekkas-Ventiris; S. Q. Wang; B. Fiorina; A. Bellemans
3-09-09:	#146	Structure and pollutant emissions of a swirled NH3 flame assisted by nanosecond discharges in the thermal spark regime A. P. Leygonie; T. A. Brionne; P. G. Danieli; P. Scouflaire; C. O. Laux; N. Q. Minesi
Colloquium		10 - Applications: Energy and material conversion and heating processes
3-10-01:	#147	A data-driven physics-based hybrid model for aluminum particle combustion H. Chu; M. Gao; A. Procacci; F. Sewerin; H. Bao; M. S. Mobarakeh; M. R. Kholghy; A. Parente; H. Pitsch
3-10-02:	#148	Thermoacoustic study of a multi-nozzle combustion system with hydrogen at high pressure: Ignition and limit cycle M. Furi; A. Durocher; J. Sirois; C. Charreton; D. May; G. Bourque; J. Bergthorson; S. Yun; P. Vena
3-10-03:	#149	Characterization of stratified hydrogen flames: Implications for burner design R. Strickling; S. Faderl; J. Schrauder; F. Vance; F. Bauer; D. Bartels; M. Schmidt; S. Will; A. Scholtissek
3-10-04:	#150	Effect of pore characteristics on the ignition behavior of H2-reduced iron particles K. Zhang; S. Paliakara; W. Prasadha; W. Tian; N. Stevens; G. Finotello; X. Mi
3-10-05:	#151	Cooperative regulation of biomass pyrolysis using multicomponent molten media for the co-production of hydrogen and High-Performance carbon materials for supercapacitors Y. Sun; Z. He; F. Fantozzi; H. Yang; D. Fabbri; S. Wang

3-10-06:	#152	Estimating the optical absorption function of flame-synthesized TiO ₂ nanoparticles using emission measurements and CFD simulations I. Choudhury; J. Yi; J. Bonnet; C. Betrand; B. Franzelli
3-10-07:	#153	Influence of surface roughness and fuel delivery strategy on hydrogen combustion stability in turbulent jet burners R. Vivoli; D. Pugh; T. Davies; S. Morris; A. Valera-Medina
3-10-08:	#154	Extended flammability limit and minimized pollutant formation in premixed ammonia/air combustion using an innovative burner configuration T. Jiang; L. Dai; Q. Wu; C. Zou
3-10-09:	#155	Fuel flexibility in porous media burners: How does an NH ₃ -optimized burner perform with H ₂ ? S. Chaturvedi; G. Vignat; E. Tandberg; M. Ihme
3-10-10:	#156	Effect of local N ₂ micro-jets on combustion dynamics of hydrogen-enriched methane flame in a swirl-stabilized premixed combustor P. Ojha; D. Michaels
Colloquium		11 - Applications: Low-speed propulsion
3-11-01:	#157	Understanding the evaporation, ignition and combustion processes of high-pressure liquid ammonia flames with diesel pilot ignition N. Wang; T. Li; X. Zhou; S. Li; X. Guo; S. Huang; R. Chen; P. Yi; F. Zhao
3-11-02:	#158	Combustion characteristics of supersonic H ₂ jet flames in wet engine-relevant conditions using LES. H. Ali; Q. Cheng; V. Grahm; Z. Ahmad; S. Karimkashi; V. Vuorinen; J. Hyvönen; P. Jukola
3-11-03:	#159	Emission and flame characterization of a novel Kerosene-H ₂ Multi-Fuel injector K. Dave; A. Garcidueñas-Correa; L. Palanti; L. Mazzei; C. Bianchini; A. Gangoli Rao; F. D. De Domenico
3-11-04:	#160	Influence of the flame shape on dynamic response and equivalence ratio fluctuations in a radially-staged spray burner Q. Buisson; A. Renaud; L. Zimmer; A. Faure-Beaulieu; Y. Méry; S. Ducruix
3-11-05:	#161	Experimental and numerical investigation of soot particle size distributions in a micro-flow reactor I. Saito; R. Kurokawa; O. Imamura; E. Takahashi; K. Akihama
3-11-06:	#162	Investigation of jet ignition in methanol-spray diffusion flames: Emphasis on jet-spray interaction Z. Yao; L. Xia; H. Wang; Z. Zheng; M. Yao
3-11-07:	#163	Effects of hydrogen peroxide in NH ₃ /H ₂ homogeneous charge compression ignition engine F. Anaclerio; F. Hurault; F. Fornarelli; C. Mounaïm-Rousselle
3-11-08:	#164	Measurement and 1-D modeling of air entrainment by ducted fuel injection C. Godbold; C. J. Mueller; C. Genzale; A. Steinberg
3-11-09:	#165	Experimental investigation of thermoacoustic instabilities in swirled, non-premixed H ₂ /air flames at elevated pressure I. Trueba-Monje; B. Dharmaputra; N. Noiray

Colloquium		12 - Applications: High-speed propulsion and energetics
3-12-01:	#166	Optical measurement of premixed rotating detonation combustor with a porous injector Y. Koyama; N. Suto; S. Sakamoto; K. Matsuoka; N. Itouyama; A. Kawasaki; H. Watanabe; J. Kasahara
3-12-02:	#167	Experimental investigation of shock-combustion feedback loop mechanism in a supersonic combustor J. Ji; Z. Cai; T. Wang; Z. Chen; M. Sun; D. Liu; J. Wu
3-12-03:	#168	Combustion organization of boron-based powder fuel in a mach 3 scramjet with variable geometry combustor T. Sun; Y. Duan; W. Dong; G. Li; M. Zhao; B. Shi
3-12-04:	#169	Low-Frequency uPDE active excitation of a supersonic combustor and experimental POD analysis K.-H. Lee; S.-W. Choi; G.-U. Mo; W.-S. Han; B.-K. Sung; J.-Y. Choi
3-12-05:	#170	Role of turbulence in flame behavior in variable-area flow paths for supersonic combustors S. S. Abisleiman; J. Singh; J. Lim; T. Lee; V. Raman
3-12-06:	#171	Complex network analysis of high-frequency combustion instability in a model rocket engine combustor T. Seshime; T. Haga; H. Gotoda; Y. Nabae; R. Kurose
3-12-07:	#172	Kinetic modulation of the Efficiency-Pressure trade-off in a Methane-Fueled scramjet combustor J. Ma; D. Yu; Q. Zhang; Q. Liu; L. Yue
3-12-08:	#173	Numerical simulation of rotating detonation characteristics in liquid ammonia fuel Z. An; Q. Meng; J. Xing; R. Kurose
3-12-09:	#174	Direct numerical simulation of supercritical turbulent combustion of CH ₄ /O ₂ shear coaxial injector M. Zhou; Z. Liu; T. Wan; X. Wang
3-12-10:	#175	Fuel effects on combustion instability for hydrogen and methane in a high-pressure gaseous rocket-type combustor R. Shimoyama; H. Terashima
3-12-11:	#176	Les of supersonic cavity flameholding from lean Blow-Out to rich Blow-Out in a cavity scramjet combustor C. Fureby
3-12-12:	#177	Effects of droplet size on combustion characteristics of liquid kerosene in supersonic flow L. Tang; Z. Zhang; Q. Meng; C. Wen
Colloquium		13 - Applications: Fire and safety
3-13-01:	#178	Oh-Plif thermometry of downward flame spread over solid fuels V. Gupta; M. J. Dunn; A. R. Macfarlane; T. Xiao; D. Morrisset; R. Hadden; A. R. Masri
3-13-02:	#179	The effect of gravity on the path from ignition to extinction in opposed flame spread over a thick solid J. Rivera; C. Liveretou; C. Fernandez-Pello; M. J. Gollner; S. Olson; P. Ferkul; D. Stocker
3-13-03:	#180	INTENTIONALLY BLANK

3-13-04:	#181	Effect of longitudinal wind on non-stationary jet fire behavior from battery thermal runaway in a tunnel N. Zhu; F. Tang; X. Peng; J. Weng; X. Fan; L. Mao; J. X. Wen
3-13-05:	#182	Flame morphology of moving train fire: Comparative study in open spaces and tunnel Y. Zheng; F. Tang; Y. Han; Y. Liu; Q. Wang; L. Hu
3-13-06:	#183	Can a lightning-induced short-duration flame ignite nearby pine needles? C. Ma; P. Guo; H. Chen; H. Zhang; N. Liu; L. Zhang
3-13-07:	#184	Experimental study of smoldering peat fire suppression: New extinguishment method and signature J. Yang; H. Qin; C. Wan; H. Xie; Y. Hu
3-13-08:	#185	Experimental and numerical simulation study on spotting ignition on high-rise building external wall insulation materials after natural aging Y. Ding; Y. Zhong; M. Cai; C. Li; J. Zhang
3-13-09:	#186	Dns of a jet flame at li-ion cell thermal runaway conditions: Ignition and stabilization N. Senarathna; Z. Li; P. Versailles; E. Robert; B. Savar
3-13-10:	#187	Study on low-temperature preparation of dry water and its efficiency in extinguishing lithium-ion battery fires X. Chen; F. Tan; W. Fen; J. Fan; L. Hu
3-13-11:	#188	Experimental analysis of the ignition and flame propagation characteristics of fuel spray with different leakage pressures on hot surface K. Wang; C. Wang; J. Ji; H. Wu; Z. Wang; N. Cai
3-13-12:	#189	A novel early detection method for ignition of flammable gases heated by a hot surface T. Imamura; K. Yamada; J.-I. Suematsu; M. Nakazawa; K. Kuwana
3-13-13:	#190	Numerical study of concurrent flow flame spread over thin solids in normoxic conditions in microgravity J. Han; W. Cui; N. Thinnakornsutibutr; Y.-T. Liao
3-13-14:	#191	Local convective heat fluxes in concurrent flame spread P. E. Pinto; M. Thomsen; X. Xi; J. L. Urban; P. E. P. Moncada
3-13-15:	#192	Experimental study on the diameter-independent burning rate of spill fires based on stagnant layer theory Y. Hu; C. Wang; J. Ji; C. Li
3-13-16:	#193	Extinction of concurrent flame spread over a thin solid M. Thomsen; C. Fernandez-Pello; D. Urban; S. Olson
3-13-17:	#194	Inhibition mechanisms of CO2/Polydimethylsiloxane on ignition and combustion of nano-sized aluminum particles G. Li; W. Gao; J. Liu; H. Jiang
3-13-18:	#195	A new coupled atmosphere-wildfire modeling using WRF and ForeFire: Validation on FireFlux J. Ye; H. Grosshans; L. Cao; Y. Hu
3-13-19:	#196	Experimental study on effect of fuel thickness on heat transfer behavior in liquid-phase controlled flame spread C. Wang; S. Luo; J. Xu; J. Ji

3-13-20:	#197	On oxidative pyrolysis of PMMA: Thermogravimetric study and macrokinetic modelling A. Snegirev; W. Wu; D. Morrisset; B. Merci
3-13-21:	#198	Predicting pyrolysis and heat transfer during ignition of 2-layer solids using DD-PINN J. Gong; Y. Liu; M. A. Delichatsios
3-13-22:	#199	A Physics-Based inverse model for thermal hazards of aged Lithium-Ion cells S. Sun; G. Xiong; D. Zeng; J. Xu

Excursions

Buses depart from ICCK at 13:00

THURSDAY AT A GLANCE

8:30-10:00	Main Hall	Morning Announcements Plenary Lecture - Bénédicte Cuenot <i>Chairs: F. Qi; M. Mueller</i>								
10:00-10:30	Break (30 Minutes)									
10:30-12:20	Poster Paper Presentations (Event Hall)									
12:20-13:40	Lunch									
Room	Main Hall	A	B-1	B-2	D	E	C-1	C-2	157	H
13:40-15:40	Topical Review: A. Parente, S. Deng, Z. Chen <i>Chairs: S. Barwey; D. Mira</i> Mini Symposium: AI & ML for Combustion	Concurrent Sessions								
		Fundamental Processes: Chemical Kinetics	Fundamental Processes: Flame dynamics and transport processes	Fundamental Processes: Detonations and high-speed combustion	Applications - Fire and safety	Fundamental Processes: Heterogeneous combustion and processes	Applications - High-speed propulsion and energetics	Applications - Low-speed propulsion	Enabling Models, Methods, Tools & Technology - Modeling approaches	Enabling Models, Methods, Tools & Technology - Diagnostics and experimental methods
15:40-16:10	Break (30 Minutes)									
Room	Main Hall	A	B-1	B-2	D	E	C-1	C-2	157	H
16:10-17:50	Mini Symposium: AI & ML for Combustion	Concurrent Sessions								
		Fundamental Processes: Chemical Kinetics	Fundamental Processes: Flame dynamics and transport processes	Fundamental Processes: Detonations and high-speed combustion	Applications - Fire and safety	Fundamental Processes: Heterogeneous combustion and processes	Applications - Energy and material conversion and heating processes	Fundamental Processes: Turbulent flames	Applications - High-speed propulsion and energetics	Enabling Models, Methods, Tools & Technology - Diagnostics and experimental methods
18:30-21:30	Cocktail Reception Awards Banquet									

Thursday		Chairs: R. Barlow; Y. Kobayashi; B. Yang; J. Yoh
Colloquium		1 - Fundamental Processes: Chemical Kinetics
4-01-01:	#001	Investigation of the formation of one- to three-ring aromatics in a TRF-iso-butanol premixed flame D. KDOUH; T. FAGES; S. GOSSELIN; N. LAMOUREUX; B. SIRJEAN; R. FOURNET; L. GASNOT; P.-A. GLAUDE; L.-S. TRAN
4-01-02:	#002	First-Principles evaluation of RDX (1,3,5-Trinitroperhydro-1,3,5-triazine) pyrolysis pathways and rate constants Q. Zhu; J.-Y. Lyu; Q. Wang; H.-T. Guo; M. Monge-Palacios; C. Cao; Y. Li; C.-W. Zhou; S. M. Sarathy
4-01-03:	#003	Thermal decomposition kinetics of propylene carbonate (PC) as a battery electrolyte solvent component X. Liu; T. Wei; Z. Chu; G. Luo; H. Xiao; A. Mao; F. Zhang; F. Zhang; Z. Wang; B. Yang
4-01-04:	#004	Kinetics insight into hexamethyldisiloxane pyrolysis and combustion Q. Fang; P. Sela; H. Somnitz; J. Fang; J. Herzler; L. Zhao; Y. Li; C. LiSchulz; M. Fikri
4-01-05:	#005	Kinetic interactions and nonlinear blending behavior in laminar flames of PMH/DTBP mixtures C. Hong; Y. Xu; J. Subburaj; A. M. Elbaz; W. L. Roberts; Z. Huang; Y. Zhang; A. Farooq
4-01-06:	#006	Ignition limits and oxidation pathways of CH ₂ F ₂ (R32) in rapid compression machine N. F. Nafi Farzana; N. Slavinskaya; P. Nema; L. Seifert; A. Ramalingam; R. Fernandes; A. Jocher; B. Shu
4-01-07:	#007	Pyrolysis and oxidation study of hydrogen sulfide using a micro flow reactor with a controlled temperature profile K. Nishimura; K. Kanayama; M. Sato; T. Tezuka; K. Yokohama; H. Takeishi; H. Nakamura
4-01-08:	#008	Comparing the pyrolysis kinetics of n-pentyl nitrate and nitrite: Insights into the structure effects Z. Chu; H. Xiao; C. Wang; L. Zhao; Z. Liu; C. K. Law; B. Yang
4-01-09:	#009	Unraveling the decomposition of 1-phenylethyl hydroperoxide: Insights from synchrotron VUV mass spectrometry, theoretical calculations, and kinetic modeling S. Chen; H. Li; Z. Hu; L. Zhu; L. Xing; Z. Wang
4-01-10:	#010	Experimental and kinetic study on pyrrole and ammonia co-oxidation to understand the nitrogen conversion mechanism of coal-ammonia co-firing Z.-C. Wei; B.-Y. Su; Y.-T. Hou; S.-W. Yao; L.-N. Wu; Z.-Y. Tian
4-01-11:	#011	Ozone-Assisted low-temperature oxidation of iso-dodecane: An experimental and modeling study Y. Zhang; W. Wu; L. Wang; Y. Liang; Z. Wang; J. Wang
4-01-12:	#012	Understanding key NO _x /hydrocarbon interactions via R+HNO=RH+NO for alkyl, alkenyl and alkynyl radicals: Ab initio kinetics and ML-based rate coefficient prediction H. Jin; H. Wu; R. Tang; Y. Li; S. Cheng
4-01-13:	#013	Investigation of n-dodecane, 1-methylnaphthalene and i-octane combustion in a burner stabilized surrogate flame E. Keksel; N. Goncz; G. Wang; M. Gonchikzhapov; T. Kasper
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4-01-15:	#014	A novel and comprehensive CH ₄ /NH ₃ /H ₂ mechanism incorporating new physics Y.-C. KAO; S. Shin; T. T. Pekkanen; Y.-P. Li; W. H. Green

4-01-16:	#015	A shock-tube study of ethylene oxidation by nitric oxide K. Ghunaim; M. E. Elsayed; B. Y. Belal; A. Elkhazraji; S. A. Alturaifi
4-01-17:	#016	An experimental and kinetic modeling study of the heptane isomers P. Wang; J. Liu; T. Nagy; H. J. Curran
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4-01-19:	#018	Impact of alkyl chain length on Low-Temperature oxidation of methyl, ethyl, and propyl cyclohexanes T. Chatterjee; S. W. Wagnon; C. Saggese; S. S. Goldsborough
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4-01-26:	#025	Kinetic model development and experimental study of high pressure ignition of nitropropane M. Bardin; J. Caravaca-Vilchez; J. Glorian; B. Baschung; K. A. Heufer
4-01-27:	#026	Influence of substituents in alkyloxirane isomers on carbonyl formation D. A. Moore; S. A. Marvin; T. N. S. A. W. Hill; N. S. Dewey; S. G. Lewis; A. V. Copan; E. M. Ferreira; B. Rotavera
4-01-28:	#027	Enhancing cool-flame oxidation of cyclic ethers via linear ether addition: A case study on tetrahydrofuran and diethyl ether in a jet-stirred reactor B. Hoblos; Z. Serinyel; G. Dayma; P. Dagaut
4-01-29:	#028	Positive ions and saturation current in ethanol flames: Experimental and kinetic modeling study A. V. Cherepanov; A. A. Chernov; S. A. Agarkin; V. G. Kiselev; D. A. Knyazkov

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4-02-02:	#030	Humidification and pressure effects on near-wall NO and N2O formation in NH3/H2 flames S. Karimkashi; P. Tamadonfar; A. Rintanen; T. Zirwes; A. Stagni; V. Vuorinen; O. Kaario
4-02-03:	#031	Two-Dimensional simulations of effect of stretch on ball-like flame in weakly stretched counterflow field using low-Lewis number premixture K. Nishiyama; J. Daou; A. Tsunoda; T. Akiba; Y. Morii; K. Maruta
4-02-04:	#032	A direct numerical simulation study of stretched laminar lean hydrogen-air flames X. Guan; H. C. Lee; T. Zhang; P. Dai; M. Wan; A. N. Lipatnikov
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4-02-06:	#034	Characterizing propene-nitric oxide interaction chemistry in oxygen-free outwardly propagating spherical flame: Insights into role of vinyl radical C. Cao; J. Zhang; J. Fang; W. Li; S. M. Sarathy; Y. Li
4-02-07:	#035	Side-Wall quenching of thermodiffusively unstable hydrogen flames with conjugate heat transfer B. Traut; F. Rong; M. Schneider; C. Hasse; H. Nicolai
4-02-08:	#036	Numerical analysis and flamelet modeling of NOx formation in a thermodiffusively unstable NH3/H2 flame with wall interaction N. Chen; M. Schneider; T. Zirwes; C. Hasse; X. Wen
4-02-09:	#037	Combined effects of heat-losses and curvature in hydrogen-air flame propagation below the lean flammability limit. R. Palomeque-Santiago; A. Dejoan; D. Fernandez-Galisteo; M. Rubio-Rubio; M. Sánchez-Sanz
4-02-10:	#038	A numerical study of Ammonia-Hydrogen flames: Propagation and emission formation in crevices V.-P. Salomaa; P. Tamadonfar; M. Gadalla; V. Vuorinen; O. Kaario
4-02-11:	#039	Thermodiffusive instabilities in lean premixed hydrogen flames under gas turbine operating conditions: Parametric effects of temperature, pressure, and forced perturbation A. Pappa; K. Bioche; R. Bastiaans; W. De Paepe
4-02-12:	#040	Flamelet modeling of thermodiffusively unstable premixed hydrogen flames with NOx formation X. Wen; L. Berger; A. Parente; H. Pitsch
4-02-13:	#041	Effect of a magnetostatic field on laminar premixed hydrogen-air flames T. Lapaire; S. Al Kassar; A. Attili; A. Giusti
4-02-14:	#042	Quenching mechanisms and their generated sound in thermodiffusively unstable laminar lean premixed hydrogen-air flames N. Misceo; F. G. Schiavone; S. M. Camporeale; D. Laera
4-02-15:	#043	Suppression of thermodiffusive instabilities by strain in counterflow lean premixed hydrogen flames A. Porcarelli; P. E. Lapenna; F. Creta; I. Langella

4-02-16:	#044	Combined reactivity and equivalence ratio stratifications for simultaneous NO _x reduction and flame enhancement J. Hu; C. K. Law; W. Liang
4-02-17:	#045	Importance of energy and molecular transport on the modeling of explosion limit and explosion behavior C. Yu; L. Cai; U. Maas
4-02-18:	#046	On the non-monotonic response of diffusive-thermal pulsations of ammonia-hydrogen-air premixed flames J. Liu; C. K. Law; W. Liang
4-02-19:	#047	Scale dependence of the Scalar-Curvature correlations in NH ₃ /H ₂ premixed swirling flame H. WANG; Z. WANG; B. Zhou
4-02-20:	#048	Effect of stagger interferences on flame dynamics and linear disturbance of lean premixed hydrogen flames Y. Yin; X. Han
4-02-21:	#049	Double tsuji diffusion flames in flow fields at high strain rates M. P. Severino; R. P. Bianchin; V. M. Sauer; F. F. Fachini
4-02-22:	#050	Direct measurements of H ₂ -Air flame quenching distances under various wall temperatures D. Liu; Y. Shoshin; N. Beishuizen; J. V. Oijen
4-02-23:	#051	Effect of buoyancy induced by fuel density on flickering behaviors in jet diffusion flames S. J. Kanga; J. Park; W. J. Lee; S. H. Chung; C. S. Yooa
4-02-24:	#052	Ex-Situ morphology characterization of soot in preheated laminar Co-Flow diffusion flames Y. T. Rajan; A. E. Karatas; O. L. Güilder
4-02-25:	#053	Ammonia addition and its impact on extinction and structure of DEE counterflow cool and hot flames A. Abdelhalim; A. Alfazazi; J. Guo; B. Dally
4-02-26:	#054	Dual ignition method for flashback reversal in Hydrogen-Blended methane premixed flames J. S. Kim; W. J. Le; D. G. Park; J.-H. Choi; S. H. Yoon
4-02-27:	#055	Numerical investigation of minimum ignition energy in Ammonia-Hydrogen-Air mixtures with insights from experiments and cold electrode effects M. Reinbol; C. Yu; R. Schießl; U. Maas; V. T. Mai; S. Shy
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4-03-01:	#056	Multi-Scale flame boundary dynamics and coherent structures in a Swirl-Stabilized premixed flame S.-Y. Lee; B. S. Leonov; B. J. McGann; S. D. Hammack; C. D. Carter; M. D'Agostino; T. Lee
4-03-02:	#057	Detachment and reattachment of inclined turbulent non-premixed jet flames Q. Wang; L. Hu; F. Tang; X. Sun; F. Guo; O. Fujita; S. H. Chung
4-03-03:	#058	Study on the induction mechanism of hydrogen jet flame coupled with deflagration in a cabin H. Ma; B. Cao; T. Du; Y. Li; C. Wang

4-03-04:	#059	Transition to distributed reaction zones through temperature controlled turbulent combustion L. Tian; D. Greenblatt; F. Hampp; B. Jose; R. Lindstedt
4-03-05:	#060	Many-Stream manifold modeling of pilot effects in turbulent nonpremixed combustion I. Bonilla; S. Fush; C. Lacey; M. Mueller
4-03-06:	#061	Autoignition of turbulent flames of oxymethylene ethers H. A. Samara; M. Dunn; A. Macfarlane; A. Masri
4-03-07:	#062	Modeling of reaction dynamics in a turbulent Hydrogen-Air slot flame using resolvent analysis. A. R. Talasikar; M. Gauding; H. Pitsch; T. L. Kaiser
4-03-08:	#063	Flame-Wall interaction of ammonia/hydrogen/air and ammonia/n-heptane/air turbulent premixed flames - DNS studies C.-O. Olsson Sjögren; Y. Zhou; X.-S. Bai
4-03-09:	#064	Where do hydrogen flames ignite? Finding the causality for ignition in turbulent Non-Premixed hydrogen flames D. Quan Reyes; J. van Oijen; D. Roekaerts
4-03-10:	#065	Impact of non-premixed hydrogen enrichment on soot and emissions of jet A-1 spray flames in a model aeronautical gas turbine combustor A. Azimi; S. Mohammadnejad; O. M. L. Gülder
4-03-11:	#066	Effect of local quenching characteristics on CO formation/oxidation in turbulent premixed CH ₄ /air flame-wall interaction Y. Wang; M. Tanahashi
4-03-12:	#067	Synergistic enhancement of thermo-diffusive instability with turbulence in lean premixed hydrogen flames J. Bae; S. Hochgreb
4-03-13:	#068	Extinction characteristics of turbulent counterflow hydrogen-rich premixed flames under BP-TR regimes Y. Zhang; T. Lin; J. Zou; H. Zhang
4-03-14:	#069	Experimental study on Ammonia-Hydrogen combustion enhanced by in-cylinder turbulence flow under EGR conditions Y. Liu; C. Xu; D. Han
4-03-15:	#070	Evaluating the Cross-Scale turbulent kinetic energy flux in a bluff body stabilized premixed flame K. O. Souders; C. A. Towery; P. E. Hamlington
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4-04-01:	#071	The interplay of mechanisms for detonation quenching and reinitiation in narrow channels M. Martin; D. Lont; A. Sethu Venkataraman; H. Farah; S. I. Jackson; E. S. Oran
4-04-02:	#072	Numerical study of vitiation effects on stabilized oblique detonation waves and propulsive performance F. Wang; L. Shi; Z. Zhang; C.-Y. Wen
4-04-03:	#073	Flame-Turbulence interaction and vorticity generation in a confined high-speed premixed flow J. Singh; S. Sharma; V. Raman

4-04-04:	#074	Assessing thermal non-equilibrium in hydrogen detonations with optical emission spectroscopy H. Bilal; K. Chatelain; D. Lacoste
4-04-05:	#075	Local dynamics of cellular detonation limit in narrow channels B. Devine; T. Westenhofer; X. Shi
4-04-06:	#076	Self-Regularization and cellular multiplicity of regular channel hydrogen detonations S. Ramachandran; R. F. Johnson; S. Yang
4-04-07:	#077	Microscale computational analysis of vibrational non-equilibrium effects in Richtmyer-Meshkov driven non-premixed combustion W. Casseus; K.-L. Pan
4-04-08:	#078	DDT following flame acceleration: Detailed description L. Bauwens; J. Melguizo-Gavilanes
4-04-09:	#079	Influence of mixing time on DDT behavior in an obstructed rectangular channel S. Mall; S. Numao; E. Dzieminska; T. Suzuki
4-04-10:	#080	Wall-Driven modulation of detonation dynamics in curved channels J.-M. Klein; D. Mira
4-04-11:	#081	Detonability limits of n-Dodecane liquid fuel cloud K. Chouga; S. Schroeder; S. Salauddin; A. Morales; L. Patel; K. Ahmed
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4-05-02:	#083	Influence of dilution air on flame structure in swirl spray flames near lean-blowoff E. Borrill; B. Cosway; Y. Jugduth; G. Zhang; A. Abu Saleh; R. Balachandran; M. Talibi; R. Yuan
4-05-03:	#084	Insights into the micro-explosion of burning iron particle under ammonia co-firing conditions J. Chen; K. Li; J. Chen; S. Zheng; Y. Zheng; N. Liu; X. Mi; S. Xu; W. Cai
4-05-04:	#085	Combustion characteristics of boron particles and agglomerates in jet flames M. Wang; Y. Gao; W. Chai; Y. Wang; C. Fu; L. Fan; J. Yu
4-05-05:	#086	Investigation of autoignition behavior of RDX and RDX/AP behind reflected shock waves Y. Ao; C. Hong; Y. Zhang; Y. Xu; W. Sun; Z. Huang; Y. Zhang
4-05-06:	#087	Auto-Ignition and burning behaviors of NEPE propellants in different oxidizing environment. T. Yu; X. Yao; C. Liu; M. Yang; X. Fu; C. Tang
4-05-07:	#088	Liquid-Phase reaction and hypergolic ignition behaviors of H2O2-Based green propellants J. Jiang; L. Fei; T. Lu; P. Lott; H. Alnahdi; C. Tang

4-05-08:	#089	Synergistically enhanced boron combustion via urea and hydrogen peroxide D. Xu; B. Zeng; X. Shi; W. Han; Q. Fu; Y. Jiang
4-05-09:	#090	Lubricant-Induced Pre-Ignition of methane and hydrogen under Engine-Relevant conditions M. Adil; J. Subburaj; T. A. Kashif; F. T. Hong; E. Cenker; A. Farooq
4-05-10:	#091	Pyrolysis and Auto-Ignition of pine wood subjected to Time-Dependent radiation and crosswind L. Yan; J. Gong; G. Jomaas; K. Liew; L. Yang; X. Ju
4-05-11:	#092	Water-Mediated L/B acid transformation governs N2 selectivity in NH3 combustion over Pt/UiO-66 C. Zhang; W. Liang; R. Kang; B. Dou; F. Bin
4-05-12:	#093	Experimental analysis and computational modeling of SiC oxidation in porous media burners C. Munoz-Herrera; S. Chaturvedi; G. Vignat; M. Toledo; M. Ihme
4-05-13:	#094	Atomic insights into micro-explosion from iron particle with carbon impurity W. Fu; Y. Zhou; L. Tian; Q. Mao; H. Xia
4-05-14:	#095	Combining pd- and fe-based materials for selective catalytic oxidation of ammonia T. Häber; L. Haag; C. Cárdenas; O. Deutschmann; P. Lott
4-05-15:	#096	Polymer property effects on hypergolic ignition of plastic fuels with embedded NaBH4 and H2O2 oxidizer K. Mizrahi; D. Peles; S. Levi; C. E. Diesendruckb; J. K. Lefkowitz
4-05-16:	#097	Effects of recess on the spray dynamics in coaxial air-assisted atomizers P.-H. Chen; A. Ceschin; M. R. Shakeel; H. G. Im
4-05-17:	#098	Microwave suppression of aluminum agglomeration in composite propellants under varying pressures W. Yang; S. Wu; X. Zou; R. Xue
4-05-18:	#099	Insight into the fate of pyrite in NH3-coal co-pyrolysis. Part 1: Transformation behavior of pure pyrite X. Yu; C. Yu; M. Shi; D. Yu; M. Xu; Y. Huang
4-05-19:	#100	Propagation of iron dust flames with wall interaction and varying inter-particle distances F. H. Vance; A. Scholtissek; H. Nicolai; C. Hasse
4-05-20:	#101	Modeling oxidation of aggregated boron powders J. L. McNanna; M. Momtaz; M. Schoenitz; E. L. Dreizin
4-05-21:	#102	Bypassing passivation breakdown: Solid-State ignition of Core/Shell WO2.9/Al nanowire thermites Y. Zhang; Z. Dong; G. Xiong; S. D. Tse
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4-06-02:	#104	The effect of a sampling probe on PAC characteristics in a premixed ethylene/air flame L. Di Liddo; F. Cepeda; J. Saldinger; P. Elvati; A. Violi; S. B. Dworkin
4-06-03:	#105	Design and implementation of a modified heat flux method to characterize cryogenic temperatures S. Eckart; G. Pio; B. De Liso; E. Salzano; P. de Goey
4-06-04:	#106	Effective image denoising with a self-supervised framework for turbulent flame diagnostics S. Liu; H. Wang; Z. Sun; K. Luo; J. Fan
4-06-05:	#107	Investigation of heat release rate measurements in NH ₃ /H ₂ /N ₂ flames at 1-3 bar using NH PLIF A. P. Hardaya; M. K. Hay; B. S. S. Soriano; J. H. Chen; W. D. Kulatilaka
4-06-06:	#108	Temporally and structurally resolved pyrometry imaging of single micron-sized aluminum droplets burning in steam dominated flows Z. Wu; C. Ruan; W. Wang; M. Aldén; Z. Li
4-06-07:	#109	Combined numerical and experimental study on a new micro-cone burner design for investigating extreme H ₂ /O ₂ conditions T. Zirwes; A. Hasche; H. Krause; A. Kronenburg; S. Eckart
4-06-08:	#110	Background-Oriented schlieren visualization and velocimetry of backdraft phenomenon G. Di Cristina Torres; R. Falkenstein-Smith; M. Flores; T. Cleary
4-06-09:	#111	Characterization of a scramjet reacting flow using Two-Point focused laser differential interferometry A. P. Ceruzzi; M. Kanapathipillai; K. H. Yu; C. P. Cadou
4-06-10:	#112	A global sensitivity and identifiability analysis of a Laser-Induced incandescence (LII) E. K. Stefanidis; M. B. McKinnon; E. Stafirovich
4-06-11:	#113	Double flame zone in laminar non-premixed counterflow H ₂ -NH ₃ flames C. D. A. Jimenez; S. Gubbi; D. Wu; W. Sun; B. Emerson
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4-07-02:	#115	Flow field reconstruction of rotating detonation combustors via neural implicit modeling X. Wang; S. Liu; J. Wu; Y. Zhang; Q. Wen; H. Wen; W. Fan; B. Wang; S. Lisong
4-07-03:	#116	Influence of flame curvature on dominant reactions and effective loop kinetics in unsteady combustion Z. Bi; L. Ji; M. Ai; Y. Wang; Z. Chen
4-07-04:	#117	Developpement of a reduced virtual chemical scheme for dual-fuel CH ₄ -H ₂ combustion in industrial furnaces M. Hustache; N. Darabiha; N. Meynet; B. Fiorina
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4-07-07:	#120	A graph neural network based chemical mechanism reduction method for combustion applications N. P. Manuru; K. Aditya; P. Dash
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4-07-11:	#122	Wall heat flux modeling in turbulent premixed combustion with heterogeneous surface reaction K. Li; L. Wang
4-07-12:	#123	Understanding the effect of a reversible nucleation model on soot formation in Stretch-Stabilized stagnation flames S. Thaviti; A. V. Singh
4-07-13:	#124	Quantification of differential diffusion in premixed NH ₃ /H ₂ /air flames using a species-specific peclet number and tangential diffusion strain rate C. Chi; M. Ihme
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4-07-15:	#126	A Reinforcement-Learning-Augmented Liquid-Fueled reactor network model for predicting lean blow out in gas turbine combustors P. John; E. Ikponmwoba; P. Pal; O. Owoyele
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4-08-02:	#128	Towards a highly scalable and extensible fire dynamics solver using GPUs Z. Chen; R. Mao; X. Lu; X. Bai; Y. Wang; Z. X. Chen
4-08-03:	#129	Generate reacting flow fields with flow matching neural operators on high-resolution grids H. Zheng; S. Gu; E. R. Hawkes; D. Zhou; X. Lu
4-08-04:	#130	Bayesian operator inference for reactive systems: Galerkin closure and non-intrusive reduced-order modeling A. Procacci; C. Novelli; S. Iavarone; A. Coussement; A. Parente
4-08-05:	#131	Language models as QSPR predictors: Unleashing potential through In-Context learning and instruction tuning C. Tao; C. Liu; C. Li; B. Yang
4-08-06:	#132	Convergence testing of large-eddy simulations of a turbulent pool fire C. Guo; Z. Lu; H. Wang

4-08-07:	#133	Development of a turbulent flame speed model for Large-Eddy simulations of premixed methane and propane flames A. Ali; M. Talei; O. Gulder
4-08-08:	#134	On the impact of scalar boundedness in high-order LES of a nonpremixed jet flame Y. Wang; A. Wehrfritz; E. R. Hawkes
4-08-09:	#135	Accelerating 1D laminar flame simulations with detailed chemistry using operator splitting A. Cuoci; A. Frassoldati
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4-09-02:	#137	Revealing the potassium uptake mechanism in Fe ₂ TiO ₅ during oxygen carrier aided combustion C. Zhu; Z. Xu; H. Tang; Y. Zhang; C. Li; L. Li; Z. Sun; L. Duan
4-09-03:	#138	Partially cracked NH ₃ combustion via AM μ -Injection J. Ahn; V. Rubio; S. Acharya; H.-C. Möhring; P. Kraus; F. Hampp
4-09-04:	#139	An aluminum agglomeration in solid propellant accelerated by graph convolution neural network. Y. Jiang; G. Xu; P. Liu; W. Ao
4-09-05:	#140	Secondary aerosol formation from jet A-1 and SAF combustion in methane-based laminar coflowing partially premixed flames F. Sasso; E. A. Scelzo; F. Picca; A. D'Anna
4-09-06:	#141	Mechanistic insights into plasma assisted ignition of methanol droplets: The role of evaporation N. Liu; J. Chen; Z. Ding; Q. Chen
4-09-07:	#142	Experimental study of CH ₄ /NH ₃ /H ₂ -air bunsen flames in a weak electric field K. Lavronov; R. Tostoguzov; D. Sharaborin; S. Liu; Y. Li; V. Dulin
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4-09-09:	#144	A novel technique to mitigate the NH ₃ slip at fuel-rich conditions by the combined used of fuel-staged combustion and gliding arc plasma Z. Wang; B. Aravind; S. Mashruk; A. Valera-Medina
Colloquium		10 - Applications: Energy and material conversion and heating processes
4-10-01:	#145	High temperature air combustion fueled ammonia in bench-scale furnace D. SHIMOKURI; T. MIYAKE; Y. WAKATA; A. SHARMA; T. KISHIMURA; T. SONODA; H. NAKAMURA; J. SATO
4-10-02:	#146	Reduction of magnetite with H ₂ : Kinetic analysis in TGA and fluidized bed reactors F. Cerciello; A. Coppola; A. Fabozzi; O. Senneca; E. Freisewinkel; C. Yannakis; M. Schiemann; V. Scherer
4-10-03:	#147	H ₂ O-Induced reconstruction of Pt/CeO ₂ interface for efficient and selective ammonia oxidation X.-Y. Zhou; X. Zhang; H.-L. Qin; X.-H. Li; Y.-W. Wu; B. Zhang; Q. Lu

4-10-04:	#148	Characterization of Ammonia-Hydrogen (80:20) swirl and bluffbody stabilized partially premixed flames R. Sadanandan; S. K; S. Agarwal; J. Brunzendorf; D. Markus
4-10-05:	#149	Characterizing turbulent iron particle flame propagation G. Thäter; M. Carbone; A. Zannini; O. T. Stein; B. Frohnapfel
4-10-06:	#150	Development of green catalysts based on converter dust for promoting ammonia cracking X. Liu; Z. Shen; X. Yu; D. Yu; M. Xu
4-10-07:	#151	Reactions of aluminum powder with pressurized CO2 part 1: Effect of operation pressure and particle size M. Salehi Mobarakeh; F. Saceleanu; M. Parker; R. Kholghy
4-10-08:	#152	Study on the mechanism of High-Alkali coal Purification-Combustion and ash evolution under variable atmospheres L. Li; S. Han; S. Yang; Q. Ren
4-10-09:	#153	Eulerian simulations of an iron dust bunsen burner R. Mehmood; Q. Fradet; U. Riedel
4-10-10:	#154	Ammonia assisted decarbonisation of a 500 kW propane flame with a scaled swirl burner design J. Davies; S. Mashruk; B. Aravind; D. Sato; S. Sadasivam; I. D. L. Cruz-Loredo; A. Valera-Medina
Colloquium		11 - Applications: Low-speed propulsion
4-11-01:	#155	Numerical and experimental cross-analysis of alternative jet fuels in a swirl-stabilized spray flame P. Vauquelin; M. Prakash; A. Ercole; J.-P. Hannappel; P. Gupta; D. Sanned; M. Richter; N. Zettervall; C. Fureby
4-11-02:	#156	Impacts of Pilot-Main jet interaction on soot formation: A large eddy simulation study of n-Heptane/Methane dual direct injection system L. Munck; J. C. Ong; K. M. Pang; G. Zhai; Q. N. Chan; J. H. Walther
4-11-03:	#157	Influence of nozzle structure on the emissions characteristics of liquid ammonia spray combustion in a swirling burner Y. Chen; G. Reibel; S. Kapuruge Don Kunkuma Amila; A. Hayakawa; H. Kobayashi; T. Kudo
4-11-04:	#158	Suppression of spray combustion instability in a backward-facing step combustor T. Shiraishi; M. Kawai; H. Gotoda; Y. Nabae; R. Kurose
4-11-05:	#159	Amplitude-Dependent response of a CH4/Air swirl-stabilized flame to equivalence ratio oscillations Z. Zhao; W. Liang; D. Yang; B. Zhou
4-11-06:	#160	Onset of thermoacoustic instability triggered by equivalence ratio for lean premixed swirl flame G. Hu; W. Zhang; J. Wang; Z. Huang
4-11-07:	#161	Thermoacoustic quasi-periodicity and mode switching in a hydrogen micro-premixed combustor Z. Qin; Y. Lin; Y. Chang; X. Han
4-11-08:	#162	High-Speed infrared spectra of soot, CO2, and H2O from diesel spray flames: Implications for radiative heat loss in diesel engines F. Shimizu; T. Tsuchihata; T. Aizawa

4-11-09:	#163	Fuel-Flexibility study of Jet-A1 and H2 in a low-swirl multi-burner combustor S. Singh; S. R. Harth; D. Trimis
4-11-10:	#164	Effects of internal swirl recess on flow, flame and emission characteristics in dual-swirl hydrogen burner M. Zhang; Q. Wen; D. Yan; Z. X. Chen

Colloquium		12 - Applications: High-speed propulsion and energetics
4-12-01:	#165	Advanced solid propellant development using Tetrazole-Grafted Hydroxyl-Terminated polybutadiene S. Saha; D. Govindaraj; A. Bhattacharjee; D. Javed; N. Kumar; A. Chowdhury; N. Kumbhakarna
4-12-02:	#166	Hydrogen-Assisted ignition and flame stabilization of kerosene and ammonia in low mach supersonic flow J. Ji; Z. Cai; T. Wang; X. Song; M. Sun; D. Liu; J. Wu
4-12-03:	#167	Ignition and combustion characteristics in an axisymmetric scramjet with distributed circumferential fuel injection T. Luo; Y. Tian; M. Sun; D. Xue; M. Wan; Q. Li; J. Zhu
4-12-04:	#168	Dual-Function graphene oxide aerogels for enhanced mechanical and combustion properties of Boron-Based solid propellants A. Huynh; J. Leem; D. Ning; J. Kalman; X. Zheng
4-12-05:	#169	Study on a novelty pleated tesla turbine driven by detonation waves Y. Ye; Z. Jiao; X. Wang; Q. Song
4-12-06:	#170	Multiscale investigation of the combustion reactivity of novel reactive materials via AIMD and CFD analyses W. X. Lim; S. Deng; H. Y. S. Chan; H. H. Hng
4-12-07:		INTENTIONALLY BLANK
4-12-08:	#171	Understanding detonation propagation modes through energy distribution in rotating detonation engines X. Huang; S. Kim; J. I. Ryu
4-12-09:	#172	An exploration of ignition limits for high-speed flight applications W. Senior-Tybora; S. Shen; J. K. Lefkowitz
4-12-10:	#173	Experimental and computational investigation of coupling mechanisms in dual rotating detonation combustors L. Nicol; J. Kasahara; A. Nakama; J. Braun
4-12-11:	#174	Combustion characteristics of Kerosene/Air mixture with hydrogen peroxide addition under scramjet relevant condition K. Wu; D. Yu; X. Fan
4-12-12:	#175	Detonation propagation and attenuation in Tesla-Valve channels Y. Li; J. Su; Y. Lin; H. Yan
Colloquium		13 - Applications: Fire and safety
4-13-01:	#176	Double firelines in canyon terrain: An experimental study P. Guo; C. Ma; N. Liu; H. Chen; X. Xie; J. Lei; W. Gao; L. Zhang; H. Zhang; Y. Yuan
4-13-02:	#177	Characteristics and governing mechanism of coupled fire induced by the interaction of hydrogen jet flame and pool flame L. Gong; B. Ren; C. Li; X. Xiang; S. Gu; Y. Zhang; J. Sun
4-13-03:	#178	Experimental study on flame phenomenon of carbonates-based electrolytes for li-ion batteries containing LiPF6 X. Peng; F. Tang; J. Weng; Y. Chen; X. Zhang; L. Hu

4-13-04:	#179	Expanding the boundaries of the explosion risk assessment of H2/O2/N2/H2O mixtures P. DIEVART; K. N'GUESSAN; S. NAGARAJU; J. PAVAGEAU; T. CUVILLIER; N. CHAUMEIX
4-13-05:	#180	Evolution of wall smoke pattern from rectangular burner with various wall-to-flame distances Y. Han; X. Sun; X. Wang; Y. Huang; F. Tang; L. Hu
4-13-06:	#181	Experimental investigation on the combustion dynamics of fire whirls with porous fuel beds X. Wang; Y. Deng; J. Lei; W. Gao; N. Liu
4-13-07:	#182	Role of gaps on flame-through and flame spread of butt-jointed wooden boards H. Hu; J. Ji; H. Li; Z. Qi; J. Shi
4-13-08:	#183	Natural convection smoldering of peat: Minimum dimensions of reactor and quenching distance D. Machado; F. Costa; E. Cortez; B. Pinto; G. Krieger
4-13-09:	#184	Effect of initial generating eddy height on flame precession of fire whirls: An experimental study C. Ji; N. Liu; J. Lei; W. Gao; X. Xie
4-13-10:	#185	Particle clustering and its role in aluminum dust cloud explosions N. Pandurangan; R. Inoue; A. Ueda; S. Sahu; W. Kim
4-13-11:	#186	Preparation and fire extinguishing performance of an environment-friendly anti-soluble gel foam in ethanol fires K. Song; F. Tang; J. Zhang; X. Zhang; L. Hu
4-13-12:	#187	Quantifying safe intervention windows for ignition prevention in Lithium-Ion batteries under external heating W. C. Tam; H. Fang; J. Chen; A. Putorti Jr.
4-13-13:	#188	Influence of substrate characteristics on heat feedback mechanisms in thin-layer fuel leakage fires C. Li; C. Wang; J. Ji; S. Yu
4-13-14:	#189	Comparative numerical investigation of fire whirls and pool fires using a Multi-Region coupling method C. Cheng; C. Shan; B. Xu; J. Wen
4-13-15:	#190	Traces and soot characteristics of wall-attached fires X. Fan; F. Tang; N. Zhu; L. Hu
4-13-16:	#191	Effect of flow velocity and incident heat flux on smoldering combustion of norway spruce char F. Perez Perez; J. Schmid; A. Frangi
4-13-17:	#192	INTENTIONALLY BLANK
4-13-18:	#193	Study on data-driven wildfire spread prediction considering fire-wind interactions based on experimental, numerical, and historical data Z. Wang; C. Chen; J. Ji
4-13-19:	#194	Effect of immersed metal objects on combustion efficiency of in-situ burning T.-Y. Tseng; K.-C. Tsai

4-13-20:	#195	Machine learning enabled Three-Dimensional firebrand transport characterisation: Combustion enhancement and gyroscopic stabilisation effects H. Y. L. Wong; A. L. Sullivan; Y. Zhang
4-13-21:	#196	Thermal behavior and flame inhibition of LiPF ₆ -Based electrolytes with fluorinated phosphorus additives S. Farmer; A. Alam; L. Zhu; L. Qiao
4-13-22:	#197	Validation of numerical model of flame spread over PMMA copolymerized with TPP against multiple independent datasets I. V. Kulikov; S. A. Trubachev; A. A. Shaklein; A. I. Karpov; A. G. Shmakov; E. A. Sosnin; A. A. Paletsky; A. A. Shcherbinina
4-13-23:	#198	Flame ejection and ceiling flame dimensions in confined compartment-corridor fires: Experimental quantification and physical analysis X. Sun; X. Chen; Y. Han; X. Zhang; L. Hu

15:40-16:10	
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FRIDAY AT A GLANCE

8:30-10:00	Main Hall	Morning Announcements Plenary Lecture - Arnaud Trouvé <i>Chairs: S. Takahashi; J. Torero</i>								
10:00-10:30	Break (30 Minutes)									
Room	Main Hall	A	B-1	B-2	D	E	C-1	C-2	157	H
10:30-12:30	Mini Symposium: Wildfires and Fires in Wildland Urban Interfaces	Concurrent Sessions								
		Fundamental Processes: Chemical Kinetics	Fundamental Processes: Flame dynamics and transport processes	Fundamental Processes: Detonations and high-speed combustion	Applications - Fire and safety	Fundamental Processes: Heterogeneous combustion and processes	Applications - Energy and material conversion and heating processes	Fundamental Processes: Turbulent flames	Applications - Low-speed propulsion	Enabling Models, Methods, Tools & Technology- Modeling approaches
12:30-13:40	Lunch									
Room	Main Hall	A	B-1	B-2	D	E	C-1	C-2	157	H
13:40-15:40	Top. Rev.: X. Huang <i>Chairs: S. McAllister; A. Simeoni</i> Mini Symposium: Wildfires and Fires in Wildland Urban	Concurrent Sessions								
		Fundamental Processes: Chemical Kinetics	Fundamental Processes: Flame dynamics and transport processes	Enabling Models, Methods, Tools & Technology - Enabling concepts	Applications - Fire and safety	Fundamental Processes: Heterogeneous combustion and processes	Applications - Energy and material conversion and heating processes	Fundamental Processes: Turbulent flames	Applications - Low-speed propulsion	Applications - High-speed propulsion and energetics
15:40-16:10	Break (30 Minutes)									
Room	Main Hall	A	B-1	B-2	D	E	C-1	C-2	157	H
16:10-17:30		Concurrent Sessions								
		Fundamental Processes: Chemical Kinetics	Fundamental Processes: Flame dynamics and transport processes	Fundamental Processes: Detonations and high-speed combustion	Enabling Models, Methods, Tools & Technology - Enabling concepts	Enabling Models, Methods, Tools & Technology - Numerical techniques	Applications - Energy and material conversion and heating processes	Fundamental Processes: Turbulent flames	Applications - Low-speed propulsion	Enabling Models, Methods, Tools & Technology - Diagnostics and experimental methods
17:45	Farewell Reception									

Friday Room	A	B-1	B-2	D	E	C-1	C-2	157	H
Colloquium	Fundamental Processes: Chemical Kinetics <i>Chairs:</i> M.S. Cha A. Frassoldati	Fundamental Processes: Flame dynamics and transport processes <i>Chairs:</i> X. Zhang J. Dawson	Fundamental Processes: Detonations and high-speed combustion <i>Chairs:</i> M. Raulescu R. Hytovich	Applications - Fire and safety <i>Chairs:</i> J. Wen D. Zeng	Fundamental Processes: Heterogeneous combustion and processes <i>Chairs:</i> C. Shaddix A. Dreizler	Applications - Energy and material conversion and heating processes <i>Chairs:</i> O. Senneca D. Shimokuri	Fundamental Processes: Turbulent flames <i>Chairs:</i> R. Barlow G. Wang	Applications - Low-speed propulsion <i>Chairs:</i> A. Steinberg Y. Tang	Enabling Models, Methods, Tools & Technology - Modeling approaches <i>Chairs:</i> A. Parente T. Grenga
10:30-10:50	5-A-01: Carbon particle formation, nanostructure, and morphology in H2-blended CH4 pyrolysis: shock-tube experiments and modeling G. Clark; C. Li; M. Adib; J. Jahanzamin; J. W. Streicher; E. Dames; S. Dasappa; A. M. Boies; M. R. Kholghy; R. K. Hanson	5-B1-01: Spiral motions of flame rings in Hele-Shaw cells M. Fan; Z. Lu	5-B2-01: Regularization of irregular-cell detonations using a staggered array of thin plates: A numerical proof of concept G. Bakalis; K. Tang-Yuk; H. D. Ng; X. Mi	5-D-01: Statistical evolution of ignition and ejecta velocity during thermal runaway of Li-ion cells B. Southern; M. Dunn; A. MacFarlane; A. Alsewailam; T. Xiao; J. Subburaj; A. Farooq; A. Masri; V. Gupta	5-E-01: Understanding HCN conversion mechanisms on LaMnO3 via DFT calculations in chemical looping combustion Z. Bai; K. Luo	5-C1-01: Nitriding of Austenitic Stainless Steel Induced by Ammonia Flames under Elevated Pressures Y. Xing; M. Lee; T. Akiba; K. Matsumoto; S. Iwasaki; Y. Suzuki	5-C2-01: Enstrophy evolution in a laboratory-scale lean-premixed lifted hydrogen swirling flame A. Pillai; S. Esaka; N. Chakraborty; R. Kurose	5-IJ-01: The Effect of Interference Between Axially Staged Flames on Thermoacoustic Stability A. Ånestad; E. Åesøy; J. Moeck; N. Worth	5-K-01: A dynamic adaptive table look-up approach for FGM modeling of axially staged ammonia flames L. Lu; M. ZHANG; W. Zhang; Z. Wang; J. Wang; Z. Huang
10:50-11:10	5-A-02: Insights into plasma-assisted methane decomposition in Ar and N2 balance: CH and CH3 measurement and simulation J. Park; A. Mohanan; S. Nilsson; J. Ravelid; A. Ehn; M. Cha	5-B1-02: Cavity-Stabilized Rotating Flames in a Circular Hele-Shaw Burner X. Nie; S. Wang	5-B2-02: Detonation propagation and quenching in a narrow channel: the role of the slapping wave T. Song; Y. Poroshyna; L. Ding; G. Ciccarelli	5-D-02: Effects of low-pressure and low-oxygen concentration on the thermal runaway characteristics and fire behavior of lithium-ion batteries Z. Jia; Y. Liu; Q. Wang	5-E-02: The dominant role of initial porosity in mitigating Wustite-Induced deactivation during cyclic combustion of iron metal fuel, J. Jean-Philyppe; E. Doyle; A. Fahmy; S. Coulombe; J. M. Berghthorson	5-C1-02: Pressure effect on H2-NH3 and CH4-NH3 MILD combustion G. B. Ariemma; V. Castro; B. Cassese; G. Sorrentino; P. Sabia; R. Ragucci; M. de Joannon	5-C2-02: Large-scale dynamics of Rayleigh-Taylor turbulent flames O. Soulard; K. Ley; J. Griffond; A. Briard	5-IJ-02: Nonlinear dynamics and higher harmonic generation in velocity-forced reacting jet in crossflow Y. choi; K. T. Kim	5-K-02: Large-eddy simulation of a hydrogen multi-regime burner using a partially premixed flamelet model X. Wen; T. Li; D. Geyer; A. Dreizler; C. Hasse
11:10-11:30	5-A-03: Investigation on bimodal pattern in laminar burning velocity of H2/NO/N2O/N2: Insight into transition from N2O-dominated chemitry to NO-dominated chemistry S. Bin; X. Shi; J. Fang; Y. Zhang; T. Lian; W. Li; Y. Li	5-B1-03: Experimental investigations of end-gas reactivity effects on the propagation of primary reference fuels flames S. Oh; K. Van; J.-W. Park; Y. Pei; F. Egolfopoulos	5-B2-03: Detonation Structural Modulation Using Waveguides: An Experimental Study R. Punna; G. Ciccarelli; J. Crane	5-D-03: Experimental study of penetrating gap on wood smoldering and flaming combustion behavior H. Li; H. Hua; Z. Qia; J. Shia; J. Jia	5-E-03: Coal Combustion Flue Gas Denitration under Flexible Load Conditions: Wide-Temperature NH3-SCR over V/CeO2 Catalysts with Mechanistic Insights P. Zeng; Z. Zhou; L. Liu; X. Yu; X. Liu; M. Xu	5-C1-03: Instabilities in Ammonia MILD Combustion in a Near-industrial Scale Furnace M. Cafiero; N. Cid; E. Rahmani; M. Fürst; M. M. Kamal; J. Beeckmann; M. Lubrano Lavadera; H. Pitsch; A. Parente	5-C2-03: Local species stratification through preferential diffusion in lean premixed H2/CH4-air turbulent flames S. Shi; R. Schultheis; R. S. Barlow; D. Geyer; A. Dreizler; T. Li	5-IJ-03: Acoustic Metamaterial-Enhanced Micro-Mixing Burner for Suppression of Thermoacoustic Instability C. Zhang; E. Liang; W. Zhu; M. Zhu	5-K-03: Bridging the Thickened Flame and Fine-Scales frameworks for multi-regime combustion modelling G. Lemmi; S. Castellani; R. Meloni; A. Andreini
11:30-11:50	5-A-04: A functional-group-based approach to modeling real-fuel combustion chemistry – IV: Extension to low temperature conditions S. Brunialti; J. C. Giraldo Delgado; X. Zhang; Q. Wang; M. Sarathy	5-B1-04: High-Temperature NO-LIF Measurements in Laminar Premixed NH3/H2/N2-Air Counterflow Flames M. Richter; R. Barlow; J. Dawson; A. Dreizler; D. Geyer	5-B2-04: Dynamics of a converging detonation in an elliptical convergent channel and its interaction with diffracting waves in open space Z. Yang; B. Zhang; H. D. Ng	5-D-04: Radiative heat feedback to the fuel surface in heptane/toluene pool fires J.-L. Consalvi; F. Nmira; H. Najmi	5-E-04: Mechanistic elucidation of selective catalytic ammonia oxidation over Rh by spatially resolved profiling F. Zhang; D. Hodonj; F. M. Bauer; P. Lott; O. Deutschmann; C. K. Law; R. Sui	5-C1-04: Experimental Validation of Thermoacoustic Network Model of a Sequential Combustor B. Dharmaputra; N. Noiray	5-C2-04: Turbulent hydrogen premixed flames at high pressure and high temperature S. Al Kassar; S. Cantagalli; W. Lauder; G. Arumapperuma; A. Attili	5-IJ-04: Data-driven suppression of quasiperiodic and mixed-mode thermoacoustic oscillations using genetic programming B. Yin; A. Ånestad; E. Åesøy; N. Worth; L. Li	5-K-04: Modeling the spatially resolved structural and morphological evolution of nanoparticles in flame spray pyrolysis using a detailed population balance Monte Carlo method S. He; F. Xie; H. Zhao
11:50-12:10	5-A-05: Ozone-assisted low-temperature oxidation of propylene oxide Q. Wang; W. Liao; H. Chen; Y. Wang; X. Liu; B. Liu; Z. Wang; B. Yang	5-B1-05: Numerical Investigation of Stabilized Inward Propagating Lean Hydrogen-air Flames F. Kaufmann; C. Frouzakis	5-B2-05: Wave-speed conditioned statistics measured in ethylene-air detonations at atmospheric conditions A. Skiba; N. Rock; M. Gomez	5-D-05: Suppression mechanism of spontaneous ignition during high-pressure H2 leakage by gas mixing: The dominant role of shock attenuation over chemical reactivity S. Zhou; Z. Luo; J. Xiao; J. Deng; M. Kuznetsov; T. Jordan; D. T. Banuti; H. Qi; T. Wang; B. Su; L. Liu	5-E-05: Effects of Pd/Pt-Based Soluble Catalysts on the Combustion Characteristics of Kerosene Droplets L. Luo; F. Zhang; Y. Sun; J. Sun; K. H. Luo; Y. C. Liu; R. Sui	5-C1-05: Undecomposed LiNO3 enhances Ni-rich cathodes for lithium-ion battery via flame-assisted spray pyrolysis J. Wang; J. Li; Y. Xu; H. Guo; S. Li; K. Wang	5-C2-05: Lewis number effects in high-Ka piloted jet flames G. Russell; C. Carter; A. Skiba; A. Aspden	5-IJ-05: Experimental analysis of flame front topology and NO location in a swirled non-premixed H2/air flame at high pressure using combined optical diagnostics Y. Touzeau; S. Petit; C. Irimie; B. Blaisot; A. K. Mohamed; G. Pilla	5-K-05: Incorporating coherent structure dynamics into a blow-off correlation for swirling flames L. Wang; C. Fu; Y. Li; Y. Wang; L. Fan; Q. Wang; X. He; M. Zhang; Y. Gao

ROOM	A	B-1	B-2	D	E	C-1	C-2	157	H
Colloquium	Fundamental Processes: Chemical Kinetics <i>Chairs:</i> T. Turányi B. Yang	Fundamental Processes: Flame dynamics and transport processes <i>Chairs:</i> C. Frouzakis K. Kanayama	Enabling Models, Methods, Tools & Technology - Enabling concepts <i>Chairs:</i> K. Kuwana F. Scala	Applications - Fire and safety <i>Chairs:</i> L. Carmignani M. Kikuchi	Fundamental Processes: Heterogeneous combustion and processes <i>Chairs:</i> R. Sui Y. Xia	Applications - Energy and material conversion and heating processes <i>Chairs:</i> M. U. Alzueta X. You	Fundamental Processes: Turbulent flames <i>Chairs:</i> B. Savard	Applications - Low-speed propulsion <i>Chairs:</i> B. Franzelli R. Eggels	Applications - High-speed propulsion and energetics <i>Chairs:</i> S. Prakash J. Burr
13:40-14:00	5-A-07: Third-body effects of N2 and Ar in ammonia pyrolysis: shock tube experiments and modeling insights T. Dinelli; B. Y. Belal; A. Elkhazraji; S. A. Alturaifi; A. Stagni	5-B1-07: Flash-Boiling and Ambient Mixture Cooling in High Pressure Liquid Ammonia Sprays K. Nonavinakere Vinod; W. Roberts; G. Tian; T. Fang	5-B2-07: Dual-region magnetic regulation of soot across wide oxygen concentrations in inverse diffusion flames K. Yang; Y. Ying; R. Yu; C. Chen; M. Chen; B. Wu; Z. Su; J. Yan; D. Liu	5-D-07: Benzene production from fires involving composite natural and synthetic fuel loads via laser spectroscopy N. Jaeger; Y. Yan; A. Venkat; M. Spearrin	5-E-07: Electric Field assisted Soot Catalytic Combustion of Non-Conductive Catalysts Q. Guo; Z. Zhou; L. Liu; Y. Long; Y. Xiong; M. Xu	5-C1-07: Emergent Graphene: Unanticipated Formation and Possible Mechanism in Extreme High-Temperature Conditions in a Shock Tube O. Padilla; C. Shao; K. Daun; J. Herzler; M. Fikri; C. Schulz	5-C2-07: A combined flamelet manifold–artificially thickened flame LES model for thermodiffusively unstable turbulent hydrogen flames M. Schneider; V. Schuh; D. Kaddar; P. Gruhlke; J. Lipkowicz; S. Pfadler; H. Nicolai; C. Hasse	5-IJ-07: Stabilizing lifted, micromix H2 flames in a fuel-flex, model gas turbine combustor Y. NADERZADEH ARDEBILI; S. WATSON; O. ZEYL; S. CHAUDHURI	5-K-07: Parasitic combustion model-based data assimilation for predicting wave speeds in rotating detonation engines R. Jain; R. Fernandez; Y. Keskinoz; V. Raman; M. Morzfeld; T. Zaki
14:00-14:20	5-A-08: Pyrolysis Kinetics of Bis(2,2,2-trifluoroethyl) Methyl Phosphonate: Experiments and Modeling C. Gregoire; P. Dievart; K. Kanayama; K. Maruta; H. Nakamura; E. L. Petersen; O. Mathieu	5-B1-08: Spatial intensity variation of the precessing vortex core in a premixed swirling flame Q. Wang; X. Xia; F. Qi	5-B2-08: Low-order modelling of NRP discharges impact on the LBO limit of a swirled ammonia flame G. Bizot; N. Bartéleon; T. Naess; A. Andreini	5-D-08: Flame radiation characteristics of underwater hydrogen-blended natural gases leakage fire Y. Chen; F. Tang; P. Hu; Q. Wang; L. Hu	5-E-08: Design method of perovskite-type metal oxides toward formaldehyde catalytic combustion Y. Yang; J. Ding; J. Liu; L. zhao	5-C1-08: Impact of hydrogen on nanographene formation during hydrocarbon pyrolysis B. Xue; R. Seng; G. Pirouznia; S. Currie; X. Shi	5-C2-08: Prediction of high-frequency thermo-acoustic instabilities with a convective flame response model H. Kang; H. Paniez; T. Schuller	5-IJ-08: Stability and Structure of Partially Cracked Ammonia/Air Premixed Swirl Flames at Elevated Pressures P. Ma; S. Marragou; T. Guibert; W. Roberts; H. Zhang	5-K-08: Internal Axisymmetric Oblique Detonation Waves for Hypersonic Propulsion Z. P. White; S. D. Smith; K. A. Ahmed
14:20-14:40	5-A-09: Unraveling the OH initiated oxidation of 1,4 dioxane: a combined experimental and theoretical study B. Giri	5-B1-09: Effects of Soret diffusion on the intrinsic instability of premixed hydrogen/air flames Q. Wen; Y. Wang; L. Yang; Y. Morii; T. Zirwes; S. Wang; Z. Chen	5-B2-09: On the combustion of hydrogen in a fluidised bed of silica revealed by OH* chemiluminescence and high-speed imaging A. Fujinawa; T. Akiba; M. Lee; Y. Suzuki; E. Marek	5-D-09: Understanding wildfire spread via 3D background oriented schlieren tomography (BOST) C. T. Foo; T. Schultze; J. C. Balzer; K. Mohri	5-E-09: Dual role of phosphorus on alkali metals release and transformation during sewage sludge incineration Z. Yang; Y. Huang; N. Bie; H. Hu; S. Li; A. Li; C. Lou; I. Naruse; H. Yao	5-C1-09: Carbon-negative combustion of aluminum particles in CO ₂ driven by non-equilibrium microwave plasma C. Li; Y. Tang; J. Li; Z. Lin; B. Huang; B. Shi	5-C2-09: Characterization of Ignition Mechanisms in Turbulent Jet Ignition using LES/TPDF Modeling U. Jain; H. Wang	5-IJ-09: Influence of inlet air pulsation on the effusion cooling characteristics of a gas turbine combustor X. Lu; Y. Li; Y. Xiao; B. Ge; M. Chen; Y. Shen; L. He; X. Liu	5-K-09: Stabilization and Throttling Mechanism of Oblique Detonation Waves for Hypersonic Propulsion L. Berson; R. Bielwaski; S. Smit; J. Sprunger; R. Hytovic; K. Ahmed
14:40-15:00	5-A-10: Molecular Insights into Ozone-Initiated Oxidation of 1,3-Dioxane Bio-Hybrid Fuel with Synchrotron-Based Photoelectron Spectroscopy A. Mendy; J. Zou; C. Smith Lewin; O. Herbinet; P. Arnoux; G. Garcia; L. Nahon; L.-S. Tran; G. vanhove; F. Battin-Leclerc; J. Bourgalais	5-B1-10: On the combustion of ultra-lean hydrogen-air mixtures in an excess-enthalpy burner D. Fernandez-Galisteo; C. Jiménez; V. N. Kurdyumov	5-B2-10: Real-time tracking of iron oxide particle reduction with hydrogen in a fluidized bed reactor M. Kannengießer; L. Braun; F. Hagen; M. Seitz; L. Mögerle; B. Stelzner; J.-D. Grunwaldt; D. Doronkin; D. Trimis	5-D-10: Effect of bulk density on fire spread in shrub fuels Z. Tan; J. Lei; P. Huang; X. Wang; W. Gao; N. Liu	5-E-10: Comprehensive study on the characteristics and theoretical model of multi-source sludge co- smoldering process Y. Xue; Q. Song; B. Qian; X. Wang; Y. Ye; K. Xu; J. Huang; Y. Qiao	5-C1-10: Generation, ignition and combustion of molten aluminum spray towards energy conversion X. Ni; Z. Wu; W. Wang; K. Zhang; H. Ni; Y. Wang; E. Berrocal; M. Aldén; Z. Li	5-C2-10: Modelling differential diffusion in a reacting shear layer using a Sparse-Lagrangian particle approach S. Gutierrez Sanchez; A. Kronenburg; T. Zirwes; J. W. Gärtner	5-IJ-10: Kerosene spray flame in hot vitiated crossflow at elevated pressures C. Vegad; K. Moon; N. Noiray	5-K-10: Active direction control of rotating detonation waves by swirl injection T. Yamamoto; K. Matsuoka; N. Itouyama; A. Manabe; Y. Ide; J. Kasahara; K. Fujiwara; A. Matsu
15:00-15:20	5-A-11: Theoretical Kinetics of HCN Isomerization and Its Reactions with H and NH2: New Insights into Ammonia Blended Combustion J. Xie; A. Konnov	5-B1-11: Self-excited thermoacoustic instabilities and flame dynamics in an H2-fueled trapped vortex combustor Q. Wang; A. Ånestad; K. Wang; D. Yang; N. Worth	5-B2-11: Interactions between liquid sprays and nanosecond-pulsed discharges C. Reuter; N. Dewey; T. Farouk	5-D-11: High-fidelity gas-phase characterization of downward flame spread over PMMA D. Morrisset; A. O. Ojo; A. Padhiary; K. Sotowicz; A. Law; B. Peterson; R. M. Hadden	5-E-11: High-resolution in situ analysis of biomass pyrolysis by combining quantitative synchrotron μ CT and 3D particle-resolved simulations E. Boigne; M. M. Ahmed; C. Foster; E. R. Toro; D. Y. Parkinson; A. A. MacDowell; H. S. Barnard; F. Panerai; C. Saggese; M. Ihme	5-C1-11: Direct Flame Synthesis and Defect Engineering of Nanoporous Graphene for Electronic and Separation Applications H. Hong; Z. Dong; S. Cetindag; J. Shan; B. Kear; S. Tse	5-C2-11: Modelling flame structure and NOx emissions in non-adiabatic multi-regime turbulent burner with virtual chemistry E. ESPADA; M. Preteseille; S. Dillon; M. Cailler; R. Mercier; N. Darabiha; B. Fiorina	5-IJ-11: Influence of residence time on emissions characteristics during liquid ammonia spray combustion in a swirling burner G. Reibel; Y.-R. Chen; A. Hayakawa; T. Kudo; K. Ishihara; S. Colson; S. Ito; M. Uchida; H. Kobayashi	5-K-11: Near Throat Flow Structure in a Rotating Detonation Combustor with Supersonic Inflow R. Fernandez; V. Raman

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Colloquium	Fundamental Processes: Chemical Kinetics <i>Chairs:</i> A. Miyoshi Z. Serinyel	Fundamental Processes: Flame dynamics and transport processes <i>Chairs:</i> T. Fang H. Nicolai	Fundamental Processes: Detonations and high-speed combustion <i>Chairs:</i> M. Short X. Shi	Enabling Models, Methods, Tools & Technology - Enabling concepts <i>Chairs:</i> A. Giusti A. Konnov	Enabling Models, Methods, Tools & Technology - Numerical techniques <i>Chairs:</i> R. Malik H. Watanabe	Applications - Energy and material conversion and heating processes <i>Chairs:</i> X. Mi S. Chaudhuri	Fundamental Processes: Turbulent flames <i>Chairs:</i> C. Mounaïm-Rousselle O. Gülder	Applications - Low-speed propulsion <i>Chairs:</i> A. Hayakawa	Enabling Models, Methods, Tools & Technology - Diagnostics and experimental methods <i>Chairs:</i> M. Shimura R. M. Spearrin
16:10-16:30	5-A-13: An experimental and kinetic modeling study of the ignition of tert-amyl methyl ether J.-T. Chen; S. Zhou; P. Wang; J. Liu; Y. Zhu; Q. Ding; M. Raza; H. J. Curran; C.-W. Zhou	5-B1-13: Interaction of vortices and lean premixed hydrogen flames with intrinsic instabilities V. Schuh; H. Nicolai; A. Bähr; C. Hasse	5-B2-13: Detonation Propagation Through Alternating Unburned and Burned Mixtures J. Gardner; J. Squeo; B. Rankin; A. Novoselov	5-D-13: Direct solar-thermal dry reforming of biogas for production of syngas and graphitic carbon B. Jeevaretanam; N. Kuenning; B. Heronimus; T. Fisher; R. Spearrin	5-E-13: Prediction of combustion instabilities in turbulent pool fires using a flamelet model with differential diffusion, Y. Yan; F. Brännströmb; C. Hasse; X. Wen	5-C1-13: Additive-free spray flame synthesis of homogeneous nanoparticles through atomization of a pressurized and superheated nitrate precursor L. Tu; Q. Mao; Y. Ren	5-C2-13: Direct numerical simulation of turbulent boundary layer flashback in a high-pressure, diffusive-thermally unstable premixed hydrogen-air flame J. Lin; Y. Wang; A. Gruber; J. Chen; E. Hawkes	5-IJ-13: Flame Stabilization in DME Spray Flames under Engine-Relevant Conditions Characterized by OH* Chemiluminescence and CH2O Laser-Induced Fluorescence J. Yi; L. Pickett; K. Wan; J. Manin	5-K-13: Sensitive, multi-species, variable-pathlength laser absorption measurements in shock-tube studies of ammonia pyrolysis and oxidation P. Prasanna Simha; T. M. Rault; O. R. Trimble; J. W. Streicher; R. K. Hanson
16:30-16:50	5-A-14: Kinetic Studies of H (2S) + O2 = OH + O Under the Supercritical Phase M. AbdelRahman; X. Zhang; P. Zhang; H. Zhao	5-B1-14: An improved critical velocity gradient model for laminar boundary layer flashback of NH3/H2/air flames Z. Zhu; H. Wang; E. Hawkes; K. Luo; J. Fan	5-B2-14: Dynamics of detonation wave induced by regular reflection of shock waves in non-uniform layered media H. Li; J. Sun; J. Z. Ma; J. Wang; Z. Chen	5-D-14: Ni oxidation suppression and low-H2 reactivation in chemical-looping integrated CO2 capture-methanation under O2-containing flue gas Y. Feng; S. Cimino; F. Massa; M. E. Fortunato; H. Yang; F. Scala; A. Coppola	5-E-14: A Deconvolution-Based Approach for A Posteriori Validation of Subgrid-Scale Models: Application to Agglomerating Nanoparticles, M. Harchaoui; A. Vié; C. Tenaud; D. Veynante; B. Franzelli	5-C1-14: Iron as a recyclable energy carrier: Redox cycling of iron oxide pellets for hydrogen storage A. Knapp; R. Flügel; F. Straub; O. Deutschmann	5-C2-14: Can high-pressure thermodiffusively-unstable lean premixed hydrogen flames be reproduced at 1 atm? A. Aspdén; T. Howarth; E. Hunt; A. Moitro; G. Russell	5-IJ-14: Magnetically rotating spark plug: spark elongation and ignition enhancement in ammonia-air mixture S. H. Park; H. J. Kang; J. H. Lee; D. H. Han; A. S. AlRamadan; M. S. Cha	5-K-14: Reacting Fuel Droplet Number Density Measurements in a Lean Premixed Prevaporized Combustor A. Stevens; I. Obi; S. Wonfor; J. Juergensmeyer; S. Wehe; A. Steinberg; Y. C. Mazumdar
16:50-17:10	5-A-15: Effect of Fischer-Tropsch Synthetic Kerosene Blending on the Oxidation Behavior of Jet A-1 T. A. Kashif; F. Zufar; S. Brunialti; Q. Wang; M. Xu; M. Sy; J. Subburaj; S. M. Sarathy; A. Farooq	5-B1-15: Ammonium Nitrate Particle Formation from Laminar Premixed Ammonia/Hydrogen/Air Flames T. Patil; C. Goertemiller; W. Northrop	5-B2-15: Experimental evidence of deflagration-to-detonation transition around a thin-metal plate in an unconfined system K. Iwata; H. Arakaki; Y. Seki; S. Maeda; T. Obara	5-D-15: Enhanced NH3/Air dual-swirl non-premixed combustion via NH3 decomposition by microsecond repetitively pulsed discharges K. Wang; Z. Nian; Y. Tang; B. Huang; B. Shi; C.-Y. Wen	5-E-15: A Conditional Source-term Estimation approach for turbulence-radiation interaction in eddy dissipation concept-based fire simulations, X. Lu; N. Ren; F. Nmira; J.-L. Consalvi; Y. Wang	5-C1-15: Multi-Objective Optimization of a Dual-Swirl Dual-Fuel Combustor unit Using L1-Sparse Regression S. Liang; Y. Lin; P. Li; H. Li; Y. Zhang; R. Fang	5-C2-15: Influence of Karlovitz number on turbulent lean premixed hydrogen-air slot jet flames acoustics F. G. Schiavone; G. Daviller; D. Laera	5-IJ-15: Unveiling hydrogen cyanide formation in pilot-diesel-ignition ammonia engines using large eddy simulations Z. Li; A. Li; J. Li; Y. Fan; T. Zhu; L. Zhu; Z. Huang	5-K-15: Impact of sustainable aviation fuel on soot properties: a physics-informed neural network enhanced in-situ characterization M. Littin; B. Kaźmierski; M. Mazur; F. Escudero; A. Fuentes; J. Yon
17:10-17:30	5-A-16: Species-Dependent NTC Behavior during the Evolution of Wall-Stabilized Diethyl Ether Cool Flames M. Zhou; Y. Suzuki; M. Lee	5-B1-16: Blow-off modes of bluff-body stabilized premixed ammonia flames with different cracking ratios T. Tomidokoro; U. A. Medina Martínez; J. Hayashi; H. G. Im	5-B2-16: Experimental investigation of shock-to-detonation transition in stoichiometric H2-O2 with repeated obstacles M. Restrepo-Cadavid; H. Watanabe; V. Rodriguez; O. Dounia; A. Chinnayya	5-D-16: Evaluation of novel oxygen storage materials (OSM) for low-emission heat generation in a flow reactor N. Sygda; O. Ravkina; R. Hoffmann; L. Zigan	5-E-16: A principal component analysis framework for subgrid closure models in turbulent NH3-H2 combustion, S. Abdelwahid; J. Guo; M. R. Malik; F. Hernandez-Perez; H. G. Im	5-C1-16: Impact of hydrogen fuel blending on the flame dynamics in a multi-element combustor A. Koyama; J. O'Connor	5-C2-16: On the evolution of thermodiffusive instabilities in turbulent lean premixed hydrogen-air jet flames assessed via experiments and direct numerical simulation A. Skiba; C. Carter; G. Russell; A. Aspdén	5-IJ-16: Auto-ignition of ammonia sprays under marine engine conditions F. Almatrafi; H. Wu; S. Cardona; M. Ben Houidi; W. Roberts	5-K-16: Identifying and mapping flare plume species using hyperspectral imaging and machine learning A. Singh; O. Gulsayin; K. Iheme; K. Daun

41st International Symposium on Combustion

Work in Progress Poster Presentation Schedule

Key:

Day-Colloquium-Poster Number

Examples:

M-01-01 #001

Monday- Fundamental Processes: Chemical Kinetics -Poster 1 # Presentation Number (1)

T-08-02 #092

Tuesday- Enabling Models, Methods, Tools & Technology: Numerical techniques -Poster 2 #Presentation Number (92)

Monday

Colloquium

1 - Fundamental Processes: Chemical Kinetics

- M-01-01: #001 An experimental and numerical investigation of CO and NO formation in premixed n-propanol and iso-propanol flames,
G. Wang, J. Bajrami, D. Deepa, S. Agarwal, S. Nadiri, D. Zhu, Z. Qu, R. Schmitz, R. Fernandes, F. Ferraro, F. Dinkelacker, B. Shu
- M-01-02: #002 A numerical and mechanistic study of zero-carbon ammonia staged combustion for gas turbine applications,
T. Cho, H. Park
- M-01-03: #003 Impacts of branching and unsaturation on hydrocarbon spray ignition,
S. Sakleshpur Nagaraja, B. A. Eraqi, S. Sarathy
- M-01-04: #004 Ethane oxidation up to 100 atm in a supercritical-pressure jet-stirred reactor,
R. Bo, S. Guo, B. Liu, Y. Guo, H. Zhao
- M-01-05: #005 Theoretical investigation of key i-C₃H₇O₂ and n-C₃H₇O₂ reaction pathways and their impact on propane oxidation under high pressure conditions,
M. Djermane, Y. Huang, M. Abdel Rahman, B. Liu, Z. Hao
- M-01-06: #006 Foundations for wildland fire atmospheric chemistry: Radical-driven pathways to understand the emissions from biomass pyrolysis,
J. Shahanand, S. Bhattacharyya, A. Lemmens, N. Dias, M. Ahmed, T. Wolf, R. Bambha, H. Michelsen
- M-01-07: #007 Quantification and identification of hydroperoxides in the low-temperature oxidation of n-heptane using HPLC-PCR,
B. Roux, S. Kanika, R. Benrabah, P. Arnoux, P. Glaude, R. Fournet, B. Sirjean
- M-01-08: #008 High-temperature oxidation of ammonia-methane blends: Shock-tube measurements of NH₃, CO, and radical chemiluminescence,
M. Alya, K. Ghunaim, B. Bela, M. Hasan, A. Elkhazraji, S. Alturaifi
- M-01-09: #009 A ReaxFF molecular dynamics study of the effects of p-xylene addition to n-decane on soot formation,
J. Wang, X. Zhang, W. Han
- M-01-10: #010 Boundary-layer thickness calculations for shock-induced ignition of binary H₂/O₂ and CH₄/O₂ mixtures,
M. Sandberg, E. Petersen
- M-01-11: #011 Flame structure of premixed hydrogen flame doped with iron pentacarbonyl/tetramethyl silane,
M. Gonchikzhapov, M. Lalanne, I. Rahinov, T. Kasper
- M-01-12: #012 Kinetic parameter optimization of a detailed NH₃/H₂ combustion mechanism using extensive direct and indirect combustion data,
A. Szanthoffer, M. Papp, T. Nagy, T. Turányi
- M-01-13: #013 Oxidation characteristics at ambient temperature and reignition mechanisms of pyrolysis residues from forest fires,
J. Li, J. Geng, S. Liu
- M-01-14: #014 Spectroscopic insights into Group III metal chemistry in combustion environment: Trimethylgallium-seeded H₂/O₂/Ar flames under varying stoichiometry and thermal conditions,
Y. Wang, H. Ni, Z. Wu, M. Alden, Z. Li
- M-01-15: #015 Exploring the pyrolysis and combustion of toluene under CO₂ and H₂O dilution,
L. Tran, M. Issa, F. Battin-Leclerc, O. Herbinet, S. Gosselin, P. Desgroux
- M-01-16: #016 Unraveling the interconversion between NO and NO₂: Reaction pathways and ab initio kinetics,
R. Tang, H. Wu, S. Goldsborough, S. Cheng
- M-01-17: #017 HiPrFlame - an ab initio based real-fluid modeling approach for high-pressure combustion: An experimental and numerical study,
T. Zhang, B. Ran, Y. Dong, Y. Han, H. Zhang, S. Cheng
- M-01-18: #018 Supercritical autoignition at up to 160 bar in an ultra-high-pressure rapid compression machine: A case study of CH₄,
B. Ran, Y. Dong, Y. Han, S. Cheng

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2 - Fundamental Processes: Flame Dynamics and Transport Processes

- M-02-01: #020 Hydrogen flame behaviour in oxy-combustion under subcritical pressure,
S. Oles, A. Pozartik
- M-02-02: #021 Enhancing flame stability of natural gas through hydrogen enrichment: Experimental study considering global compositional variations using a McKenna flat burner,
A. Kaewpradap
- M-02-03: #022 Phase dynamics of parametric thermoacoustic instability in premixed flames,
J. Delfin, N. Hashimoto, O. Fujita
- M-02-04: #023 Stability limits of low-temperature non-premixed hydrogen micro jet flame,
D. Melliti, S. Michaux, K. Chatelain, D. Lacoste
- M-02-05: #024 Characteristics and instability of CH₄/air premixed flames in a stepwise-disk-burner (SDB),
J. Han, N. Kim

- M-02-06: #025 Unsteady curvature effects on non-premixed flamelets,
F. Rivadeneira, F. Huenchuguala, A. Scholtissek, C. Hasse, H. Olguin
- M-02-07: #026 Laminar burning velocities of cyclopentane at 298-353K: Heat flux measurements and mechanism validation,
A. Dmitriev, A. Konnov
- M-02-08: #027 Near-limit propagation of premixed H₂-Br₂ flames,
M. Pandey, K. Agrawal, A. Ray
- M-02-09: #028 Analytical determination of Markstein number using the corrected stability region width method in downward propagating flames in acoustic field,
A. Ahirwar, A. Dubey
- M-02-10: #029 Autoignition and flame dynamics of an isolated n-heptane droplet within a hot methane/air mixture,
Z. Yuan, S. Li, Z. Jiang, S. Zheng, H. Zhang, Z. Chen
- M-02-11: #030 Effect of stagger interferences on flame dynamics and linear disturbance of lean premixed hydrogen flames,
Y. Yin, X. Han
- M-02-12: #031 Evolution of turbulent heat fluxes in flame wall interaction using simultaneous laser diagnostics,
X. Wei, A. Padhiary, M. Thomas, B. Peterson
- M-02-13: #032 Experimental study of self-excited and pulse-excited combustion instability of GO₂/GCH₄ coaxial injectors,
Y. Tang, J. Li, X. Chen, C. Li, J. Wei, B. Shi
- M-02-14: #033 Numerical analysis of ammonia-air vortex bursting in a narrow tube,
K. Hara, N. Hayashi, D. Shimokuri
- M-02-15: #034 Numerical study on flammable range and structures of flame ball in NH₃/H₂/air mixture,
A. Tsunoda, Y. Morii, K. Maruta

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3 - Fundamental Processes: Turbulent flames

- M-03-01: #036 Control of a nitrogen-diluted hydrogen flame using a star-shaped bluff body and oxidizer flow excitation,
A. Tyliczszak, L. Caban, A. Wawrzak
- M-03-02: #037 Influences of turbulence and LFL on ignition characteristics for hydrogen-air mixtures,
M. Nakahara, Y. Matsushita, R. Komatsu, F. Abe
- M-03-03: #038 Local characteristics of turbulent premixed hydrogen/air flames at ambient and cryogenic temperatures,
L. Yang, X. Fang, M. Davy, F. Leach
- M-03-04: #039 Real-fluid multiphase modeling of n-dodecane/ammonia combustion under engine-relevant conditions,
J. Gracia I Sanz, N. Doan, S. Hickel
- M-03-05: #040 Nanoparticle-assisted stabilization of blended hydrogen flames,
R. Mollick, H. Ding, A. Ratner
- M-03-06: #041 Response characteristics of a bluff-body stabilized turbulent premixed flame to acoustic perturbations,
H. Lee, B. Lee
- M-03-07: #042 A new mixed-mode bluff-body burner to stabilize lean turbulent flames,
A. Kattan, M. Dunn, A. Masri
- M-03-08: #043 Investigating the effect of the global equivalence ratio, swirling intensity and elevated pressure on NH₃/CH₄ non-premixed swirling flame using LES/FPV approach,
A. Adam, H. Watanabe, R. Kai
- M-03-09: #044 Predicting natural-mode suppression under open-loop acoustic forcing: A framework based on dual-frequency forcing of a thermoacoustically stable flame,
Y. Lei, Y. Liao, J. Zhang, Y. Guan

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4 - Fundamental Processes: Detonations and high-speed combustion

- M-04-01: #046 Comparison of DAAF-based composite formulations,
T. Lujan, J. Lichthardt, K. Kozisek, R. Mier, E. Francois
- M-04-02: #047 Detonation dynamics in a two-dimensional confined arc of conventional high explosive,
W. Chapman, E. Anderson, M. Short, C. Chiquete, J. Gamo
- M-04-03: #048 Mode locking and resonance selection in rotating detonation engines under inlet pressure forcing,
Y. Chai, J. Sun, J. Ma, J. Wang, Z. Chen
- M-04-04: #049 A shock wave explosion mechanism for gas pipeline explosions,
R. Leishear
- M-04-05: #050 Detailed modelling of hydrogen detonation initiation inhibited by trifluoroiodomethane,
Z. Weng, H. Zhang

- M-04-06: #051 INTENTIONALLY BLANK
- M-04-07: #052 Stability of weak deflagration solutions in reactive Rayleigh flow,
H. Okada, Y. Morii, K. Maruta

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5 - Fundamental Processes: Heterogeneous combustion and processes

- M-05-01: #054 Flame structure transition from liquid ammonia spray to fully prevaporized ammonia,
R. Wang, X. Liang, Z. An, J. Xing, R. Kurose
- M-05-02: #055 Integrated steam gasification and combustion of wood pellets and spent mushroom substrate in a single fluidized bed reactor,
G. Chen, F. Wu, Y. Li, B. Wu, Z. Chang
- M-05-03: #056 Large-eddy simulation of hydrogen-assisted swirl-stabilized kerosene spray flames,
X. Zhu, M. Lu, K. Wan, R. Liu, C. Jiang
- M-05-04: #057 Experimental and numerical assessment of Pt-catalyzed combustion of SOFC start-up fuel gas in foam monoliths,
R. Catapan, E. Souza, L. Silva
- M-05-05: #058 Nitrogen doping modulates NH_3 oxidation on char: A mechanistic insight from first-principles calculations,
K. Ren, X. Chen, J. Ma
- M-05-06: #059 Near-surface chemistry of Pd/Pt-ceria catalysts,
B. Aljaman, S. Sarathy, J. Ruiz-Martinez
- M-05-07: #060 Screening and comparative study of the combustion characteristics of binary metal boron-based thermites,
Q. Huang, C. Zhu, W. Zheng
- M-05-08: #061 Slow pyrolysis under recirculated vapors: Effects of steam on co-products,
C. Grottola, P. Giudicianni, D. Amato, P. Sabia, R. Ragucci
- M-05-09: #062 Investigation of droplet combustion characteristics of sustainable rocket propellant (SRP), a plant-based propellant optimized for rocket propulsion,
T. Takaoka, H. Habu

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6 - Enabling Models, Methods, Tools & Technology - Diagnostics and experimental methods

- M-06-01: #064 INTENTIONALLY BLANK
- M-06-02: #065 Digital coherent Raman imaging in a $\text{H}_2\text{-O}_2$ rotation-detonation-engine canonical flow,
A. Bohlin, L. Castellanos, J. Melguizo Gavilanes
- M-06-03: #066 Improvement of tunable diode laser absorption spectroscopy by 3D measurement for better combustion analysis demonstrated on ammonia flame,
N. Warnecke, S. Agarwal, P. Morajkar, B. Shu, R. Fernandes
- M-06-04: #067 Simultaneous high speed NH-PLIF and PIV using R-branch excitation in the A-X(0,0) band,
Z. Wang, S. Li, C. Dong, Y. Liu, B. Zhou
- M-06-05: #068 Quantitative PLIF measurements of mixture distribution and its impact on stratified hydrogen combustion,
Y. Ki, J. Kim, H. Yang, J. Hwang, C. Bae
- M-06-06: #069 Quantitative NH_2 radical measurements in ammonia flames using planar laser-induced fluorescence,
M. Rupam, X. Xu, T. Akiba, M. Lee, Y. Suzuki
- M-06-07: #070 Effect of injector tip temperature on methanol spray dynamics during cold-start conditions,
S. Lee, H. Kim, S. Bae, C. Bae, J. Hwang
- M-06-08: #071 Assessment of low-efficiency driver gases in shock-tube flows over a wide range of conditions: Cost analysis and optimal shock-tube design,
Z. Ding, M. Sandberg, E. Petersen
- M-06-09: #072 Flame temperature effects on NO^* , OH^* , and NH^* emissions in premixed laminar $\text{NH}_3/\text{H}_2/\text{N}_2$ -air flames,
W. Kulatilaka, M. Suarez, S. Pias
- M-06-10: #073 Detection of key gaseous phosphorus species via chemiluminescence,
M. Dewerth, T. Kasper, M. Gonchikzhapov
- M-06-11: #074 Experimental investigations into the sub-atmospheric ignition behavior of catalyzed methanol hypergolic fuel,
S. Bhowmick, N. Kumbhakarna
- M-06-12: #075 MHz-rate optical pressure sensing in high-pressure detonation environments,
P. Barnouin, E. Foss, M. Spearrin
- M-06-13: #076 Quantitative nitric oxide thermochemistry in air plasmas via combined laser absorption imaging and planar laser-induced fluorescence,
B. Steavenson, N. Stegmeier, J. Hernandez-McCloskey, A. Fuchs, J. Colborn, C. Combs, D. Pineda

Colloquium

7 - Enabling Models, Methods, Tools & Technology - Modeling approaches

- M-07-01: #078 Robust three-step global n-heptane mechanism from shock-tube ignition delays to ODW initiation,
Y. Wu, J. Chen, Y. Niu
- M-07-02: #079 Modeling and analysis of thermal runaway propagation in cylindrical battery modules,
B. Stiehl, L. Zigan
- M-07-03: #080 Modeling the response of a tilted conical flame at large tilting angles,
E. Takeo, V. Acharya
- M-07-04: #081 Numerical modeling of MILD cyclonic burner with extended 6D flamelet-generated manifold,
B. Cassese, G. Sorrentino, A. Terlizzi, R. Ragucci, M. de Joannon
- M-07-05: #082 Effect of injection strategy and fuel properties on the Wiebe function for quasi-dimensional internal combustion engine simulations,
S. Baykal, T. Methling, S. Jacobs, A. Huber, M. Koehler
- M-07-06: #083 Systematic reaction model development for ammonia combustion utilizing high-pressure data,
M. Kovacs, H. Nakamura
- M-07-07: #084 Improving offline reinforcement learning for thermoacoustic instability mitigation using preprocessing Hilbert transform and exponential moving average,
J. Giraldo Delgado, Q. Wang, S. Sarathy
- M-07-08: #085 LES-FDF of temporally evolving hydrogen-air shear layer with intrinsically generated shock-flame interactions,
G. Walia, S. Galindo-Lopez, M. Cleary, S. De
- M-07-09: #086 Generating simultaneous OH-PLIF/PIV images of turbulent flames with a conditional diffusion model,
A. Tarur, S. Barwey, S. Sankaran

Colloquium

8 - Enabling Models, Methods, Tools & Technology - Numerical techniques

- M-08-01: #088 Impact of burner design on convective heat transfer in industrial ovens,
K. Akkaya
- M-08-02: #089 Chemical reactor network modeling of the effects of hydrogen lancing position on NO_x emissions in H₂/CH₄ diffusion flames,
F. Wu, M. Wu, G. Chen, C. Lu, Y. Huang

Colloquium

9 - Enabling Models, Methods, Tools & Technology - Enabling concepts

- M-09-01: #091 Hydrothermal flames for terrestrial and extraterrestrial application,
J. Kozinski, M. Reddy, K. Kang, S. Nanda
- MI-09-02: #092 Small ethylene diffusion flames under the influence of electric-fields on the ISS,
Y. -C. Chien, D. Stocker, U. Hegde, D. Dunn-Rankin
- MII-09-03: #093 Influence of swirling jet generated by rotating flat paddle impeller on stability limits of propane/air premixed flames,
R. Endo, Y. Takeda, Y. Suenaga, H. Yanaoka
- MIII-09-04: #094 Ti-doped K₂CO₃/ZrO₂ adsorbents significantly enhance DAC performance: Experimental and first-principles insights,
Z. Qi, X. Chen, J. Ma

Colloquium

10 - Applications - Energy and material conversion and heating processes

- M-10-01: #096 Experimental study on NO_x emission characteristics using a 100 kW_{th} ammonia combustion burner,
S. Hwang, W. Sim, J. Lee, T. Chae, W. Yang, K. Oh Chae
- M-10-02: #097 A study on the thermochemical conversion of gaseous and solid hydrocarbons into hydrogen and carbon through optimized pyrolysis environments,
E. Lee, S. Lee, W. Yang, S. Im, Y. Lee
- M-10-03: #098 Flame spray pyrolysis enabled InGaN nanomaterials for photocatalytic CO₂ reduction,
J. Lin, X. Jin, X. Zhang, Y. Tao
- M-10-04: #099 Combustion and emissions characteristics of oxygen fuels toward the net-zero vision,
P. Pham, H. Nguyen
- M-10-05: #100 Flame synthesis of chromium perovskites for catalytic fluorination reactions,
P. Fortugno, D. Li, Q. Ji
- M-10-06: #101 Combustion and emission analysis of a model combustor with CH₄/H₂/NH₃ fuel blends for a micro gas turbine,
H. Shih, W. Chen, C. Huang
- M-10-07: #102 Study of coaxial oxy-fuel hydrogen-methane flames for melting furnace applications,
D. Mario, M. Bugge, I. Saanum
- M-10-08: #103 Liquid fuel combustion in a multi-nozzle jet-stabilized burner: An optical diagnostic investigation,
H. Kim, J. Pareja, N. Petry, P. Kramer, O. Lammel

- M-10-09: #104 Coupling oxy-fuel biogas combustion with microwave plasma for radiative high-temperature heat generation,
S. Eckart, K. Voss, D. Liebsch, A. Hasche, R. Behrend, H. Krause
- M-10-10: #105 A low NOx combustion technology for stoker incinerator utilizing recirculation flow and swirling flow,
S. Yokoi, Y. Kujiyasaki, T. Daimaru, K. Yamamoto, T. Setoguchi, H. Momose, Y. Saitou
- M-10-11: #106 Experimental investigation on combustion and emission characteristics of hydrogen peroxide/diesel emulsion in a 0.3 MW industrial furnace,
S. Hou, H. Hsieh, Y. Chang, W. Chiu
- M-10-12: #107 Flame synthesis of binary TiO₂/SiO₂ nanoparticles by flat premixed flame,
S. Hwang, H. Lee
- M-10-13: #108 Experimental investigation on a porous media burner with a 90° elbow geometry,
M. Toledo, J. Alfaro, V. Bubnovich

Colloquium

11 - Applications - Low-speed propulsion

- M-11-01: #110 Influence of bluff-body shape on flame stabilization: Shear-layer turbulence,
L. Gaipf, W. Guan, D. Thevenin
- M-11-02: #111 Experimental investigation of mixture formation in a microturbine vaporizer,
H. Nguyen, P. Pham, Q. Nguyen
- M-11-03: #112 A pathway over 50% thermal efficiency in gasoline engine with active pre-chamber,
X. Li, X. Miao, J. Deng, L. Li
- M-11-04: #113 Improving combustion kinetics of ammonia diesel emulsion fuel in a diesel engines by controlling water content,
I. Telaumbanua, H. Siagian, Y. Oishi, H. Ambarita, R. Situmorang
- M-11-05: #114 Flame structure, emissions, and dynamics in a swirl-stabilized lean premixed prevaporized combustor with a flow-blurring atomizer,
A. Gupta, S. De
- M-11-06: #115 Influence of momentum flux ratio on flame stabilization and NOx emissions in swirl-stabilized partially premixed CH₄/H₂ flames,
A. Silva Correia, S. Link, A. Gangoli Rao, F. De Domenico
- M-11-07: #116 One-Dimensional DNS of Flame Acceleration Preceding Knock Onset in Spark-Ignition Engines,
T. Fukaya, Y. Sasaki, T. Yoso, Y. Morii, K. Maruta

Colloquium

12 - Applications - High-speed propulsion and energetics

- M-12-01: #118 Real-Fluid Modeling of High-Pressure Dimethyl Ether Flame Extinction Using the 3 rd Virial Equation of State,
X. Zhang, N. Zhao, H. Zhao
- M-12-02: #119 Experimental Investigation of Injector Configurations on a Disk-Type Rotating Detonation Engine Under Low Mass Flow Rates,
M. Small, H. Shiga, E. Dzieminska, T. Suzuki, M. Ichiiyanagi, M. Kawalec, B. Wu
- M-12-03: #120 Effects of ignition methods on flameholding characteristics of ethylene in a low flight mach number condition,
K. Matsushashi, K. Norimatsu, N. Katsumura, M. Kakuda, T. Hori, K. Maeda, J. Kasahara, T. Kudo, A. Hayakawa, K. Kobayashi, S. Tomioka
- M-12-04: #121 Numerical Investigation of the Near-Injector Reacting Flow of a LOX/CH₄ Shear Coaxial Element Using Finite-Rate Chemistry Modeling,
E. La Cava, J. van Schyndel, D. Cavalieri, D. Schintu, P. Lapenna, F. Creta
- M-12-05: #122 Metal flames produce nano-oxide aerosols that could mitigate global warming,
E. Antar, E. Lu, S. Goroshin, J. Berghorson
- M-12-06: #123 Supercritical combustion characteristics of H₂/O₂ coaxial injectors: role of density ratio,
W. Xu, Q. Meng, Z. Zhang

Colloquium

13 - Applications - Fire and safety

- M-13-01: #125 Preliminary Design and Prototype Verification of a Built-In Automatic Fire Extinguisher for Small Lithium-Ion Battery Fires in Personal Mobility,
E. Go, D. Kim
- M-13-02: #126 Mesh-Free Suppression of External Ignition in H₂-Air by a Quenching-Distance-Guided Miniature Ceramic Package,
M. Hatano, N. Minowa, S. Akasaka
- M-13-03: #127 Preliminary Fire and Evacuation Simulation of a Korean Subway Station Under Different Occupancy Conditions,
M. Kim, M. Lee
- M-13-04: #128 Experimental Study of Liquid Hydrogen Explosions,
T. Hara, A. Nakano, K. Oyamada, Y. Sakamoto, H. Kobayashi, T. Shibutani, Y. Oka, Y. Sakurai, E. Kono, R. Dobashi
- M-13-05: #129 CFD and Deep-Learning Prediction of Overpressure Mitigation by a Blast Wall in a High-Pressure Hydrogen Tank Explosion,
C. Oh, S. Choi, Y. Park

- M-13-06: #130 Investigation of non-reactive powders effect on hydrogen-air explosion mitigation,
T. Garnier, M. Idir, S. De Persis, A. Comandini, L. Porcheron, J. Daubech, N. Chaumeix
- M-13-07: #131 Simultaneous Detection of Hydrogen Leakage Velocity and Concentration Based on Dual-Channel Background Oriented Schlieren and Laser Beam Profile Deformation,
C. Jia, J. Wang, Y. Miao
- M-13-08: #132 Hot Surface-Induction Ignition of H₂/O₂ in Cylindrical Pipes: Insights from detailed Kinetics and Transport Modeling,
C. Yu, D. Markus, U. Maas
- M-13-09: #133 Numerical modelling of flame acceleration of non-homogeneous H₂-CO-H₂O gas mixtures in large-scale volumes. Application to nuclear accident scenarios.
R. Oton-Martinez, A. Dahmani, J. Serna Serrano, F. Sanchez Velasco
- M-13-10: #134 Effect of Narrow Channel on Simulating Overcurrent Ignition behavior of Electric Wires in Microgravity
H. Chen, O. Fujita, F. Guo, Q. Wang, H. Che
- M-13-11: #135 Experimental Analysis of Jet Flame Formation Depending on the Presence of In-Tube Spontaneous Ignition of Pressurized Hydrogen,
J. Nam, Y. Song, J. Park, B. Lee
- M-13-12: #136 Investigation of Internal Flow and Atomization Mechanisms of Perfluorohexanone with Optimized Swirl Core Structures,
Z. Yu, Z. Junchao

Tuesday

Colloquium

1 - Fundamental Processes: Chemical Kinetics

- T-01-01: #001 The role of low-temperature chemistry on the synergistic autoignition behavior of high-octane fuel blends: Kinetics-based discussions and further requirements,
H. Song
- T-01-02: #002 Electromagnetic interactions in hydrogen-oxygen systems: Insights from molecular dynamics,
J. Mampilli, N. Lalli, A. Giusti
- T-01-03: #003 NOx reduction of hydrogen flame using dual orifice diffusion burner,
H. Kim, N. Kim
- T-01-04: #004 Artificial intelligence-assisted simplification of chemical reaction mechanism,
S. Yang, W. Huang, T. Li, J. Lin
- T-01-05: #005 Beyond ideal gas phase mechanisms: Automatic generation of detailed kinetic models in liquid solvents and supercritical fluids,
F. Destro, F. Paes, C. Liu, G. Batalha-de-Souza, P. Glaude, R. Fournet, B. Sirjean
- T-01-06: #006 NO, N₂O, and steam interaction effects on laminar burning velocity of NH₃/H₂-air flames at elevated temperature and pressure,
M. Sood, S. Shawnam, S. Kumar
- T-01-07: #007 An isomeric-resolved FTIR-MBMS approach of C₈ iso-alkane oxidation in a flow reactor study: Reaction intermediates and early soot chemistry,
M. Groß, T. Bierkandt, S. Schmitt, N. Gaiser, A. Huber, M. Köhler
- T-01-08: #008 An experimental study on the effects of lithium-ion battery additives including organophosphorus and fluorinated compounds on the laminar flame speed of H₂-air mixtures,
M. Nielsen, S. Vezilier, T. Sikes, O. Mathieu, E. Petersen
- T-01-09: #009 Optimized rate rules and kinetic models for the oxidation of large normal and iso-alkanes,
T. Nagy, P. Wang, S. Brunialti, M. Papp, S. Zhou, T. Turanyi, S. Sarathy, H. Curran
- T-01-10: #010 Quantitative assessment of dynamics-based kinetic parameter extraction using ChemXDyn,
T. Shiva Sai, R. Maddipati, D. Boddapati, P. Motamarri, K. Aditya
- T-01-11: #011 Physicochemical characterization of soot emissions from combustion of jet fuel blended with pentanol,
C. Moularas, U. Trivanovic, I. Tsiodra, K. Tavernarakis, N. Mihalopoulos, G. Kelesidis
- T-01-12: #012 Ignition-retardant effects of alkenes in heptane: Experimental and modeling study using RCER,
A. Tanaka, T. Oguchi
- T-01-13: #013 Study on two-stage oxidation of lean NH₃/H₂/O₂/Ar mixtures using a micro flow reactor with a controlled temperature profile,
H. Yanagisawa, K. Tamaoki, K. Nishimura, K. Kanayama, T. Tezuka, H. Nakamura
- T-01-14: #014 Effects of hydrogen addition on fuel-NOx formation in NH₃/H₂ laminar jet diffusion flames,
M. Le, W. Lin, Y. Li
- T-01-15: #015 Theoretical investigation of plasma-assisted combustion of 1,3-C₄F₆,
Y. Park, H. Choi, Y. Kim
- T-01-16: #016 Experimental speciation and kinetic modeling of solketal oxidation in an atmospheric laminar flow reactor,
S. Agarwal, S. Nadiri, J. Tuerck, T. Bierkandt, R. Tuerck, J. Krahel, M. Koehler

Colloquium

2 - Fundamental Processes: Flame Dynamics and Transport Processes

- T-02-01: #018 Stretch and curvature induced combustion enhancement of single premixed partially cracked ammonia/air tubular flames,
F. Brown, L. Beard, R. Pitz
- T-02-02: #019 Effects of isobutanol fraction on the burning rate and flame structure of gasoline/isobutanol blend droplets,
Y. Xu, X. Liu, X. Liang, M. Xu
- T-02-03: #020 Response of laminar counterflow non-premixed flames to time-varying ammonia-methane fuel composition,
A. Nihira, T. Tomidokoro, H. Im, J. Hayashi
- T-02-04: #021 Combustion and NOx formation mechanisms of ammonia hydrogen counterflow diffusion flames in oxy-steam atmospheres,
J. Li, A. Alfazazi, B. Dally
- T-02-05: #022 Numerical investigation of flame dynamics in a radial microchannel with baffles under constant temperature distribution,
J. Chang, J. Wang
- T-02-06: #023 Effects of reaction progress on the laminar flame speed of ammonia, hydrogen and air mixtures,
K. Fukuda, T. Yokomori
- T-02-07: #024 Forced thermoacoustic response of a self-excited conical flame to higher harmonics,
F. Bian, J. Zhang, Y. Guan

- T-02-08: #025 Study on extinction limits and NO emissions of premixed ammonia/air counterflow flames at elevated temperature and pressure,
Y. Kitagawa, H. Nakamura, K. Kanayama, H. Takeishi, T. Tezuka, M. Izumi, A. Hayakawa
- T-02-09: #026 Development and initial characterization of a counterflow burner for inhibition and extinction studies of phosphorus-doped propane flames,
S. Kruse, M. Gonchikzhapov, T. Kasper
- T-02-10: #027 Interaction effects between twin acetylene diffusion microflames,
S. Suzuki, T. Hirasawa
- T-02-11: #028 Impact of droplets on the propagation of water-diluted air-hydrogen flames,
G. Barbosa Paganini, F. Sacomano Filho, P. Magalhaes de Oliveira
- T-02-12: #029 Effects of hot air coflow on autoignition of hydrogen-enriched methane flames,
H. Lin, C. Lin, C. Yu
- T-02-13: #030 Effects of octane number on FREI behavior in PRF/air mixtures: Transition from one-step to multi-step ignition,
T. Suzuki, Y. Morii, T. Tezuka, K. Maruta
- T-02-14: #031 Computational assessment of reaction mechanisms and NO_x formation characteristics in ammonia blended fuels in laminar co-flow diffusion flames,
H. Choi, Y. Kim, S. Song, J. Hwang, S. Yoon, D. Park
- T-02-15: #032 Stability and NO_x emission of diffusion flame of NH₃ and cracked NH₃ using dual coaxial air tube burner,
S. Kim, D. Jeon, N. Kim
- T-02-16: #033 Experimental study on delayed onset of quenching for hydrogen/air and propane/air premixed flames in meso-scale tubes with wire mesh,
K. Makino, K. Ueda, M. Mikami
- T-02-17: #034 Evaluation of the flame retardancy of fluoropolymers in a low-pressure environment,
M. Iwashita, Y. Konno, A. Ota, N. Hashimoto, O. Fujita

Colloquium

3 - Fundamental Processes: Turbulent flames

- T-03-01: #035 Experimental investigation of flame characteristics in dual-swirl CH₄/H₂ flames with comparison to one-dimensional numerical simulation,
J. Kim, H. Lee, K. Lee
- T-03-02: #036 Recovery dynamics (note: presenter indicated file change),
H. Lee
- T-03-03: #037 Role of combustor acoustics in shaping the nonlinear response of turbulent flames,
Y. Liao, J. Zhang, Y. Lei, Y. Guan
- T-03-04: #038 A priori evaluation of presumed PDF models and the CMC hypothesis in premixed and partially premixed flames,
A. Ghayour, M. Nowruz, X. Fang
- T-03-05: #039 High-speed PLIF and LES to assess ignition transition and flame structure on Spray A flames under varying ambient temperatures,
S. Song, S. Kim, J. Ryu, H. Shim, J. Manin, H. Sim
- T-03-06: #040 Influence of KH wavelength range on transitional mixing and combustion in reacting shear layers,
M. Ali, M. Cleary, B. Thornber
- T-03-07: #041 Large eddy simulations of premixed flames in a gas turbine burner with actively generated turbulence,
F. Arguelles, D. Hofer, X. Fang
- T-03-08: #042 Kinematic analysis of stoichiometric hydrogen/air flame flashback in a turbulent boundary layer,
J. Sohn, M. Lee, J. Yoon, D. Shin
- T-03-09: #043 Comparison of real gas flamelet model and ideal gas flamelet model for supercritical hydrogen/oxygen combustion,
N. Numata, T. Haga, I. Tsutsumi, R. Kurose

Colloquium

4 - Fundamental Processes: Detonations and high-speed combustion

- T-04-01: #044 Detonation performance comparisons of the HMX-based high explosives LX-14 and PBX 9501,
R. Originales, E. Anderson, M. Short, G. Montoya, R. Chicas, C. Chiquete, S. Voelkel
- T-04-02: #045 Experimental investigation of the dependence of detonation energy on DAAF content for various DAAF-based explosives,
N. Benavidez, T. Lujan, J. Porto, G. Montoya, R. Chicas, E. Anderson, S. Voelkel, C. Chiquete
- T-04-03: #046 Experimental investigation of the dynamics of failing detonations,
E. Anderson, G. Montoya, R. Chicas, S. Voelkel, C. Chiquete, M. Short
- T-04-04: #047 One-dimensional numerical analysis on dimethyl ether/O₂ premixture detonation using detailed chemical reaction model: The effect of reaction model on heat release rate and detonation speed,
- T-04-05: #048 Numerical analysis of deflagration-to-detonation transition in a duct with repeated obstacles,
Y. Suda, N. Tsuboi, T. Ito, K. Hayashi, E. Dzieminska, F. Onishi, I. Nakamori, T. Tomizuka, A. Takahashi, T. Kodama, N. Satou

- T-04-06: #049 Effects of sintered-wire-mesh walls on detonation initiation process,
K. Kashi, K. Ishii
- T-04-07: #050 Shock-induced energy transfer across a gas-liquid interface,
K. Lysakowska, N. Kateris
- T-04-08: #054 High explosive detonation in a 2-D confined circular arc: Effect of outer layer confinement material,
J. Garro, M. Short, C. Chiquete

Colloquium

5 - Fundamental Processes: Heterogeneous combustion and processes

- T-05-01: #056 Study on combustion kinetics of coal and ammonia co-firing using a counterflow TGA,
Y. Zhang, M. Chen, Q. Ding, J. Wang, T. Wang, L. Su, J. Liu
- T-05-02: #057 Influence of kerosene gel film rheology on hypergolic ignition with a hydrogen peroxide droplet,
M. Wu, P. Yang
- T-05-03: #058 Phosphorus-Potassium Interactions During Biomass Pyrolysis: Implications for Additive Performance and Ash Chemistry,
H. Wu, W. Zhang, P. Glarborg
- T-05-04: #059 Transition from quasi-steady droplet evaporation to disruptive boiling in hydrocarbon-alcohol blends,
E. Konuk, K. Fadamiro, K. Keya, M. Snigdha, Z. Huque
- T-05-05: #060 Combustion characteristics of paraffin-based hybrid rocket fuel in counterflow field,
A. Banno, D. Yonemaru, R. Kamisono, M. Mikami
- T-05-06: #061 The supercritical phase transition of fuel droplets: A comparative investigation of dimethyl ether, ethanol, and n-hexadecane,
D. Wang, W. Zhao, Y. Wang, H. Shi, H. Wei, L. Zhou
- T-05-07: #062 Implementation of a hybrid breakup model and the role of bubble nucleation seeding in flash-boiling spray breakup,
M. Fagade, S. King, X. Fang
- T-05-08: #063 Advancing biomass catalytic pyrolysis: Flame-synthesized alumina-based nanocatalysts enabling tunable structures and bimetallic synergy for ketone production,
H. Zhang, Y. Tao, K. Liu, X. Jin

Colloquium

6 - Enabling Models, Methods, Tools & Technology - Diagnostics and experimental methods

- T-06-01: #066 Femtosecond laser induced breakdown spectroscopy (Fs-LIBS) for applications in supersonic combustion,
I. Wall, T. Ombrello, E. Braun, B. McGann, C. Carter
- T-06-02: #067 Al-assisted monitoring of coal particles within droplets in a coal monoethylene glycol slurry spray,
W. Schaefer, T. Jakobs, P. Stegmann
- T-06-03: #068 Towards CO₂-free combustion: Tailoring of nanosecond plasmas to measure efficiency of ammonia dissociation at high electric fields,
S. Starikovskaia, S. Vankova, M. Raveesh, A. Ehn, A. Konnov, K. Kourtzanidis, R. Pasolari
- T-06-04: #069 A mid-infrared laser absorption diagnostic for measuring Li-ion battery electrolyte components,
M. Raza, Y. Omer, B. Belal, M. Alya, A. Elkhazraji, S. Alturaiifi
- T-06-05: #070 Spectrum-informed neural networks for tomographic imaging of reactive flows,
Y. Xia, C. Liu
- T-06-06: #071 Measurement of temperature distribution in high-speed, high-temperature jets using a two-band emission method based on H₂O radiation,
T. Yoshikawa, S. Nakano, S. Takahashi, Y. Kobayashi
- T-06-07: #072 Enhancing mixing uniformity of W-KClO₄-BaCrO₄ powder mixture using acoustic mixer,
K. Park, Y. Kim, E. Kim, S. Hong
- T-06-08: #073 Chemiluminescence in premixed NH₃+O₂+Ar flames: Spatial characterization and kinetic modeling,
U. Padhi, M. Raveesh, C. Brackmann, J. Bood, A. Konnov
- T-06-09: #074 Development of a surrogate-based dynamic pressure prediction model using acoustic forcing experimental data from a model gas turbine combustor,
M. Jeon, D. Jang, Y. Heo, M. Lee
- T-06-10: #075 LED-based spectroscopy in multiphase reactive media,
R. Courville, E. Antar, N. Chepel, S. Goroshin, J. Berghthorson
- T-06-11: #076 Spatially resolved H-atom detection in premixed NH₃/H₂ flames using femtosecond two-color, two-photon polarization spectroscopy,
A. Hardaya, M. Hay, W. Kulatilaka
- T-06-12: #077 Progress in flame imaging - evaluation of new UV-sensitive high-speed cameras based on chemiluminescence and LIF measurements,
A. Fenk, S. Faderl, F. Toepfer, A. Charogiannis, S. Will, F. Bauer

- T-06-13: #078 In-situ imaging of gas-turbine exhaust temperature and its downstream evolution using chemical species tomography,
M. Zhou, Y. Xia, Y. Chen, R. Zhang, X. Yao, Y. Zhu, I. Ahmed, M. Pourkashanian, M. Lengden, H. McCann, C. Liu
- T-06-14: #079 Actively cooled additively manufactured optical interface for in-chamber combustion diagnostics in rotating detonation engines,
J. Hernandez-McCloskey, D. Pineda

Colloquium

7 - Enabling Models, Methods, Tools & Technology - Modeling approaches

- T-07-01: #081 Implementation and validation of a thermodynamically consistent manifold-based model for LES of premixed compressible reacting flows,
J. Boerchers, M. Mueller
- T-07-02: #082 Evaluating stretched and unstretched flamelets for FGM of lean hydrogen-air flames,
X. Fang, M. Trindade, S. Hus, W. Swadling
- T-07-03: #083 A unified combustion framework for coupled thermochemical and electrochemical systems in solid-state energetic materials,
H. Choi, J. Lee, R. Rajak, J. Yoh
- T-07-04: #084 Experimental and kinetic modeling of non-catalytic methane pyrolysis for developing condition-specific kinetic parameters,
J. Park, J. Lee, W. Yang, J. Hong, S. Kim
- T-07-05: #085 Scaling laws for intrinsic flame instabilities in hydrogen-based flames based on numerical dispersion relations,
T. Lehmann, T. Howarth, A. Attili, M. Gauding, H. Pitsch
- T-07-06: #086 Simulating morphological changes of porous reactive particles using a Darcy-Forchheimer-based immersed boundary method,
S. Baier, A. Dernbecher, A. Dieguez Alonso
- T-07-07: #087 Improvement of SGS atomization model,
H. Arita, J. Shinjo, K. Kitada, Y. Fujimoto, R. Kurose
- T-07-08: #088 A novel lattice Boltzmann model for combustion with thermodiffusion phenomena,
C. Xuan, S. Xiaowen, Y. Kun, Y. Dong
- T-07-09: #089 Development and validation of general framework for auto-generated CRN using CFD results,
D. Kim, N. Kim, Y. Guahk, S. Lim

Colloquium

8 - Enabling Models, Methods, Tools & Technology - Numerical techniques

- T-08-01: #091 Numerical investigation of flame spread and surface regression over cylindrical PMMA under opposed flow,
I. Lin, S. Hung, S. Hsu
- T-08-02: #092 Learning reduced representations of detonations with graph neural networks,
S. Pujali Elilarasan, M. Ullman, S. Barwey

Colloquium

9 - Enabling Models, Methods, Tools & Technology - Enabling concepts

- T-09-01: #094 From papers to knowledge: An LLM-driven fuel knowledge graph for combustion knowledge discovery and reasoning,
Y. Ye, Q. Wang, M. Sarathy
- T-09-02: #095 Porous iron architectures for indirect hydrogen storage via the steam-iron redox cycle: Impact of additives on cyclic stability and hydrogen yield,
M. Seitz, M. Kannengiesser, A. Knapp, B. Stelzner, O. Deutschmann, F. Hagen, D. Trimis
- T-09-03: #096 Directional regulation mechanism of Ca and Cu on the lattice oxygen activity of Mn-based perovskite oxygen carrier during chemical looping combustion,
X. Ma, J. Liu, Y. Yang, S. Wang, B. Zhao, L. Di
- T-09-04: #097 Nanosecond pulsed discharges for ignition and flameholding in supersonic flows,
K. Opacich, E. Braun, B. McGann, T. Ombrello
- T-09-05: #098 Plasma and spark ignition in spherically expanding laminar flames,
S. Das, Y. Zhang, A. Boules, D. G. Trinidad, B. Nawaz, J. Trelles, J. Mack

Colloquium

10 - Applications - Energy and material conversion and heating processes

- T-10-01: #100 First demonstration of an innovative pure ammonia gas turbine combustor in high pressure conditions,
K. Nogenmyr, O. Lindman, M. Magnus Persson, D. Moëll, M. Ditaranto, I. Saanum
- T-10-02: #101 NOx reduction in methane-ammonia co-combustion via ammonia lancing,
M. Wu, A. Fauzy, H. Wu, W. Hsieh
- T-10-03: #102 Adapting oxyfuel combustion to the hydrogen transition: The effects on flame structure and pollutant formation in industrial burners,
A. Hasche, H. Krause, S. Eckart
- T-10-04: #103 Rapid start-up ammonia cracking in a rotating gliding arc plasma-catalyst system,
H. Choi, S. Choi, S. Choi, D. Lee, J. Choi

- T-10-05: #104 Integration of methane pyrolysis and flameless combustion for simultaneous reduction of CO₂ and NO_x,
J. Yu, J. Hong, Y. Lee
- T-10-06: #105 One-step synthesis of high-performance catalysts for CO₂ methanation by flame-assisted spray pyrolysis,
K. Okada, M. Nakamura, T. Nagasawa
- T-10-07: #106 Flame synthesis of high-entropy cobalt-free nickel-rich cathode materials,
J. Li, S. Li, R. Zhang, K. Wang
- T-10-08: #107 Numerical model for the fouling process in an industrial gas turbine burner operated under methane and addition of diolefins,
V. Castro, G. Babazzi, M. Cerutti, C. Romano
- T-10-09: #108 Molecular dynamics simulation of stainless-steel nitriding by ammonia,
Y. Huang, H. Zhao, J. Chen, Z. Chen
- T-10-10: #109 Combustion characteristics of an ammonia mono-fueled engine equipped with an onboard ATR reformer for engine applications,
Y. Takeuchi, Y. Saiki
- T-10-11: #110 Non-reacting and reacting flow characteristics of duct burner configurations for hydrogen-blended fuels,
Y. Kim, M. Shin, J. Lee, S. Kim, H. Youn, H. Park
- T-10-12: #111 Spectral analysis of methane/aluminum hybrid flame using spatially resolved emission spectroscopy,
D. Keo, C. Chauveau, P. Graumer, S. Courtiaud, F. Halter

Colloquium

11 - Applications - Low-speed propulsion

- T-11-01: #113 Diesel- and SI-engine studies of gamma-valerolactone (GVL) fuel blends,
S. Dobe, K. Lukacs, A. Beni, A. Bereczky, M. Farkas
- T-11-02: #114 Advancing fuel-flexible combustion technology: Hybrid pintle injector for carbon neutrality,
J. Dixit, S. Singh, P. Kumar, T. Muruganandam
- T-11-03: #115 Combustion dynamics of bluffbody-stabilized Jet A-1 spray flames in a model afterburner combustor,
J. Park, M. Jeong, U. Jin, D. Yeom, K. Kim
- T-11-04: #116 A method to correct the optical flame transfer functions in acoustically forced, partially premixed hydrogen flame,
W. Liang, Z. Zhao, C. Dong, B. Zhou, D. Yang
- T-11-05: #117 Reactive high-speed PIV in a multi-fuel multi-phase hydrogen-kerosene combustor,
N. van der Ploeg, A. Garcidueñas-Correa, F. De Domenico
- T-11-06: #118 Combustion and emission analysis of the Wärtsilä W34DF engine operating on ammonia-diesel dual-fuel mode,
M. Miccio
- T-11-07: #119 Fuel-flexible and low-emission characteristics of a lean azimuthal flame (LEAF) combustor: Kerosene to H₂ transition,
K. Pandey, C. Vegad, T. Gilmour, N. Noiray

Colloquium

12 - Applications - High-speed propulsion and energetics

- T-12-01: #121 Experimental characterization of regression rate and combustion behavior in solid fuel ramjet combustor,
L. Yun, H. Sim
- T-12-02: #122 Combustion instability driven by oscillations in the height of the fuel-rich zone in a single-cavity scramjet,
Z. Zhao, X. Wang, X. Wang, F. Li, X. Chen, J. Zhu, M. Sun, B. Zhou
- T-12-03: #123 Reliable and repeatable ignition of a rotating detonation engine using a three-electrode spark,
A. Manabe, K. Maeda, H. Sato, M. Kakuda, T. Hori, N. Itouyama, K. Matsuoka, M. Yasui, J. Kasahara
- T-12-04: #124 Pressure and temperature scaling in an ethylene fueled generic scramjet,
T. Ombrello, E. Braun
- T-12-05: #125 Experimental and numerical investigation of regression rate and combustion characteristics of solid fuel in counterflow combustion,
E. Kim, L. Yun, H. Sim

Colloquium

13 - Applications - Fire and safety

- T-13-01: #127 Pyrolysis modeling for predicting wood fire behavior under radiative heat flux,
Y. Ha, J. Jeon
- T-13-02: #128 Numerical study on the effect of particle size distribution on light extinction,
D. Yu, J. Jeon
- T-13-03: #129 Comparison of combustion behavior and smoke optical properties of wood under different smoke generation conditions,
G. Kim, Y. Ha, D. Yu, J. Jeon

- T-13-04: #130 Direct visualisation of transport liquid phase convection and thermal structure in pool fires under crossflow,
F. Shen, X. Meng, Y. Lai, Y. Zhang
- T-13-05: #131 Advancing H₂ flame arresters through composite material-based designs,
N. Dennda, M. Kreißig, L. Soma Nanayakkara, S. Tork Torabi, B. Leßlich, S. Spörhase, A. Lucassen, L. Ruwe
- T-13-06: #132 Modular kinetic modelling of lithium-ion battery thermal runaway,
R. Daneshvari, H. Fatehi
- T-13-07: #133 Suppressing thermal runaway propagation in lithium-ion batteries via architected molten salt heat shields,
J. Choi, M. Park, Y. Kim, Y. Lee, J. Yoh
- T-13-08: #134 Uncertainty of heat release rate based on flame-airflow interaction in scaled tunnel fires,
J. Bielawski, D. Luan, X. Huang, W. Węgrzyński
- T-13-09: #135 Investigation of different composite materials for use as pressure relief elements in flameproof enclosures for hydrogen-air atmospheres,
S. Spörhase, D. Grey, N. Dennda, A. Lucassen, L. Ruwe
- T-13-10: #136 Effects of gravity level on flame acceleration over thermally thin solids,
N. Thinnakornsutibutr, J. Han, Y. Liao
- T-13-11: #137 Extension of the subgrid combustion model (SCM) with finite-rate chemistry modelling for CO predictions in LES of buoyant turbulent diffusion flames,
Y. Moorthamers, B. Merci, A. Snegirev, G. Maragos

Thursday

Colloquium

1 - Fundamental Processes: Chemical Kinetics

- TH-01-01: #001 Experimental and modeling study on the oxidation of cycloalkane-blended HEFA,
J. Wang, Y. He, Y. Zhang
- TH-01-02: #002 Advancing the study of soot formation from pyrolysis of C₃ fuels under elevated pressures: A combined simulation and experimental investigation,
Y. Ying, J. Long, D. Liu
- TH-01-03: #003 Ignition delay times and pyrolysis of furfural in a rapid compression machine and a shock tube,
K. Yasunaga, K. Ohuchi, S. Ishii, K. Tanaka, N. Yamanaka
- TH-01-04: #004 Gas phase kinetic modelling of ammonia-n-heptane dual-fuel combustion,
M. Rajendran, K. Hughes, W. Nimmo
- TH-01-05: #005 Development of the new optimised H₂ combustion mechanism using a large experimental data collection,
I. Gerasimov, T. Nagy, M. Papp, T. Turanyi
- TH-01-06: #006 Analysis of cyclohexane low-temperature combustion models: Performance in hydroperoxides profiles simulations,
B. Roux, K. Sood, R. Benrabah, P. Arnoux, P. Glaude, R. Fournet, B. Sirjean
- TH-01-07: #007 Shock-tube spectroscopic measurements of dimethyl carbonate and ethyl methyl carbonate during their pyrolysis,
Y. S. Omer, O. Munteshari, M. A. Alya, B. Y. Belal, K. Ghunaim, M. E. Hasan, M. Raza, S. A. Alturaifi
- TH-01-08: #008 Low-temperature oxidation of iso-cetane investigated by SVUV-PIMS,
Y. Wang, Z. Jin, Q. Zhu, Z. Wang, M. Braun-Unkhoff, Z. Tian
- TH-01-09: #009 Acid anhydride roles in formation and reactions of PFAS intermediates and byproducts,
P. Westmoreland
- TH-01-10: #010 Natural gas/ammonia mixtures ignition delay times at gas turbine operating conditions,
S. Vasu, M. Pierro, R. Rahman, J. Urso
- TH-01-11: #011 Numerical analysis of counterflow diffusion flames of hydrofluorocarbons (HFCs): Relationship between fluorine atom content and flammability limits,
A. Ota, Y. Konno, N. Hashimoto, O. Fujita
- TH-01-12: #012 Effect of H₂ addition on nitric oxide formation in laminar premixed C₁ to C₄ burner-stabilized flames,
S. P. Q., I. Mulla
- TH-01-13: #013 Pressure-temperature coupling and thermal diffusion effects on the laminar burning velocity of NH₃/H₂ air flames,
S. Shawnam, M. Sood, S. Kumar
- TH-01-14: #014 Oxidative fragmentation of CF-type molecules at high temperature: A ReaxFF MD study of C₃F₆, C₄F₈, and c-C₄F₈,
H. Kim, Y. Park, H. Choi
- TH-01-15: #015 Effects of butanol isomers addition on the laminar burning velocities of ammonia,
W. Li, J. Fang, B. Ye, Q. Zhang, P. Xia, S. Liu, Y. Li
- TH-01-16: #016 THF-H₂ as a sustainable e-fuel blend: Kinetic and emission pathway insights,
M. Sharma

Colloquium

2 - Fundamental Processes: Flame Dynamics and Transport Processes

- TH-02-01: #018 Determination of fundamental combustion parameters of n-dodecane using the heat loss flat flame method,
R. Catapan, F. Bongoski, L. Vettori, R. Francisco, R. Medeiros
- TH-02-02: #019 Laminar burning velocity of high-ammonia NH₃/C₂H₂ - air premixed flames: Measurements across extended operating conditions, chemical kinetic analysis, and optimized reaction mechanism development,
V. Yempally, S. Shawnam, S. Kumar
- TH-02-03: #020 Stretch correction approach for the measurement of laminar burning velocity in Bunsen burner flames,
J. Hannappel, M. Prakash, C. Brackmann, C. Fureby, M. Richter
- TH-02-04: #021 A novel framework for systematic stability analysis of thermoacoustic limit cycles in annular combustors based on a 2D low-order network model,
K. Wang, D. Yang
- TH-02-05: #022 Flame velocity and Markstein length of binary and aromatic-enriched sustainable aviation fuels surrogates,
N. Hamamousse, N. Hamamousse, M. Bellenoue, J. Sotton, C. Strozzi, C. Viguier
- TH-02-06: #023 CSP analysis of ammonia flame structure near the extinction limit,
Y. Cho, T. Cui, H. Terashima, H. Nakamura, N. Oshima
- TH-02-07: #024 Auto-ignition behavior of H₂ and NH₃/H₂ mixtures at high pressure and rich conditions: Experimental and kinetic analysis,
M. Kohansal, A. Mokhov, S. Gersen, R. Bastiaans

- TH-02-08: #025 An investigation of the effects of hexamethyldisiloxane on methane and air laminar flame speeds,
P. Dunphy, Q. Meng, R. Ramesh, M. Gamba, M. Wooldridge
- TH-02-09: #026 Solid-phase heat transfer during downward flame spread over finite thickness PMMA,
K. Sotowicz, A. Ojo, D. Morrisset, R. Hadden, B. Peterson
- TH-02-10: #027 Investigation of EGR effects on NO_x formation in methane-ammonia non-premixed jet flames,
R. Iwanaga, Q. Wang, N. Hashimoto, Y. Konno, O. Fujita
- TH-02-11: #028 Numerical study of NO_x formation in ammonia-hydrogen Bunsen flames,
D. Slasnaia, R. Mulyadzhinov, V. Dulin
- TH-02-12: #029 Experimental study of the effect of a transverse weak DC electric field on premixed laminar Bunsen flames,
K. Lavronov, R. Tolstoguzov, D. Sharaborin, V. Dulin
- TH-02-13: #030 Experimental investigation of thermoacoustic oscillations in an industrial-scale annular combustor with center-staged swirling burners,
Z. Xiang, Z. Zhu, Y. Fang, H. Wu, G. Wang
- TH-02-14: #031 Investigation of non-premixed NH₃/H₂ swirl flames: Stability, emissions, and flame morphology,
H. Kim, H. Jeon, D. Kim, A. Mardani, K. Kim, S. Oh
- TH-02-15: #032 Blow-off limit of the regression mode on cylindrical solid fuel with various oxidizers,
M. Fukada, T. Son, M. Yamaguchi, S. Suzuki, H. Nagata
- TH-02-16: #033 Flame dynamics and emissions in stratified ammonia/hydrogen/nitrogen-air laminar premixed flames,
S. Rzepka, M. Mueller

Colloquium

3 - Fundamental Processes: Turbulent flames

- TH-03-01: #035 Experimental characterization of H₂-air planar jet flame under velocity conditions representative of aeronautic combustion chambers,
M. Orłowski, M. Bellenoue, C. Strozzi
- TH-03-02: #036 Thermoacoustic dynamics of a bluff-body stabilized premixed NH₃/CH₄/air flame,
W. Yu, Z. Liu, Y. Liao, Y. Lei, J. Li, Y. Sun, Y. Guan
- TH-03-03: #037 A DNS study on the flame structure and stabilization mechanisms of turbulent NH₃/H₂ jet diffusion flames in highly heated coflow,
A. Shioyoke, K. Reo, H. Watanabe
- TH-03-04: #038 Investigating turbulent premixed hydrogen flames under pressure,
Y. Li, A. Dreizler, T. Li
- TH-03-05: #039 Soot and flame-front structure characterization in a model rich-quench-lean combustor,
K. Kumar, I. Mulla
- TH-03-06: #040 Entropy wave generation induced by unstable flame dynamics in array micro-mixed hydrogen flames,
P. Fu, Y. Fu, A. Chen, G. Wang
- TH-03-07: #041 Characterization of flamelet dynamics in partially premixed swirled turbulent flames of natural gas with various hydrogen addition rates,
S. Can, E. Boncu, E. Saday, M. Karaca, C. Allouis, A. Yozgatligil, I. Gokalp
- TH-03-08: #042 Structure and extinction of CH₄-air swirl flames with premixed and non-premixed hydrogen injection,
T. Su, Y. Tan, F. D'alessio, N. Swaminathan, M. Kraft, E. Mastorakos
- TH-03-09: #043 Turbulent burning velocity of burner stabilized ammonia/air mixture under high-pressure and high-temperature conditions based on NH-PLIF,
K. Noro, J. Suzuki, T. Kudo, A. Hayakawa

Colloquium

4 - Fundamental Processes: Detonations and high-speed combustion

- TH-04-01: #045 Novel cutback design for direct imaging of detonation corner turning,
N. Benavidez, W. Chapman
- TH-04-02: #046 Detonation decay and flame acceleration in hydrogen-air mixtures in thin rough channels,
G. Bivol, S. Golovastov, V. Golub
- TH-04-03: #047 Self-ignition of hydrogen-air and methane-air mixtures at shock wave interaction with a porous foam,
S. Golovastov, G. Bivol, F. Kuleshov, V. Golub
- TH-04-04: #048 Study of N₂O catalytic decomposition for premixed N₂O/C₂H₄ DDT for predetonator design,
C. Cottenot, Y. Ballossier, F. Viot, N. Itouyama, K. Mastuoka, M. Bellenoue, J. Kasahara
- TH-04-05: #049 Statistical analysis of wave propagation in a reflective shuttling detonation combustor using spatiotemporally resolved imaging,
R. Sato, K. Matsuo, N. Itouyama, J. Kasahara, A. Matsuo, A. Kawasaki
- TH-04-06: #050 Curved detonation propagation in liquid-fueled ethanol sprays,
A. Millán Merino

TH-04-07: #051 Investigation of reflective shuttling detonation using a liquid ethanol and gaseous oxygen,
H. Sato, T. Nagaoka, K. Matsuoka, N. Itouyama, J. Kasahara

Colloquium

5 - Fundamental Processes: Heterogeneous combustion and processes

- TH-05-01: #053 Optimization of electrode distance in annular end-burning voltage-responsive energetics (VRE) thrusters,
J. Lim, R. Rajak, D. Lim, E. Jin, J. Lee, J. Yoh
- TH-05-02: #054 Evaporation characteristics of a single aqueous ammonia droplet: Experimental and numerical analysis,
Y. Ito, N. Hashimoto, N. Nakamichi, L. Khuong, O. Fujita, Y. Konno
- TH-05-03: #055 Quantitative assessment of PAH dynamics in oscillating counterflow flames toward hybrid flamelet modeling,
S. Ando, R. Yamaguchi, O. Moriue
- TH-05-04: #056 Transition from diffusion- to kinetically-dominated combustion regimes in Bunsen iron flames,
E. Antar, K. Mangalvedhe, N. Chepel, E. Cohen, S. Goroshin, J. Bergthorson
- TH-05-05: #057 Plastic waste pyrolysis in industrial reactors,
C. Aresi, T. Faravelli, A. Frassoldati
- TH-05-06: #058 Combining computational, experimental, and kinetic approaches to study hemicellulose pyrolysis,
C. Grottola, B. Ballotta, P. Giudicianni, R. Ragucci, J. Ren, M. Pelucchi, S. Dooley
- TH-05-07: #059 Understanding low-temperature reaction mechanisms for improved boron oxidation using transition metal oxides vs transition metal additives,
S. Sarwar, K. Chintersingh
- TH-05-08: #060 Morphology and composition tuned solid oxygen carriers for enhanced chemical looping combustion,
K. Chintersingh, Y. Peng, M. Momtaz, S. Sarwar, A. Gonzalez, K. Thompson
- TH-05-09: #061 Experimental investigation on aluminum cloud combustion: Integrating optical diagnostics and product residue analysis,
Y. Venkataram, K. Gnanaprakash

Colloquium

6 - Enabling Models, Methods, Tools & Technology - Diagnostics and experimental methods

- TH-06-01: #063 Characteristics of co-flow diffusion flames in the co-combustion of carbon-free fuels and methane,
K. Kim, S. Chung, Y. Kim, S. Yoon, J. Hong, D. Park
- TH-06-02: #064 Modular burner design for canonical flame experiments for data assimilation and optimal sensor placement in reactive flows,
A. Fenk, S. Will, F. Bauer
- TH-06-03: #065 Comparative primary breakup behavior of water and ethanol jets using ballistic imaging and wavelet-based optical flow velocimetry,
A. Wilson, E. Lewis, F. Hammad, T. Huckstep, B. Peterson
- TH-06-04: #066 Experimental characterization of intra-particle heat transfer and surface temperature in anisotropic biomass pyrolysis,
F. Ryll, A. Dernbecher, A. Dieguez Alonso
- TH-06-05: #067 Developing a canonical facility to study flame spread and evaluating 1D HRCARS in a linear Hencken burner,
D. Escofet-Martin
- TH-06-06: #068 Hydrogen-air lean and rich flame propagation studies: Investigation of possible ns-plasma assistance above and below quenching,
C. Polese, G. Kreyder, L. Catoire, S. Starikovskaia
- TH-06-07: #069 Towards the measurement of the mass-absorption cross-section (MAC) of soot via a combined measurement of light extinction and scattering in a multi-pass cavity,
L. Peruyero, M. Al Zallouh, M. Mazur, T. Rogez-Florent, C. Monteil, J. Yon
- TH-06-08: #070 Effect of cavitation on primary breakup of an atomising jet investigated using ballistic imaging and wavelet-based optical flow velocimetry,
T. Huckstep, E. Lewis, A. Wilson, F. Hammad, B. Peterson
- TH-06-09: #071 Spatially resolved mass spectrometric analysis of pyrolysis vapors from burning roundwood,
A. Wortmeier, M. Gonchikzhapov, T. Kasper
- TH-06-10: #072 Investigation of acoustically forced ammonia-hydrogen blend flames using OH* chemiluminescence and NH PLIF imaging,
A. Hardaya, W. Kulatilaka
- TH-06-11: #073 Intercomparison of multiple McKenna flat-flame burners using background-oriented schlieren (BOS),
S. Faderl, P. Braeuer, F. Fuest, S. Will, F. Bauer
- TH-06-12: #074 Experimental and numerical assessment of gas sampling probe performance in burner-stabilized flames,
S. Sharma, I. Mulla
- TH-06-13: #075 Inferring soot volume fraction and temperature from flame images via deep learning,
V. Chernov, M. Moses-Alon
- TH-06-14: #076 Geometric control and stability of hybrid hydrogen microwave plasma torches for high-temperature furnace applications,
S. Eckart, D. Liebsch, R. Behrend

Colloquium**7 - Enabling Models, Methods, Tools & Technology - Modeling approaches**

- TH-07-01: #078 A generalizable hybrid neural operator for high-fidelity reconstruction of turbulent flames from sparse data,
Y. Yang, Y. Liao, F. Bian, J. Zhang, Y. Guan
- TH-07-02: #079 OpenFOAM-based multiphysics framework for reactive, multicomponent engine flows with mesh motion,
B. Tekgul, S. Leponiemi, K. Keskinen, Y. Patel, M. Gadalla, J. Alopaeus, M. Ramachandran, E. Lendormy
- TH-07-03: #080 Super-resolution of thermochemical fields from graph-based chemical reactor networks in ammonia-hydrogen combustion,
A. Inciardi, A. Parente
- TH-07-04: #081 Numerical modelling of high-pressure H₂-NH₃ MILD combustion in a cyclonic burner using RANS and dynamic PaSR,
B. Cassese, G. Ariemma, G. Sorrentino, R. Ragucci, M. de Joannon
- TH-07-05: #082 LES of piloted ammonia-hydrogen jet flames: A comparative analysis of sparse Lagrangian multiple mapping conditioning and Eulerian stochastic fields approach,
K. Marthi, S. Gautam, S. De
- TH-07-06: #083 LES simulations of the lifted HYLON L1 swirling H₂-air flame: Adaptive mesh refinement and a bespoke dynamic thickened flame sensor,
P. Gauthier, V. Sethi, X. Sun, G. Singh
- TH-07-07: #084 One-dimensional numerical study of iron combustion accounting for ignition delay,
J. An, J. Lee, X. Mi, C. Ryu, W. Yang, S. Kim
- TH-07-08: #085 Resolving differences in experimental and 1D modeling approaches of ignition delay times of ethylene in a combustion shock tube,
M. Knadler, E. Hassan, M. Hageman

Colloquium**8 - Enabling Models, Methods, Tools & Technology - Numerical techniques**

- TH-08-01: #088 Performance evaluation of GPU in a detonation analysis: Case for one-dimensional code,
S. Nakano, N. Tsuboi, H. Okuda, K. Hayashi
- TH-08-02: #089 Towards a low-precision solver for reacting flows,
S. Neelakandan, S. Sudhakar, A. Arumugam, K. Aditya

Colloquium**9 - Enabling Models, Methods, Tools & Technology - Enabling concepts**

- TH-09-01: #091 Chemical kinetic analysis of surrogate-based waste plastic-derived oil pyrolysis in a hydrogen plasma reactor,
S. Choi, C. Jung, D. Lee, J. Choi
- TH-09-02: #092 Influence of flue gas composition on flame structure and stability at extended EGR levels,
V. Thielens, E. Leoncino, Z. Yin, F. Demeyer, W. De Paepe, K. Geigle
- TH-09-03: #093 Nanosecond-pulsed high-frequency discharge interactions with liquid fuel sprays,
W. Senior-Tybora, J. Lefkowitz
- TH-09-04: #094 Techno-economic comparison of blue and green ammonia retrofit pathways for an existing SMR plant,
F. Juric, S. Perkovic, H. Mikulcic

Colloquium**10 - Applications - Energy and material conversion and heating processes**

- TH-10-01: #096 Effects of hydrogen addition on NO_x formation and radical chemistry in methane-ammonia co-combustion under HITAC conditions,
K. Tsuchida, M. Tsuchida, Y. Xia, Q. Wang, Y. Konno, N. Hashimoto, O. Fujita
- TH-10-02: #097 Where does the oxygen go? Unraveling contaminant pathways in plastic pyrolysis,
X. Van Eeckaute, M. Denton, D. Withoeck, L. Pires da Mata Costa, R. John Varghese, M. Kusenberger, K. Van Geem
- TH-10-03: #098 Investigation of the control of emissions from ammonia-hydrogen-air combustion using two-stage lean-lean combustion strategy,
T. Hasebe, K. Kasai, D. Matsuda, T. Kitagawa, E. Okafor
- TH-10-04: #099 Experimental and numerical investigations of hydrogen enriched natural gas combustion in domestic gas burners,
E. Saday, S. Can, V. Ertis, A. Yozgatligil, I. Gokalp
- TH-10-05: #100 Experimental investigation of Jet A-1 combustion under diluted and preheated conditions,
G. Ariemma, P. Sabia, G. Sorrentino, M. de Joannon, R. Ragucci
- TH-10-06: #101 Experimental investigation of premixed pure ammonia combustion in novel vortex tube burner,
A. Halder, C. Goertemiller, W. Northrop
- TH-10-07: #102 Experimental investigation of a new fuel-staged jet-stabilized burner operating with 100% hydrogen,
E. Leoncino, Z. Yin, A. Huber
- TH-10-08: #103 Morphological evolution of freestanding few-layer graphene and soot during hydrocarbon pyrolysis,
A. Akyildiz Mert, M. Bransen, H. Friedrich, H. Wiggers, C.-F. Lopez-Camara

- TH-10-09: #104 Non-catalytic dry reforming of bio-oil model compounds,
M. Manna, D. Amato, G. Ariemma, G. Fabozzi, P. Sabia, R. Ragucci, M. de Joannon
- TH-10-10: #105 Performance evaluation of partial ammonia cracking integration in gas turbine combined cycle power plants,
H. Choi, J. Lee, W. Yang, C. Ryu, S. Kim
- TH-10-11: #106 Effects of carbonization stages on a low-pressure lean-premixed industrial gas combustor,
R. Toledo, L. Faria, M. Martins
- TH-10-12: #107 Investigation on surface composition variations of aluminum walls interacted with intermittent ammonia combustion by using an acoustically-forced burner flame,
J. Kitsuyama, K. Watanabe, Y. Takeuchi, Y. Saiki
- TH-10-13: #108 Investigation of the distribution and behavior of chemical species in flames during high-temperature air combustion of ammonia, and their effects on heated materials,
M. Tsuchida, Y. Xia, K. Tsuchida, Y. Ueno, T. Ishida, M. Ohnuma, Y. Konno, N. Hashimoto, O. Fujita

Colloquium

11 - Applications - Low-speed propulsion

- TH-11-01: #110 Investigation of ultrasonic atomization and radial-inward flow porous media combustion for micro-gas turbines,
S. Elanjickal, Y. Abraham, V. Erenburg, N. Kositskii, O. Bershadsky, A. Malichi, A. Kleiman, B. Cukurel
- TH-11-02: #111 Numerical analysis of optimal hydrogen post-injection timing for NOx reduction in H₂ ICE across various excess air ratios,
D. Kim, S. Oh
- TH-11-03: #112 Knock characterization in a lean-burn SI engine using oxygenated fuels,
Y. Ishii, Y. Sakai, K. Tanaka, K. Kanayama, K. Nishimura, H. Nakamura, T. Yokomori
- TH-11-04: #113 Ammonia-hydrogen combustion in spark-ignition engines,
Y. Ding, L. Li, Z. Wang, D. Han, Z. Huang
- TH-11-05: #114 Study on flame behavior and knocking in n-heptane based fuels at RON 20: Observation experiments and 1D DNS,
S. Miyazaki, T. Tezuka, Y. Morii, K. Maruta
- TH-11-06: #115 Ignition delay study of ammonia under direct-injection compression ignition engine conditions,
D. Sankesh, L. Wibberley, R. Dyer

Colloquium

12 - Applications - High-speed propulsion and energetics

- TH-12-01: #118 Study on the quenching phenomena of a rotating detonation afterburner at different inlet total temperatures,
Z. Zhou, Y. Huang, H. Peng
- TH-12-02: #119 Numerical investigation of methane-rich and oxidizer-rich combustion in a two-dimensional slit injector configuration,
Y. Daimon, C. Zhang, M. Nishioka
- TH-12-03: #120 Numerical investigation on mixing and exhaust behavior of bottom-injected fuel in a reflective shuttling detonation combustor,
H. Sato, A. Matsuo, E. Shima
- TH-12-04: #121 A fundamental investigation on the operation characteristics of a propane-nitrous oxide torch burner,
S. Lee, N. Itouyama, K. Matsuo, J. Kasahara
- TH-12-05: #122 Effect of binder material properties on detonation performance of TATB-based high explosives,
R. Chicas, E. Anderson, G. Montoya, M. Short, C. Chiquete, S. Voelkel, J. Tisdale, A. Duque
- TH-12-06: #123 Preliminary investigation of thermal management and application of conventional cooling method in rotating detonation engine,
H. Park, E. Dzieminska, T. Suzuki, M. Ichiyanagi

Colloquium

13 - Applications - Fire and safety

- TH-13-01: #125 Experimental study on the mass burning rate and morphology of turbulent wind-driven flames,
V. Bhadabhagani, A. Srivastava, A. Singh
- TH-13-02: #126 Scaling laws for buoyant diffusion flames at different separation distances from an inclined wall,
S. Yu, K. Zhao, Z. Lin, Y. Wang
- TH-13-03: #127 Characterization of electro-thermal instability onset to early detect thermal runaway in lithium-ion batteries using sentinel-frequency,
P. Singh, J. Yoh
- TH-13-04: #128 On the instability of opposed-flow flame spread over carbon-fiber-reinforced plastic sheets,
S. Tsutsui, H. Namura, Y. Kobayashi, S. Takahashi
- TH-13-05: #129 Analytical model of opposed-flow flame spread over carbon-fiber-reinforced plastic sheets,
H. Namura, S. Tsutsui, Y. Kobayashi, S. Takahashi
- TH-13-06: #130 NOVA-Firebrand Transport: Framework to predict firebrand transport dynamics through neural ODE VAE,
S. Suzuki, R. Kameyama, S. Manzello

- TH-13-07: #131 Application of the subgrid combustion model (SCM) in large eddy simulations of under-ventilated compartment fires: Flame ejection through the opening and CO production,
K. Patil, Y. Moorthamers, A. Snegirev, G. Maragkos, B. Merci
- TH-13-08: #132 Numerical prediction and validation of flame spread and extinction over insulated wires under microgravity,
F. Kanayama, Y. Konno, N. Hashimoto, O. Fujita
- TH-13-09: #133 Experimental study on flame spread over a PMMA flat sheet on the ground centrifuge,
J. Pal, N. Hashimoto, Y. Konno, Y. Kobayashi, S. Takahashi, O. Fujita
- TH-13-10: #134 Kinetic modeling of gas generation, evolution, and combustion risks during thermal runaway of lithium-ion batteries,
E. Jadot, B. Xu, G. Gimenez, M. Lecompte, T. De Bruin, S. Benjamin, L. Catoire
- TH-13-11: #135 3D computational framework for simulations of surface flame spread,
A. Snegirev, G. Maragkos, B. Merci
- TH-13-12: #136 Modeling firebrand deposition characteristics: Numerical development of firebrand-structure interaction physics,
S. Simons-Wellin, D. Chaudhari, J. Floyd
- TH-13-13: #137 Development of a modified Sealed Controlled Atmosphere Pyrolysis Apparatus with integrated gas sampling for pyrolysis characterization of solid materials,
Z. Zhou, M. Zhang, X. Xia, X. Wang, Z. Chen, Y. Ding

Friday

Colloquium

1 - Fundamental Processes: Chemical Kinetics

- F-01-01: #001 Development of ab initio kinetics for $O(^1D)+C_2H_4$,
N. Yokochi, C. Mulvihill
- F-01-02: #002 A review of high-temperature gasoline oxidation in a shock tube,
J. Jacobs, M. Sandberg, E. Petersen
- F-01-03: #003 Emission characteristics assessment of mainstream VOCs from heat-not-burn and rolled cigarettes,
X. Xie, K. Tonokura, M. Fujita
- F-01-04: #004 Multi-species study of the oxidation of ammonia-natural gas mixtures,
M. Fikri, C. Schulz, J. Herzler, B. Flesch
- F-01-05: #005 Optimizing rate rules for large alkane oxidation using AI-driven thermochemistry,
R. Kumar, S. Brunialti, S. Sarathy
- F-01-06: #006 Experimental and kinetics investigation of CO formation in laminar premixed C_1 to C_4 alkane flames,
H. Zinta, I. Mulla
- F-01-07: #007 Propane oxidation behind reflected shock waves: Ignition delay times and laser absorption measurements of CO, H_2O , and C_2H_4 ,
A. Saif, B. Belal, A. Elkhazraji, E. Mokheimer, S. Alturaifi
- F-01-08: #008 Elucidating the decomposition of diethyl methyl phosphonate, a prototypal flame retardant for Li-ion batteries,
P. Dievert
- F-01-09: #009 Selective catalytic reduction systems for ammonia-n-heptane dual-fuel combustion,
M. Rajendran, W. Nimmo
- F-01-10: #010 Modelling study of hydrogen-methane mixture, Jet-A and green Jet-A alternatives in premixed laminar flames at elevated pressures,
F. Ryde, E. Heimdal-Nilsson
- F-01-11: #011 Study on NO emission characteristics of a preheated NH_3 /air stagnation flame,
T. Ono, K. Kanayama, T. Tezuka, M. Izumi, H. Nakamura
- F-01-12: #012 Development of an ammonia/diesel-surrogate reaction model for emission formation in dual-fuel combustion,
G. Huang, Y. Zhu, M. Grün, N. Slavinskaya, A. Jocher
- F-01-13: #013 Atmospheric-pressure conversion of NH_3 /DMM mixtures: Experiments and kinetic modelling,
A. Ruiz-Gutiérrez, I. de Diego, M. Uxue
- F-01-14: #014 Kinetic studies of reaction $NH_2 + HO_2$ in a photolysis reactor using time resolved Faraday rotation spectroscopy,
M. Adil, B. Mei, H. Zhong, Y. Ju
- F-01-15: #015 In-situ UV-VIS absorption spectroscopy of toluene and acetylene pyrolysis over a wide temperature range,
C. Shao, M. Rezaeian, J. Herzler, G. Smallwood, T. Dreier, T. Endres, M. Fikri, C. Schulz

Colloquium

2 - Fundamental Processes: Flame Dynamics and Transport Processes

- F-02-01: #019 Effect of nozzle geometry and ambient pressure on flash boiling liquid ammonia spray characteristics in a swirl burner,
C. Nwankwo, M. Tagashira, D. Matsuda, T. Kitagawa, E. Okafor, A. Paykani
- F-02-02: #020 High-density energetic ionic liquids: Design, synthesis, and hypergolic properties,
D. Liang, F. Xiong, X. Guo, Y. Hao, R. Lin, D. Shen
- F-02-03: #021 Experimental characterization of combustion-zone location and flame transfer behavior in a quartz pulse jet,
N. Pillai, A. Flatau, J. Mayonado
- F-02-04: #022 Influence of nozzle geometry on the unsteady dynamics and acoustic characteristics of hydrogen jet flames,
K. Fukuta, H. Ueda, H. Mizoguchi, M. Asahara, K. Takeno, Y. Akimoto, D. Kang, T. Saburi, T. Miyasaka
- F-02-05: #023 Chemiluminescence signature and heat release rate of laminar premixed ammonia-methane flames,
F. Liu, H. Xu, Z. Zhu, L. Zhang, C. He, Z. Wang, F. Liu
- F-02-06: #024 Resolving the weak detonation paradox through supersonic autoignitive reaction waves,
Y. Morii, K. Maruta
- F-02-07: #025 Minimum ignition energy transition of NH_3 /air and NH_3 /10% H_2 /air premixed flames,
M. Saito, R. Urayama, T. Tezuka, Y. Morii, K. Maruta
- F-02-08: #026 Different stages of development of diffusional-thermal instability of curved lean hydrogen-air laminar flames,
X. Guan, H. Lee, P. Dai, M. Wan, A. Lipatnikov

- F-02-09: #027 Boundary layer flame-wall interaction of lean hydrogen-air premixed flames at elevated pressures using pointwise adaptive mesh refinement,
U. Ahmed, R. Cant
- F-02-10: #028 Flexi-fuel burner to decarbonize the heat in industry,
C. Rousselle, T. Calvy, T. Schuller, L. Selle, C. Bibow-Correa, P. Bréquigny, F. Halter, M. Dabrowski, N. Minesi, S. Ducruix, C. Khelaifa, M. Kuhni, C. Galizzi, T. Poinso
- F-02-11: #029 NH₃/air 2D simulations: Fundamental study of high temperature ignition and flame dynamics in narrow channels,
V. Lafaunie
- F-02-12: #030 Wall-initiated premixed gas-phase flame: A new flame propagation regime in mixtures below the flammability limit,
V. Kurdyumov, C. Jimenez, D. Fernández Galisteo
- F-02-13: #031 Investigations on flame characteristics near the blowout limit in non-premixed, double-swirled pure and blended ammonia flames,
A. Goyal, F. Ren, M. Tsue, S. Nakaya
- F-02-14: #032 Combustion characteristics of premixed ammonia-hydrogen/air swirl flames under secondary-air injection and elevated-temperature conditions in a model combustor,
K. Kim, O. Kwon, T. Kim, J. Kim, H. Lee, J. Kim, M. Kim
- F-02-15: #033 Combustion characteristics of nonpremixed NH₃-H₂/air coaxial flames under elevated temperature and pressure conditions,
M. Kim, O. Kwon, J. Kim, T. Kim, J. Kim, H. Lee

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3 - Fundamental Processes: Turbulent flames

- F-03-01: #036 Effect of hydrogen-blending on soot formation and leakage in a swirling flame,
Y. Gao, Y. Wang, J. Li, C. Fu, M. Wang, L. Wang, Q. Wang, H. Ma, Y. Yan, M. Zhang
- F-03-02: #037 Impact of hydrogen carrier fuel on the flame dynamics of swirl-stabilized flames in a model gas turbine combustor,
A. Shealy, R. Limbaugh, A. Karmarkar, S. Won
- F-03-03: #038 OH-PLIF of micromixed hydrogen and methane turbulent flames,
M. Meulemans, E. Tatis Lozano, E. Robert, P. Versailles
- F-03-04: #039 Effect of bluff body recess length on the stability of lean premixed swirl flames,
N. Huda, K. Marthi, S. Soni, K. Yadav, S. De
- F-03-05: #040 Experimental investigation of flame stabilization and emission characteristics in multi-swirl nozzle configuration,
G. Lee, H. Lee, K. Lee
- F-03-06: #041 Analysis of flame behavior and lift-off in a hydrogen dual-swirl injector with different swirl directions,
J. Hong, H. Lee, K. Lee
- F-03-07: #042 Direct numerical simulation of Sandia-A syngas flame,
E. Forti, M. Fratini, A. Neri, M. Valorani, F. Stella, M. Bernardini, P. Ciottoli
- F-03-08: #043 Large-eddy simulation of transcritical combustion of conventional and sustainable aviation fuels using a flamelet-based approach,
M. Molinari, D. Cavalieri, P. Ciottoli
- F-03-09: #044 Sensitivity of heat release modulations to chemical timescales,
S. Iyer, A. Ghosh
- F-03-10: #045 An experimental study on a 100 kWth ammonia/hydrogen co-firing burner for naphtha cracking center (NCC) process combustion,
T. Chae, S. Hwang, J. Lee, W. Yang

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4 - Fundamental Processes: Detonations and high-speed combustion

- F-04-01: #047 Canonical experiments for shock-induced drag and vaporization of liquid droplets,
J. Kennedy, E. Genter, N. Kateris, A. Jayaraman, C. Crown, H. Wang
- F-04-02: #048 Experimental investigation of fuel regression characteristics based on propellant mass flux in a gas-solid multiphase rotating detonation combustor,
Y. Fukui, H. Nishida, N. Itouyama, K. Matsuoaka, J. Kasahara
- F-04-03: #049 Boundary layer formation and velocity deficit in narrow-channel detonations,
S. Krock, T. Westenhofer, B. Devine, P. Meagher, X. Shi
- F-04-04: #050 Experimental investigation of quasi-2D monodispersed droplet-assisted detonations,
C. Douglas, J. Crane
- F-04-05: #051 Explosion characteristics of by-product gases with low hydrogen content from industrial processes,
M. Kim, H. Lee, K. Lee
- F-04-06: #052 Experimental investigation of detonation corner turning in an annular geometry,
G. Montoya, E. Anderson, M. Short, R. Chicas
- F-04-07: #053 Detonation propagation across stratified hydrogen in oxygen,
A. Kurup, E. Dzieminska, S. Takashi

- F-04-08: #054 Experimental study of deflagration-to-detonation transition in DME/H₂ mixtures in mesoscale channels,
A. Thawko, S. Atlan, E. Tenenbaum, D. Diskin

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5 - Fundamental Processes: Heterogeneous combustion and processes

- F-05-01: #056 Atomisation dynamics of electrically charged liquid jets in a crossflow,
T. Gilmour, J. O'Shea, K. Pandey
- F-05-02: #057 Experimental investigation of nozzle geometry effects on flash boiling atomization and flame stability of liquid ammonia in a co-fired burner,
P. Augustin, W. Rohlf, M. Reddemann
- F-05-03: #058 Deactivation behavior of inherent metals in manure-derived biochar during high temperature NO reduction based on SEM-EDX analysis,
H. Youn, M. Shin, Y. Kim, S. Kim, H. Park, J. Lee
- F-05-04: #059 Light absorption dynamics of wildfire-like BrC from wood combustion,
C. Moularas, I. Tsiodra, N. Mihalopoulos, P. Demokritou, G. Kelesidis
- F-05-05: #060 Experimental investigation on combustion behavior of trimethyl borate/Jet A-1 and triethyl borate/Jet A-1 droplets,
S. Gupta, S. Karmakar
- F-05-06: #061 Modeling approach for microwave assisted pyrolysis of woody biomass with OpenFOAM,
A. Dernbecher, L. Ohm, S. Blum, A. Dieguez-Alonso
- F-05-07: #062 Electron microscopic analysis of flame synthesized iron oxide nanoparticles,
P. Sharma, M. Dunn, A. Masri
- F-05-08: #063 Effect of ABE (acetone-butanol-ethanol) blending on atomization, combustion, and emissions of biodiesel in swirl-stabilized combustor,
S. Singh, S. Karmakar
- F-05-09: #064 Gasification of rice husk and restricted equilibrium modeling for hydrogen production,
A. Pawar, S. Kashyap, S. De

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6 - Enabling Models, Methods, Tools & Technology - Diagnostics and experimental methods

- F-06-01: #066 Linking soot structure and optical properties using X-ray photoelectron spectroscopy, UV-VIS-NIR absorption, and Raman spectroscopy,
K. Le, J. John, A. Jemeljanov, S. Bergqvist, K. Zhao, C. Preger, M. Patanen, A. Eriksson, S. Sasikumar, T. Pham, N. Walsh, J. Rissler, A. Kaarna, J. Lin, P. Bengtsson, A. Kivimäki
- F-06-02: #067 Soot maturity and temperature biases in laser-induced incandescence measurements of soot volume fraction,
A. Choudhary, I. Mulla
- F-06-03: #068 Development of a 3-in-1 proximal sensor for synchronized and co-located near-wall gas, heat flux, and ion measurements,
Y. Tagaya, K. Dejima, T. Nagasawa, H. Kosaka
- F-06-04: Potassium radiative emissions from flames: A chemiluminescence process?,
E. McCaughey, P. Westmoreland, H. Miller
- F-06-05: #070 Effect of swirl air on structure and droplet dynamics of ammonia hollow-cone spray,
S. Soni, S. Chavez, P. Ma, J. Li, X. Zhu, S. Xie, H. Hu, H. Zhang
- F-06-06: #071 Temperature and H₂O mole fraction fluctuations in oscillating NH₃/CH₄ flames measured by laser absorption spectroscopy,
N. Shohdy, S. Ducruix, N. Minesi
- F-06-07: #072 A 3D Tomo-PIV approach for cross-interface imaging in confined space,
C. Ling, Y. Wu, Z. Shi
- F-06-08: #073 In-situ quantification of NH₂ radicals in low-pressure NH₃/O₂/N₂ flames implementing cavity ring-down spectroscopy,
A. Ghosh, P. Desgroux, N. Lamoureux
- F-06-09: #074 A new approach combining quenching-corrected LIF and Raman spectroscopy measurements for quantifying concentrations of OH in atmospheric-pressure hydrogen-air flames,
A. Sahay, M. Surendran, B. Lecordier, C. Lacour, D. Honore, A. Cessou, N. Lamoureux, P. Desgroux
- F-06-10: #075 TDLAS measurements of flame temperature and CO concentration for off-gas combustion of SOFC,
S. Umeki, G. Yoo, T. Akiba, M. Lee, Y. Suzuki
- F-06-11: #076 Regional scale assessment of combustion efficiency with observations of the CO/CO₂ enhancement ratio by GOSAT-2 satellite,
S. Maksyutov, R. Janardanan, Y. Someya, T. Saeki, Y. Yoshida, T. Matsunaga
- F-06-12: #077 Spatially and temporally resolved investigation of PMMA pyrolysis using event-based imaging for fire spread modeling,
A. Belt, M. Fehr, L. Arnold
- F-06-13: #078 Experimental optimization of a multi-swirler model combustor for sustainable liquid fuel studies,
P. Gupta, J. Hannappel, M. Prakash, A. Özçelik, D. Sanned, A. Ahamed Subash, M. Richter

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7 - Enabling Models, Methods, Tools & Technology - Modeling approaches

- F-07-01: #080 Assessment of unsteady flamelet/progress-variable approach for hydrogen lifted flames,
M. Muto, T. Nishiie
- F-07-02: #081 Development of SGS turbulent wrinkling models for flame kernel evolution in ignition prediction,
Y. Yao, J. Li, Y. Yan
- F-07-03: #082 An aging progress variable approach to predicting soot in a non-premixed flame with tabulated chemistry,
C. Avonde, K. Bushe
- F-07-04: #083 Investigation of the impacts of radiation and Soret effect on ammonia-air flame propagation for numerical simulations with a detailed reaction chemistry,
B. Thuong, M. Muto, N. Hashimoto, Y. Xia, R. Kurose, H. Nakamura, Y. Konno, O. Fujita
- F-07-05: #084 A VOF modeling approach for reacting porous particles: Coupling shrinking and gas phase dynamics in biomass pyrolysis and oxidation,
R. Caraccio, E. Cipriano, A. Frassoldati, T. Faravelli
- F-07-06: #085 Data-informed Bayesian sparse sensing for combustion thermochemical fields with discrepancy awareness,
V. Rosati, G. Sorrentino, R. Ragucci, M. De Joannon
- F-07-07: #086 Tabulated chemistry RANS modeling of lean hydrogen flames including preferential diffusion and heat-loss effects,
A. Garcia Vergara, E. Perez-Sanchez, E. Fortes, D. Mira, N. Schmitz, C. Wuppermann
- F-07-08: #087 Deflagration-to-detonation transition modeling using the PeleC framework,
P. Dawe, S. Goswami, X. Fang
- F-07-09: #088 Coupled FGM-DPM modeling of kerosene spray combustion in hot vitiated crossflow,
B. Cassese, M. Piras, A. Terlizzi, G. Sorrentino, R. Ragucci, M. de Joannon

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8 - Enabling Models, Methods, Tools & Technology - Numerical techniques

- F-08-01: #090 Neural network-driven chemistry for flameless combustion modeling,
F. Cenvinzo, L. Vervisch, P. Domingo

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9 - Enabling Models, Methods, Tools & Technology - Enabling concepts

- F-09-01: #092 Cumulative effects of two trains of DBD pulses on flame kernel development in RCEM,
S. Agrawal, J. Hayashi, H. Kawanabe
- F-09-02: #093 Enhancement of non-premixed ammonia swirl flames by nanosecond repetitively pulsed discharges,
A. Jano Fong, N. Shohdy, A. Radwan, D. Lacoste
- F-09-03: #094 Effects of discharge frequency on nanosecond repetitively pulsed ignition in ultra-lean hydrogen ignition,
J. Dou, E. Cenker, D. Lacoste
- F-09-04: #095 Influencing hydrogen flame stability maps with temperature-controlled, additively manufactured burner nozzles,
S. Will, S. Faderl, F. Toepfer, F. Bauer

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10 - Applications - Energy and material conversion and heating processes

- F-10-01: #097 Role of heating rate in controlling the supercritical water gasification of plastic,
H. Han, M. Wang, R. Gautam, S. Saxena, F. Angikath, B. Dally
- F-10-02: #098 Characteristics of an EGR hydrogen burner for hydrogen and carbon production via methane pyrolysis,
S. Miyamoto, Y. Katsuragawa, M. Asahara, H. Yasuda, H. Ueda, T. Miyasaka
- F-10-03: #099 Additive manufacturing of porous structures for combustion of methane-air mixtures,
M. Halesova, M. Dostal, V. Klecka, P. Raska, A. Mikoczy, S. Eckart, V. Nevrlý
- F-10-04: #100 Molecular dynamics study on evaporation of droplets containing Ni-Ce nitrate precursor in flame-assisted spray pyrolysis,
N. Minegishi, T. Nagasawa, H. Kosaka, T. Mabuchi
- F-10-05: #101 Investigation of CO₂ and H₂O dilution effects on oxyfuel engine performance, emissions and carbon capture,
R. Asgarzade, T. Franken, F. Mauss
- F-10-06: #102 Passivation of as-reduced micron-sized iron particles for safe handling and storage,
M. Kannengiesser, M. Wielage, B. Stelzner, F. Hagen, D. Trimis
- F-10-07: #103
- F-10-08: #104 Optical characterization of ammonia/methane MILD combustion under a cyclonic flow,
V. Castro, G. Ariemma, P. Sabia, G. Sorrentino, R. Ragucci, M. De Joannon
- F-10-09: #105 Experimental investigation of spray atomization and combustion behavior of ammonia-methanol blends,
S. Cardona Vargas, D. Mengü, H. Dai, T. Guiberti

- F-10-10: #106 Numerical investigation of a non-premixed swirl-stabilized biogas surrogate flames,
M. Singh, S. Mukhopadhyay, A. H, R. Sadanandan
- F-10-11: #107 Formation of dual heat release zones in ammonia oxygen-enriched turbulent jet diffusion flames,
M. Kovaleva, Y. Xia, K. Tanji, K. Somarathne, T. Kudo, A. Hayakawa, H. Kobayashi
- F-10-12: #108 Performance evaluation of Fe-NH₃ co-firing in an ultra-supercritical coal-fired boiler using a one-dimensional boiler analysis model,
Y. Pei, C. Byun, S. Kim, W. Yang, J. Lee, G. Park, C. Ryu, S. Im
- F-10-13: #109 Toward near-zero carbon combined heat and power generation using recyclable iron fuel and waste-derived biodiesel,
S. Karmakar, S. Singh

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11 - Applications - Low-speed propulsion

- F-11-01: #111 Coupling a dynamic 1D spray model with an advanced generic zonal framework for combustion system applications,
S. Heidarabadi, J. Hyvönen, M. Mikulski
- F-11-02: #112 One-dimensional DNS for thermodynamic-state comparison with SI engine knock experiments for PRF90,
T. Fukaya, H. Moriyama, A. Tsunoda, S. Miyazaki, Y. Yasutake, K. Misono, Y. Suzuki, T. Naiki, M. Watanabe, F. Hurault, C. Mounaim-Rousselle, Y. Morii, K. Maruta
- F-11-03: #113 Theoretical investigation of combustion kinetics, ignition delay, and phasing of ammonia borane gasoline blends,
A. Pingle, S. Kumar, N. Kumbhakarna
- F-11-04: #114 Experimental study of NOx emissions and combustion instability in a hydrogen-fueled super-rich-burn, quick-mix, lean-burn model combustor under elevated pressure and temperature,
K. Hirose, S. Nakaya, R. Asanoma, K. Nakayama, K. Takizawa, K. Okai, M. Tsue
- F-11-05: #115 Optical Characterization of Wall-Inpinging Hydrogen Jets,
M. Andersson, M. Gong, M. Lundgren, J. Eismark, Z. Sun
- F-11-06: #116 Modeling of a Hybrid SOFC-H2ICE System with Oxygen-Diluted Combustion for Low-NOx Operation,
A. Thawko, I. Wiesler, D. Diskin
- F-11-07: #117 Reactivity control in diesel-ammonia RCCI via negative-valve-overlap ammonia injection,
A. Soleimani, J. Kim, J. Hunicz, J. Hyvönen, M. Mikulski

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12 - Applications - High-speed propulsion and energetics

- F-12-01: #119 Modeling supersonic hythane combustion with reduced chemistry: A scramjet-based study,
A. Morai, M. Neimatallah
- F-12-02: #120 3D Numerical Simulation on Disk Type RDE Used Hydrogen-Air Non-premixed Gas: Effect of Shape,
T. Ito, N. Tsuboi, K. A. Hayashi
- F-12-03: #121 Challenges in extending the lower limit of the operational mach number range for a scramjet combustor with jet fuel,
M. Takahashi, K. Kobayashi, S. Tomioka
- F-12-04: #122 Investigation of Ammonia-Fueled RDE with Enhanced Ignition System and Hollow Chamber,
T. Okada, F. Kato, M. Aburada, E. Yilmaz, E. Dzieminska, M. Ichiyonagi, T. Suzuki
- F-12-05: #123 High-Fidelity Large Eddy Simulation of Supersonic Combustion in Hydrogen-Air Coflow Jets,
F. Zanetti, M. Fratini, M. Cimini, D. Cecere, E. Giacomazzi, M. Bernardini

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13 - Applications - Fire and safety

- F-13-01: #126 Adaptive simulations of pyrolysis, ignition, and burning of fine-scale solid scale solid wood particles,
S. Simons-Wellin, D. Chaudhari, J. Floyd
- F-13-02: #127 Flammability and Combustion Properties of Thermal Insulators for Offshore Pipeline,
A. Xavier, M. Correa, L. Neves, L. Dalapicula, M. Klippel, N. Strey, R. Martins, M. Orlando, M. Martins
- F-13-03: #128 Comparison of ignition behavior of fuel beds by intermittent heating: Cartridge heater vs firebrand showers,
S. Suzuki, Y. Hara, S. Manzello
- F-13-04: #129 Effects of Liquid Phase DMC Partitioning on Battery Vent Gas Auto-Ignition,
J. Huang, J. Yu, Z. Wang
- F-13-05: #130 Multiple versus Single Hot Particles : Spotting Ignition of Pine Needle Bed,
S. Wang, W. Xu, C. Zhang, X. Huang, C. Pello
- F-13-06: #131 Direct visualisation of transport liquid phase convection and thermal structure in pool fires under crossflow,
F. Shen, X. Meng, Y. Lai, Y. Zhang
- F-13-07: #132 Downward Flame Spread over PMMA-Copper Foil Composite Plates: Effects of Metal Foil on Flame Spread Rate and Limiting Oxygen Concentration,
Y. Morishita

- F-13-08: #133 Assessment of Gas-Solid Interface Predictions in Horizontal Flame Spread Simulations,
T. Quaresma, D. Morrisset, T. Hehnen, R. Hadden, L. Arnold
- F-13-09: #134 Characterization of thermal runaway onset and sequential failure in 18650 lithium-ion batteries induced by external conductive heating,
S. Seong, K. Son, S. Yoon
- F-13-10: #135 Experimental Investigation of Subsurface Heat Transfer and Smouldering Ignition in Wildfires,
S. Arnold, L. Arnold