

11th U.S. National Combustion Meeting, Pasadena, California

Monday, 25 March 2019

	Chemical Kinetics	Chemical Kinetics II	Turbulent Flames	Fire	Engines	Laminar Flames	Engines II	Detonations	Soot	Coal
09:35	1A01: 71CK-0246 Low-temperature oxidation of tetrahydrofuran	1B01: 71CK-0328 Filtering in combustion data assimilation	1C01: 71TF-0490 Effect of Turbulence on Chemistry in Single Element Shear Coaxial Rocket Injector	1D01: 71FI-0362 Comparison of emissions from liquid-fueled pool fires and fire whirls	1E01: 71IC-0556 Autoignition propensity of high octane full boiling range gasolines – Correlating combustion behavior, from detailed chemical kinetic models to RCM and IC engine experiments	1F01: 71LF-0051 Effect of Fuel Sensitivity on PAH Emissions in Partially Premixed Counterflow Flames	1G01: 71IC-0279 Neural Networks Applied to Predicting Diesel Fuel Spray Characteristics	1H01: 71DE-0217 Acceleration of deflagration-to-detonation transition through ozone addition in C ₂ H ₂ /O ₂ mixtures in microchannels	1J01: 71SO-0256 Isomer-specific combustion chemistry in opposed-flow diffusion flames of allene and propyne	1K01: 71CB-0385 Sub-micron ash aerosol formation in oxy-coal combustion at atmospheric and elevated pressures

	Chemical Kinetics	Chemical Kinetics II	Turbulent Flames	Fire	Engines	Laminar Flames	Engines II	Detonations	Soot	Coal
09:55	1A02: 71CK-0118 Speciation Studies during Low-to-intermediate Temperature Oxidation of n-heptane in a Motored Engine	1B02: 71CK-0205 The machine learning for variational transition state theory	1C02: 71TF-0554 Retrospective Lagrangian Analysis of Turbulence-Chemistry Interactions in Highly Turbulent Premixed Flames	1D02: 71FI-0253 Effect of carbon nanotubes addition on the Flame Spread Rate over a Jet A pool	1E02: 71IC-0208 End-Gas Autoignition Fraction and Flame Propagation Rate in Laser-Ignited Primary Reference Fuel Mixtures at Elevated Temperature and Pressure	1F02: 71LF-0068 Exploring N ₂ O Emissions from Lean Premixed Hydrogen and Natural Gas laminar flames stabilized by a Flat Flame Burner	1G02: 71IC-0040 Prediction of autoignition, flame and engine combustion properties for multicomponent fuels using machine learning	1H02: 71DE-0293 Some specific aspects on state vectors in the conservative representation of chemical explosive mode analysis	1J02: 71SO-0067 Reactive molecular dynamics simulations of the yield sooting indices of nitrogenated hydrocarbons	1K02: 71CB-0457 Uncertainty Quantification and Validation of a 15MW Oxy-fired Coal Combustion System
10:15	1A03: 71CK-0578 Functional Group Chemistry of Low-Temperature Biofuel Oxidation	1B03: 71CK-0146 LES/PDF of Sandia flame D using a coupled pre-partitioned adaptive chemistry (PPAC) – ISAT methodology	1C03: 71TF-0551 Assessing the impact of multicomponent transport on the vorticity budget of turbulent premixed flames	1D03: 71FI-0449 Swirling dynamics in liquid-pool fires: transitions between pool fires, fire whirls, and blue whirls	1E03: 71IC-0494 Investigating Auto-ignition of Hydrotreated Vegetable Oil in Ignition Quality Tester	1F03: 71LFP-0587 Head-on quenching of laminar methane-air flames on a plate at temperatures below 300 K	1G03: 71IC-0415 Chemical explosive mode analysis of lean blowout in a gas turbine combustor	1H03: 71OT-0506 Effect of Capacitive Discharge Ignition on Plasma Combustion of Propane-Air Mixture	1J03: 71SO-0169 Evaluating the charged fraction of nanometric carbonaceous materials from a sooting ethylene premixed flame	1K03: 71CB-0540 Radiative heat transfer modeling in pressurized oxy-fuel combustion systems

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10:35	1A04: 71CK-0271 Studies of Low and High Temperature Oxidation of N-pentane with Nitric Oxide and Nitrogen Dioxide Additions in a Jet Stirred Reactor	1B04: 71CK-0485 A unifying analytical framework of using Jacobian matrices with consistent state vectors	1C04: 71TF-0213 A non-local analysis of strong fluctuations in non-premixed turbulent jet flames	1D04: 71FI-0528 The influence of an immersed heater on pool fire burning behaviors	1E04: 71IC-0395 Impact of Ethanol Blending on the Autoignition Characteristics of a Full Boiling Range Gasoline and Its Surrogates at Advanced IC Engine Conditions	1F04: 71LF-0112 Experiments and Modeling of NO _x Formation in Premixed Stagnation Flames of a Typical Jet A	1G04: 71IC-0374 Mapping the Dual-Fuel Combustion Modes of a Light-Duty Diesel Engine at Medium Speed and Low Load	1H04: 71DE-0199 Effect of unequal blockage ratio and obstacle spacing on wave speed and overpressure during flame propagation in premixed H ₂ /O ₂ mixtures	1J04: 71SO-0119 Development of a Data-derived Sooting Index that Includes Effects of Oxygen Containing Fuel Components	1K04: 71CB-0455 Bayesian Parameter Estimation for a Large-Eddy Simulation (LES) Based Coal NO _x Model
10:55 – 11:20 Morning Break										
	Chemical Kinetics	Chemical Kinetics II	Turbulent Flames	Fire	Engines	Laminar Flames	Laminar Flames II	Detonations	Soot	Coal
11:20	1A05: 71CK-0349 Influence of Chemically Termolecular Reactions on Species Concentrations during RDX Combustion	1B05: 71CK-0178 Understanding of the differences of graph-based mechanism reduction methods through a new species block strategy	1C05: 71TF-0025 Do Turbulent Nonpremixed Cool Flames Require Special Treatment?	1D05: 71FI-0516 Effect of initial fuel temperature on flame spread rate of alternative aviation fuels	1E05: 71IC-0069 Examination of Predictive Flame Blow Off Boundaries for Premixed Fuel/Air Reactions at Gas Turbine Premixer Conditions	1F05: 71LF-0420 Numerical investigation of real-gas effects in premixed CH ₄ -O ₂ flames at cryogenic conditions	1G05: 71LF-0022 Application of Physics-Based Machine Learning in Combustion Modeling	1H05: 71DE-0100 Extension of Detonation Limits Using Ozone as an Additive	1J05: 71SO-0061 Experimental and theoretical study of the soot-forming tendencies of furans as potential biofuels	1K05: 71CB-0117 Assessment of Various Tar and Soot Treatment Methods for Use in Coal Combustion Simulation

	Chemical Kinetics	Chemical Kinetics II	Turbulent Flames	Fire	Engines	Laminar Flames	Laminar Flames II	Detonations	Soot	Coal :
11:40	1A06: 71CK-0206 Analysis of RDX monopropellant combustion wave structure using a model with detailed condensed-phase kinetics	1B06: 71CK-0092 An automatic rate-based algorithm for building and modifying reduced kinetic mechanisms	1C06: 71TF-0534 Evolution of Local Flame Displacement Speeds in Turbulence	1D06: 71FI-0513 Experimental Investigation of Hot Surface Ignition Temperature s for Aviation Fuels	1E06: 71IC-0081 Flame Stability for a Premixed Jet in Vitiated Coflow	1F06: 71LF-0301 Influence of Low- and High-Temperature Chemistries on Flame Propagation in Supercritical Fluids	1G06: 71LF-0535 Assessing the performance of an implicit, fully-coupled procedure for reactive flow simulations	1H06: 71DE-0244 Explosion Characteristic Measurements of Propane Mixtures	1J06: 71SO-0126 A numerical study on the sooting tendencies of Co-Optima bio-derived blendstocks	1K06: 71CB-0211 Predicting Smoke Emissions Using A Compositional Linear Trend
12:00	1A07: 71CK-0156 Thermogravimetric analysis and chemical kinetic study of HMX decomposition in liquid phase	1B07: 71CK-0542 Re-analysis of Methoxy Decomposition Measurements at High Temperature	1C07: 71TF-0552 Evolution of Turbulent Flame Speed of Premixed Flames	1D07: 71FI-0433 Design of an Experimental Apparatus to Measure Minimum Hot Surface Ignition Temperature (MHSIT) of Aviation Fluids	1E07: 71IC-0283 Multimodal Instability Characteristics of a High Pressure, Turbulent, Premixed Jet Flame	1F07: 71LF-0168 The Effect of Working Fluids on Premixed Hydrogen Combustion in a Constant Volume Combustion Chamber	1G07: 71SC-0438 A direct method for calculating the turning points of perfectly stirred reactors	1H07: 71DE-0191 Quenching limits and dynamics of multidimensional detonation waves confined by an inert layer	1J07: 71SO-0062 Soot Characterization of Burning Wildland Porous Fuel Bed	1K07: 71CB-0153 Sub-micron particle formation during pulverized coal combustion in a two-stage flat flame burner

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12:20	1A08: 71CK-0018 Heterogeneous Catalysis of Hydrogen Peroxide Vapor on Platinum	1B08: 71CK-0496 The Pyrolysis Chemistry of Propionic Acid and Ethyl Propionate in a Microreactor	1C08: 71TF-0522 Turbulent Deflagrations of Mildly Flammable Refrigerant-Air Mixtures	1D08: 71FI-0075 Laser induced incandescence measurement of soot in buoyant turbulent diffusion flames under different oxygen concentration atmospheres	1E08: 71IC-0326 Chemical Kinetic Preferential Vaporization Impacts on Lean Blow-Out Behaviors of Jet Fuels	1F08: 71LF-0110 Binary Diffusion Coefficients of Polycyclic Aromatic Hydrocarbons: A Molecular Dynamics Study	1G08: 71LF-0046 Accelerating laminar flamelet calculations; application to sooting tendencies of co-flow diffusion flames	1H08: 71DE-0296 Effects of Low-Temperature Chemistry and Turbulent Transport on Knocking Formation in Stratified Dimethyl Ether/Air Mixtures	1J08: 71SO-0048 Measuring the Sooting Tendencies of Terpenes as Potential Biofuels	1K08: 71CB-0529 Ash aerosol and deposition formation with changing alkali-Cl-S additives during coal combustion

12:40 – 13:55 Lunch Break

	Chemical Kinetics	Chemical Kinetics II	Turbulent Flames	Fire	Engines	Laminar Flames	Heterogeneous Combustion	Detonations	Soot	Coal
13:55	1A09: 71CK-0404 C14 polycyclic aromatic hydrocarbons are formed by acetylene addition to naphthyl radicals	1B09: 71CK-0080 An Accurate Reaction Model for the High Temperature Pyrolysis of Silane and Disilane	1C09: 71TF-0093 Assessing different subfilter mixing models for combustion in large eddy simulations	1D09: 71FI-0052 A wide band gas radiation model for fire CFD simulations	1E09: 71IC-0389 Towards improved mesh designing techniques of Spark-Ignition engines in the framework of spectral element methods	1F09: 71LF-0247 Oscillating Propagation of Cellularly Unstable Constant Pressure Expanding Flames	1G09: 71OT-0446 FLAME AS A UNIQUE METHOD FOR THE SYNTHESIS OF HYDROPHOBIC C-LAYERS	1H09: 71DE-0520 Examination of detailed methane/oxygen kinetics in the context of detonation simulations	1J09: 71SO-0171 The effect of PAH geometry and aliphatic linkers on exciplex fluorescence emission	1K09: 71CB-0172 Characteristics of pressurized oxy-coal combustion in a 100 kWth, 15 bar combustor

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14:15	1A10: 71CK-0479 From benzene to naphthalene, direct measurement of ring growth in polycyclic aromatic hydrocarbon formation	1B10: 71CK-0242 Ethanol Kinetic Model Development and Validation	1C10: 71TF-0372 Dynamically Dominant Interscale Couplings in the Nonlinear Chemical Source Terms for Species Evolution in Premixed Turbulent Combustion with Application to LES Modeling	1D10: 71FI-0555 Progress Towards High Fidelity Simulations of Large-Scale Fires	1E10: 71IC-0250 Modelling and Simulation of Dilute Syngas Combustion in a CFR Engine	1F10: 71LF-0188 An experimental study of cell-induced flame acceleration during the compression stage of confined spherical flame propagation	1G10: 71HC-0456 Flame Synthesis Nanostructures with Complex Morphologies and Hybrid-nature	1H10: 71DE-0277 Effect of a Diffuser on Conditioning Flow Field Fluctuations at the Exit of a Rotating Detonation Combustor	1J10: 71SO-0267 The Effects of the Interactions between Aromatics on Soot Formation	1K10: 71CB-0462 Experimental and Numerical Modeling of Laminar Coal Flames
14:35	1A11: 71CK-0138 Ring opening of cycloalkanes at high temperatures	1B11: 71CK-0580 RON and MON Chemical Kinetic Modeling Study	1C11: 71TF-0322 Differential diffusion modelling in LES/TPDF simulations of turbulent flames	1D11: 71FI-0150 Simulation of Unsteady Radiation Effects in Laminar Diffusion Flames	1E11: 71IC-0234 3-D Modeling of the CFR Engine for the Investigation of Knock on Natural Gas	1F11: 71LF-0357 Stratified Spherical Flame Propagation of Low Molecular Weight Fuels in the Presence of Electric Fields	1G11: 71HC-0024 Reaction propagation in a printed Al/CuO composite observed using high-speed microscopy and thermometry	1H11: 71DE-0366 Boundary Layer Ignition Modeling	1J11: 71SO-0291 On the growth of Polycyclic Aromatic Hydrocarbons (PAHs) in a coflow diffusion flame	1K11: 71CB-0500 Improvement of Computational Efficiency for Discrete Transfer Radiation Calculations Through the Use of Dimensionally Adaptive Mesh Techniques

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	Chemical Kinetics	Chemical Kinetics II	Turbulent Flames	Fire	Engines	Laminar Flames	Heterogeneous Combustion	Detonations	Soot	Coal
15:55	1A14: 71DI-0361 A Study of Shock-Tube Facility Effects over a Wide Range of Conditions Using Multiple Facilities	1B14: 71CK-0227 Experimental and surrogate modeling study of diesel fuel	1C14: 71TF-0306 Assessment of the stabilization mechanisms of turbulent lifted jet flames at elevated pressure using 2-D Raman imaging	1D14: 71FI-0140 Effect of free stream turbulence on wind-driven fires	1E14: 71IC-0264 Improving Numerical Modeling of DISI Cold-Start	1F14: 71LF-0453 Self-sustaining warm diffusion flames in the counterflow	1G14: 71HC-0258 DNS of n-heptane droplet vaporization and combustion	1H14: 71DE-0222 Modeling of Combustion Dynamics in a Non-premixed Rotating Detonation Engine	1J14: 71SO-0187 Soot formation and radiation heat transfer in a tri-axial methane diffusion flame	1K14: 71CB-0487 Pore-Resolving Simulation to Study the Effect of Morphology on Char Combustion
16:15	1A15: 71CK-0082 Quantitative Measurements of CH in a Shock Tube Using Laser Absorption at 427 nm	1B15: 71CK-0254 Oxidation of an iso-paraffinic alcohol-to-jet fuel and heptane mixture: an experimental and modelling study	1C15: 71TF-0476 Statistical analysis of scalars for ignition via transient hot jet	1D15: 71FI-0180 A computational study on the fire merging of burning chamise shrubs	1E15: 71IC-0268 Numerical Simulation of a Controlled Trajectory Rapid Compression and Expansion Machine	1F15: 71LF-0017 Effects of H ₂ O and CO ₂ fuel dilution on a coflow methane/air diffusion flame	1G15: 71HC-0359 An investigation of characteristics of airblast atomization using 3D DNS for altitude reflight conditions	1H15: 71DE-0337 Simulating Multidimensional Reacting Flow with the Discontinuous Galerkin Method	1J15: 71SO-0532 Soot Concentration, Temperature, and Radiant Emission Measurements in a Turbulent Ethylene Jet Flame	1K15: 71CB-0544 Kinetic Monte-Carlo Study of Pitting Dynamics in High-Temperature Graphene Gasification

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16:35	1A16: 71CK-0086 A revisit of constant temperature approximation in chemical kinetics study using single pulse shock tubes with GC speciation	1B16: 71CK-0414 An experimental and modelling study of 2,4,4-trimethyl-1-pentene	1C16: 71TF-0517 Understanding the Effect of Nanosecond Pulsed Discharge on Ignition and Flame Stability of Methane Jet Flames	1D16: 71OT-0167 A Study of Intermittent Convective Heating Effects on Fine Fuel Ignition	1E16: 71IC-0160 Numerical Study on Direct Injection of Hydrogen-Methane Blends into a Constant Volume Combustion Chamber	1F16: 71LF-0526 Rate-Ratio Asymptotic Analysis of the Influence of Addition of Carbon Monoxide on the Structure and Mechanisms of Extinction of Nonpremixed Methane Flames	1G16: 71HC-0245 Numerical investigation of n-dodecane spray ignition	1H16: 71DE-0050 An Analysis of Irregular Detonation Phenomena Using Machine Learning and Numerical Simulation	1J16: 71SO-0034 Predicting Soot Formation and Emission in Wildland Fires with FIRETEC	1K16: 71CB-0561 A continuum model for graphene oxidation
16:55	1A17: 71CK-0173 Multi-species time-history measurements during ethanol pyrolysis behind reflected shock waves	1B17: 71CK-0407 Validated Model for Burning Velocities of R-32/O ₂ /N ₂ Mixtures over a Wide Range of Conditions	1C17: 71TF-0342 Ignition and Flame Kernel Development in Lean Premixed H ₂ /Air Flowing Gases	1D17: 71FI-0425 Effects of Fuel Characteristics on Smoldering Behavior of Ponderosa Pine Duff	1E17: 71OT-0158 Influence of the real-gas equation-of-state binary interaction coefficients on the turbulent mixing of many species at diesel-engine high-pressure conditions	1F17: 71LF-0049 An Experimental and Computational Study on the Influence of Ammonia during Soot Formation Processes	1G17: 71HC-0029 Predicting drop impact on heated walls using multiphase SPH with adaptive resolution	1H17: 71DE-0047 Study on the analog system of detonation with two step chemical reaction model	1J17: 71SO-0193 Soot volume fraction measurements in piloted turbulent nonpremixed flames at elevated pressures	1K17: 71CB-0260 Modulated Thermogravimetric Experiments on Argonne Premium Coal Samples with Combustion Gas Analysis

TUESDAY, 26 March 2019

	Chemical Kinetics	Chemical Kinetics II	Turbulent Flames	Fire	Engines	Laminar Flames	Heterogeneous Combustion	Diagnostics	Soot	Other
09:20	2A01: 71CK-0300 Role of ozone doping in the explosion limits of hydrogen-oxygen mixtures: multiplicity and catalyticity	2B01: 71CK-0273 The effects of roaming radical reactions on global combustion properties of transportati on fuels	2C01: 71TF-0509 Flame-structure analysis of the Hi-Pilot stratified premixed jet flame using large-eddy simulations	2D01: 71FI-0152 A Numerical and Theoretical Study of the Effects of Wind on the Structure of a Turbulent Line Fire	2E01: 71IC-0194 Numerical studies on flame-wall interaction in a closed chamber	2F01: 71LF-0295 Studies of High Pressure 1,3- Butadiene Flame Speeds and High Temperatur e Kinetics Using Hydrogen and Oxygen Sensitizatio n	2G01: 71HC-0562 Subgrid Flamelet Generated Manifold Multi-Scale Modeling for Spray Combustion	2H01: 71DI-0335 High-resolution velocimetry in turbulent premixed flames using a wavelet-based optical flow technique	2J01: 71CK-0079 Sooting Tendencies of Ethylene in a Shock Tube	2K01: 71OT-0371 A review of evidence-based best practices for developing research software in combustion
09:40	2A02: 71CK-0132 Products Investigatio n of Ethylene Ozonolysis Reaction by Flow Reactor and VUV- Photoioniza tion Mass Spectromet ry	2B02: 71CK-0515 Developme nt of a New Chemical Mechanism for Ethanol-Air Mixture in a Wide Range of Temperatur e and Pressure	2C02: 71TF-0289 Getting the full picture: extension of NGA to fully compressible reacting flows	2D02: 71FI-0472 Numerical Investigation of Gypsum Thermo-Chemistry under Fire Exposure	2E02: 71IC-0056 Flame-wall fuel film interaction under engine conditions	2F02: 71LF-0463 Experiment al investigatio ns of laminar flame propagation of C1-C4/O2/inert mixtures at engine-relevant conditions	2G02: 71HC-0339 The Influence of Droplet Injection Models on Reynolds-Averaged Navier-Stokes Simulations of High-Speed Heptane/Et hane Spray Flames	2H02: 71DI-0392 Multi-isotope spectroscop y of CO for shock tube oxidation studies of fuel blends	2J02: 71SO-0189 Evolution of sp ² carbon bonding on nanoparticle s formed in premixed stagnation flames at elevated temperatur e and equivalence ratio	2K02: 71OT-0038 Open Source CFD for Reacting Flow Simulation: An Upgraded OpenFOAM Platform

	Chemical Kinetics	Chemical Kinetics II	Turbulent Flames	Fire	Engines	Laminar Flames	Heterogeneous Combustion	Diagnostics	Soot	Other
10:00	2A03: 71CK-0009 Insights into the Reactions of Hydroxyl Radical with Diolefins	2B03: 71CK-0352 Towards a High-Accuracy Kinetic Database Informed by Theoretical and Experimental Data	2C03: 71TF-0396 Time-efficient methods for real fluid property evaluation in numerical simulation of chemically reacting flows	2D03: 71FI-0054 Numerical Modeling of Soot-Radiation in Optically-Thin, Buoyant Diffusion Flames of Varying Oxygen Index	2E03: 71IC-0355 Dynamical Systems Analysis of Transient Thermoacoustic Oscillations in a Liquid Fueled Gas Turbine Combustor at Elevated Pressures	2F03: 71LF-0315 The effect of droplets on laminar flame propagation for an acetone/air strained premixed flame	2G03: 71HC-0406 Effect of subfilter time integration on the dynamics of dilute evaporating sprays	2H03: 71DI-0163 Multiparameter Absorption Tomography with a Lineshape Prior	2J03: 71SO-0174 Soot Precursor Formation from Oxygenated Aromatics: How oxygen functionality alters organic reaction pathways	2K03: 71OT-0237 Molecular level simulations of combustion processes using the DSMC method
10:20	2A04: 71CK-0219 Low temperature oxidation of ethylene by ozone in a jet-stirred reactor	2B04: 71CK-0338 A Chemical Functionality Approach Towards the Formulation of a High-Fidelity Surrogate Fuel for FACE Gasoline F	2C04: 71TF-0375 An Overview of Multi-Physics Modeling Considerations for Turbulent Jet Flames with Inhomogeneous Inlets	2D04: 71FI-0304 Numerical study of fire behavior between two inclined plates	2E04: 71IC-0145 Quantifying facility effects for the interpretation of optical engine data	2F04: 71LF-0238 Effects of radiation on flame speed of H ₂ /O ₂ /N ₂ mixtures at elevated pressures	2G04: 71HC-0393 Modelling Disruptive Burning in Multicomponent Droplets	2H04: 71DI-0106 X-ray Excitation of Thermographic Phosphors	2J04: 71SO-0021 In Situ Imaging Studies of Combustor Pressure Effects on Soot Oxidation	2K04: 71SC-0408 A numerical investigation of quenched laser-ignited CH ₄ and biogas mixtures near the lean flammability limit

10:40 – 11:05 Morning Break

	Chemical Kinetics	Turbulent Flames II	Turbulent Flames	Fire	Engines	Laminar Flames	Heterogeneous Combustion	Diagnostics	Soot	Other
11:05	2A05: 71CK-0523 An experimental and modeling study of autoignition for cyclopentane and dimethyl ether binary blends	2B05: 71TF-0026 A Population Dynamics Model for Expanding Turbulent Flames	2C05: 71TF-0097 A Comparative Study of Hydrodynamic Effects in Turbulent Premixed Jet Flames	2D05: 71FI-0442 Laboratory scale testing of Nomex fabric as a protective flame barrier in enriched oxygen atmospheres	2E05: 71IC-0220 Flame position-Shear Layer Offset Effects on Reacting Jet in Cross-flow Dynamics	2F05: 71LF-0272 Studies of multi-channel spark ignition characteristics of n-pentane/air mixture under fuel lean conditions in a spherical bomb	2G05: 71HC-0133 Investigating the Role of Atomization on Flame Stability of Liquid Fuels in an Annular Co-flow Spray Burner	2H05: 71DI-0041 Dual-pump Coherent Anti-Stokes Raman Scattering Spectroscopy in Turbulent Heptane/Ethane Spray Flame	2J05: 71SO-0411 Effects of equivalence ratio and temperature on soot formation in partially premixed counterflow flames	2K05: 71OT-0149 Experimental and Theoretical Study of Cyclopentane as a Catalyst for Low Temperature Alkene Oxidation
11:25	2A06: 71CK-0104 Studying the Impact of Different Organic Silicon Structures on Syngas Auto-ignition Behavior	2B06: 71TF-0282 Machine Learning based models for joint PDF shapes for multi-scalar mixing in turbulent flows	2C06: 71TF-0347 Unique Identification of Turbulent Reacting System Dynamics with Time-Lag Phase Portraits	2D06: 71FI-0134 Simultaneous measurement of fuel transport and foam degradation for firefighting foams to improve understanding of fire suppressing mechanisms	2E06: 71IC-0270 Jet Development and Penetration of a Multi-hole Diesel Injector in a Constant Volume, Low Temperature Chamber	2F06: 71LF-0545 Validation and Refinement of Scaling Analysis for Mild Ignition	2G06: 71HC-0512 Investigating the role of preferential vaporization during submillimeter sized multi-component jet fuel surrogate droplet combustion	2H06: 71DI-0308 High-Speed OH* and CH* Chemiluminescence Imaging Diagnostics in Spherically Expanding Laminar and Turbulent Flames	2J06: 71SO-0489 An Investigation of Soot Morphology in High-pressure Spray Combustion	2K06: 71MC-0162 Combustion Assisted Fabrication of Paper-Templated Metal Structures

	Chemical Kinetics	Turbulent Flames II	Turbulent Flames	Fire	Engines	Laminar Flames	Heterogeneous Combustion	Diagnostics	Soot	Other
11:45	2A07: 71CK-0469 Performance comparison of chemical kinetic models for toluene autoignition	2B07: 71TF-0466 A Neural Network-Based Flamelet Model for a Liquid Propellant Rocket Engine with Partially-Premixed Flame	2C07: 71TF-0567 Analysis on Turbulent Flow Dynamics of a Practical Direct-Injection Swirler for Gaseous Fuel	2D07: 71FI-0166 Fuel Effects on Pool Fire Extinction by Aqueous Foams	2E07: 71IC-0558 On the effect of Pre-chamber's Volume and Nozzle Area on Combustion Process inside the Pre-chamber and Resulting Jet Characteristics	2F07: 71LF-0181 Influence of Diluent Gas on Ignition in Premixed Methane-Air-Diluent Mixtures	2G07: 71HC-0565 Modifying Continuous Thermodynamics Droplet Vaporization Models to Directly Predict Combustion Property Targets	2H07: 71DI-0243 Effect of Diluents on Autoignition Process by Using Rapid Compression Machine	2J07: 71SO-0363 Soot Formation Models for Non-Premixed Flames with Variable Stoichiometric Mixture Fraction and Strain	2K07: 71OT-0431 Fabrication of Binary Manganese Oxide - Carbon Films by Flame Assisted Deposition with Tuned Metal Oxidation and Carbon sp ² Bonding
12:05	2A08: 71CK-0035 High-Pressure Ignition Delay Measurements of Methane Under Supercritical Carbon Dioxide Conditions	2B08: 71TF-0120 Validation of a Low Mach Fire Environment Model with Vertical Porous Burner Experiments	2C08: 71TF-0378 Local Statistics of Expanding Turbulent Flames: Effect of Darrieus-Landau Instability	2D08: 71FI-0057 Performance Characterization of Wood-Fueled Camp Stoves	2E08: 71IC-0329 Effect of Fuel Properties on Spray and Combustion Characteristics under Compression Ignition Engine Conditions	2F08: 71LF-0521 Using confined spherically expanding flames to study autoignition of reacting mixtures	2G08: 71HC-0084 High-Speed Imaging of Spray Near-Field Behavior in a Turbulent Heptane/Ethane Spray Flame	2H08: 71DI-0307 Single-Shot, OH Planar Laser-Induced Fluorescence (PLIF) Studies of Spherically Expanding Laminar Flames	2J08: 71SO-0113 A physics-based approach to modeling soot formation from real jet fuel combustion	2K08: 71OT-0292 Formation mechanisms of Ni-rich LiNi _{1-x-y} Mn _x Co _y O ₂ battery cathode materials in flame aerosol synthesis

12:25 – 13:40 Lunch Break

	Chemical Kinetics	Chemical Kinetics II	Turbulent Flames	Fire	Engines:	Laminar Flames	Heterogeneous Combustion	Diagnostics	Stationary Combustion Systems	Coal	Lam Memorial Session
13:40	2A09: 71CK-0202 Shock tube ignition study of pre-nol – a “hyperboosting” fuel relevant to the Co-Optima initiative	2B09: 71CK-0427 Dynamic Evaluation of Multi-Component Pressure Dependence in Multi-Channel Reactions: CH ₃ +OH as a Case Study	2C09: 71TF-0434 Direct numerical simulation of auto-ignitive turbulent flame in a stratified DME/air mixture	2D09: 71FI-0471 Downward burning of PMMA cylinders in spacecraft environments	2E09: 71HC-0416 Analysis of ignition and stabilization modes in diesel spray flames	2F09: 71LF-0239 Temperature, species, and laminar flame speed measurements in high-temperature, premixed ethane-air flames	2G09: 71HC-0269 Very-High-Pressure Burning Rates of Aluminized and Non-Aluminized AP/HTPB-Composite Propellants	2H09: 71DI-0310 Characterization of Dust Particle Flow Field in Minimum Ignition Energy Testing Apparatus Using High-Speed Digital In-Line Holography	2J09: 71SC-0501 INCORPORATION OF COAL KINETICS INTO A DUAL CIRCULATING FLUIDIZED BED REACTOR BURNING COAL BY CHEMICAL LOOPING WITH OXYGEN UNCOUPLING	2K09: 71CB-0546 Comparison of Flame Temperatures to Mass Flux Rates for Wildland Fire Fuels	Lam1: CSP and Local Sensitivity Analysis
14:00	2A10: 71CK-0015 Intermediate species measurements during sarin simulants combustion inside a shock tube	2B10: 71CK-0095 Pressure Dependence of the Reaction between CH ₃ O ₂ and OH: Triox Formation	2C10: 71TF-0230 DNS analysis of flame propagation at different turbulence length scales	2D10: 71FI-0311 Opposed Flame Spread over Thick PMMA Fuel Samples in The Narrow Channel Apparatus (Simulated Microgravity)	2E10: 71IC-0443 Fuel blend ratio effects on ignition and early stage soot formation	2F10: 71LF-0098 Laminar Burning Speed of Isobutane/Air/Carbon Dioxide Mixtures at Various Pressures and Temperatures	2G10: 71HC-0130 Burning Rate Characterization of Guanidine Nitrate and Basic Copper Nitrate Propellants with Metal Oxide Additives	2H10: 71DI-0032 Assessment of imaging diagnostics for measurement of lift-off length in diesel flames.	2J10: 71SC-0077 A numerical study of confined turbulent jets for high-temperature homogeneous combustion with oxygen enrichment for industrial applications	2K10: 71CB-0318 The Role of Chemical Structure in the Thermal Decomposition of Xylan	Lam2: Using Global Pathway Analysis to Understand Complex Chemical Kinetics

	Chemical Kinetics	Chemical Kinetics II	Turbulent Flames	Fire	Engines:	Laminar Flames	Heterogeneous Combustion	Diagnostics	Stationary Combustion Systems	Coal	Lam Memorial Session
14:20	2A11: 71CK-0183 Optimization of shock tube performance in the reaction region at high temperatures and pressures	2B11: 71CK-0437 Reaction Kinetics of Chemically Termolecular Reactions: Pressure Dependence	2C11: 71TF-0252 DNS of Multi-Injection Mixing and Combustion at Compression Ignition Engine Conditions	2D11: 71FI-0074 Development of Turbulent Wall Fire Burner and Preliminary Test Results	2E11: 71IC-0428 Effect of CO ₂ Dilution on the Ignition and Development of CH ₄ /air Ignition Kernels	2F11: 71LF-0323 An experimental and modeling study of laminar flame speeds for iso-propyl-nitrate and iso-propyl-nitrate/propane blends.	2G11: 71HC-0094 Synchrotron Based Measurement of the Temperature Dependent Thermal Expansion Coefficient of Ammonium Perchlorate	2H11: 71DI-0507 Quantifying the Influence of Camera Sensor and Optics on Multispectral Image-Based Thin Filament Pyrometry	2J11: 71SC-0065 Combustion performance of storage water heaters operated on mixtures of natural and renewable gas	2K11: 71HC-0262 A Simplified Theory Connecting Burning Rate and Flame Spread Rate in Opposed-Flow Flame Spread over Flat Fuel Beds	Lam3: Toward Computational Singular Perturbation (CSP) without Eigen-decomposition
14:40	2A12: 71CK-0087 A Diaphragmless, Fire-By-Wire Shock Tube for High-Temperature and Low-Pressure Kinetics	2B12: 71CK-0356 Screening for Structural Uncertainties from Third-body Collision Efficiencies	2C12: 71TF-0525 DNS of a high-speed turbulent ethylene-air premixed flame stabilized over a backward facing step	2D12: 71FI-0241 Structure and Stability of an Inclined Laminar Flame	2E12: 71IC-0101 Transient Plasma Ignition of Lean and Dilute Propane/Air Mixtures	2F12: 71LF-0031 Laminar Flame Speed Measurements of Alternative Liquid Fuels at 403 K and 1 atm	2G12: 71HC-0121 Low Temperature Decomposition of Ammonium Perchlorate in the Presence of Catalyst	2H12: 71DI-0397 2-kHz laser absorption imaging of ethane in unsteady partially premixed flames	2J12: 71SC-0147 Evaluation of a Low Cost, Real-Time Gaseous Fuel Composition Sensor	2K12: 71CB-0451 Oxidative Torrefaction of Corn Straw	Lam4: Theory of Combustion of Normal-Alkane Droplets Supported by Cool-Flame Chemistry

	Chemical Kinetics	Chemical Kinetics II	Turbulent Flames	Fire	Engines:	Laminar Flames	Heterogeneous Combustion	Diagnostics	Stationary Combustion Systems	Coal	Lam Memorial Session
15:00	2A13: 71CK-0229 A shock tube kinetic study on the reaction of OH + cyclopentanone and OH + cyclohexanone	2B13: 71CK-0460 The Role of Mixture Rules in Experimental Interpretations of Third-Body Efficiencies	2C13: 71TF-0566 DNS of premixed flames under different turbulent conditions	2D13: 71FI-0089 Comprehensive analysis of dynamics and hazards associated with cascading failure in lithium-ion cell arrays	2E13: 71IC-0559 Investigation of fuel property effects on knock propensity in a Direct Injection Spark Ignition (DISI) engine	2F13: 71LF-0321 Laminar Flame Speed Measurements from OH* Chemiluminescence of Spherically Expanding CH ₄ -O ₂ -CO ₂ Flames	2G13: 71HC-0073 Microscopic Imaging of 3D printed nano aluminum PVDF composite Propellants	2H13: 71DI-0275 Quantification of Diesel Fuel Spray Regimes by Rainbow Schlieren Deflectometry	2J13: 71SC-0059 Experimental Assessment of the Combustion Performance of an Oven Burner Operated on Pipeline Natural Gas Mixed with Hydrogen	2K13: 71CB-0137 Oxy-combustion Behavior of Torrefied Biomass Particles	Lam5: Propagation Speeds and Kinetic Analysis of Premixed Heptane/Air Cool and Warm Flames at Large Ignition Damköhler Numbers
15:20	2A14: 71CK-0155 Time-Resolved Speciation of iso-Octane First-Stage Ignition Products at Elevated Effective-Pressures in a Shock Tube	2B14: 71CK-0390 Are Termolecular Reactions Facile in Radical Recombinations?	2C14: 71TF-0499 Required Transition Zone Size in Hybrid LES-DNS of Premixed Turbulent Flames	2D14: 71FI-0481 Analytical Study of a Burning Accident in an Obstructed Coalmining Passage	2E14: 71IC-0475 Pre-ignition and knock limits on utilization of ethanol in Octane-on-Demand concept	2F14: 71LF-0201 Laminar burning velocities of preno – a “hyperboosting” fuel relevant to the Co-Optima initiative	2G14: 71HC-0419 Burning Rate and Flame Structure of Cocrystals of CL-20 and a Polycrystalline Composite Crystal of HMX/AP	2H14: 71DI-0240 Mid-infrared laser-absorption imaging of temperature and CO in laminar flames	2J14: 71IC-0033 Emission Free Closed Loop Carbon Dioxide Power Cycle	2K14: 71CB-0139 Pyrolysis and Combustion of Raw and Torrefied Biomass	Lam6: Tangential Stretching Rate: Theory and Application in the Diagnostics of Turbulent Flames

15:40 – 16:00 Afternoon Break

	Chemical Kinetics	Turbulent Flames II	Turbulent Flames	Fire	Engines	Laminar Flames	Heterogeneous Combustion	Diagnostics	Micro-Combustion/ New Concepts	
16:00	2A15: 71CK-0159 Autoignition of CRC Diesel Surrogates at Low Temperature Combustion Conditions: Rapid Compression Machine Experiments and Modeling	2B15: 71TF-0353 Dynamics of scalar isosurfaces in isotropic turbulence	2C15: 71TF-0391 Ignition and flame propagation in a supersonic cavity	2D15: 71FI-0409 Forced convection fire spread along wooden dowel array	2E15: 71IC-0257 Emissions Formation in a Heavy-Duty CI Engine Converted to Natural Gas SI Operation	2F15: 71LF-0527 Experimental and numerical investigation of n-heptane cool flame structures and propagation speeds at sub-atmospheric pressures	2G15: 71HC-0055 Aging Effects on the Pyrolysis Rate of Polymeric Binders and Fuels	2H15: 71DI-0305 Evolution of the OH Relative Concentration during Flame Quenching in a Rectangular Cross Section Channel	2J15: 71MC-0582 Numerical investigation of ignition characteristics of selected fuel blends in a micro reactor	
16:20	2A16: 71CK-0454 A Chemical Pathway Perspective on the Kinetics of Low-Temperature Ignition of Propane	2B16: 71TF-0107 Topologically conditioned chemical flame structure for turbulent lean premixed flames	2C16: 71TF-0020 Investigating Pulse Combustion Effects on the Anode Baking Furnace Energy Consumption and Emissions Characteristics	2D16: 71FI-0215 An Experimental Study on the Effects of Ullage on Flame Spread through Wooden Matchstick Arrays	2E16: 71OT-0350 Comprehensive Emissions from a Spark-Ignited Gasoline Engine under Transient Load Profiles	2F16: 71LF-0309 NUMERICAL SIMULATIONS OF LAMINAR NONPREMIXED CH ₄ -AIR JET FLAMES INFLUENCED BY VARYING ELECTRIC FIELDS	2G16: 71HC-0023 Direct writing of 90-weight percent nanothermite loading ink	2H16: 71DI-0384 Exploiting line mixing effects for laser absorption spectroscopy at extreme combustion conditions	2J16: 71MC-0421 Low Temperature Soot Regime of Propane in a Micro Flow Reactor with Controlled Temperature Profile	

	Chemical Kinetics	Turbulent Flames II	Turbulent Flames	Fire	Engines	Laminar Flames	Heterogeneous Combustion	Diagnostics	Micro-Combustion/ New Concepts	
16:40	2A17: 71CK-0298 An Analysis of a Thermal-Chemical Mechanism for Plasma Combustion Instability in Ignition Processes	2B17: 71TF-0341 Correlation between integral length scale and unburned pocket formation in CH4/air premixed turbulent flames	2C17: 71OT-0157 Direct numerical simulation of high-pressure mixing in turbulent jets	2D17: 71FI-0344 Upward Flame Spread over Discrete Thin Fuels	2E17: 71IC-0001 Effect of Mach Number and Low Residence Time on the NOx Emissions produced by a Staged Gas Turbine Model Combustor	2F17: 71LF-0511 Experimental Study on the Influence of Gravity on Highly Diluted and Sooting Methane Coflow Flames	2G17: 71HC-0027 Analysis of the Combustion Behavior of 3D-Printed Aluminum/P VDF Based Energetic Laminates	2H17: 71DI-0216 Modeling a Micro-Reactor with Transonic Regions	2J17: 71MC-0265 Thermodynamic Analysis of Combustible Systems for Power Generation in Deep Space Missions	
17:00	2A18: 71CK-0045 Kinetics Study of Ethanol Oxidation Behind Reflected Shock Waves: Ignition Delay Times, H2O Measurements, and Detailed Kinetics Model Comparisons	2B18: 71TF-0125 On the role of scale separation in the enhancement of burning rates in turbulent premixed flames	2C18: OUT2	2D18: 71FI-0484 Effect of Flow Velocity on Flame Spread along Insulated Electrical Wires	2E18: 71IC-0214 Novel Automotive Emission Reduction and Power Generation through Solid Oxide Fuel Cells	2F18: 71LF-0176 Ion Current and Flame Changes with Electric Fields in Microgravity	2G18: 71HC-0058 Experimental Assessment of HTPB/Paraffin in Fuel Blends for Hybrid Rocket Applications	2H18: 71DI-0380 On the suitability of thermal boundary layer analysis for boundary layer growth in a miniature shock tube	2J18: 71MC-0379 Flame Propagation of Dual-Pulse Laser-Induced Breakdown in a Premixed Methane-Air Flow	
	Day Two Adjourns 17:20									

WEDNESDAY, 27 March 2019

	Chemical Kinetics	Turbulent Flames II	Turbulent Flames	Fire	Engines	Laminar Flames	Heterogeneous Combustion	Diagnostics	Micro-Combustion/ New Concepts	Other
09:20	3A01: 71CK-0441 Effects of Pulsating Flow Field on NO and Radially-inhomogeneous NO ₂ Distribution in a Multidimensional Numerical Investigation of McKenna-driven Flow Tube Configuration	3B01: 71TF-0030 Application of the Damköhler In-Situ Targeted Adaptive Numerical Thermochemistry (DISTANT) Finite-Rate Chemistry Model to Combusting and Dissociating Hypersonic Flows	3C01: 71TF-0198 Experimental assessment of the stability and structure of premixed bluff-body stabilized flames at elevated pressures	3D01: 71FI-0422 A Kinetic Model for Flame Propagation in the Mixtures of Moist O ₂ /N ₂ Oxidizer with Fluorinated Propene Refrigerants (CF ₃ CFCH ₂ , CF ₃ CHCHF, or CF ₃ CHCH ₂)	3E01: 71IC-0444 Detailed soot modeling of mixing controlled compression ignition engines	3F01: 71LF-0436 Propagation and extinction of premixed H ₂ -O ₂ -N ₂ edge-flames in a counter-flow burner	3G01: 71HC-0028 Experiments and Analysis of n-Heptane/Iso butanol Mixture Droplet Combustion	3H01: 71DI-0124 Rayleigh Scattering mixing rate diagnostic technique for enclosed burners	3J01: 71MC-0491 Enabling Tailored Porous Media Burners via Additive Manufacturing	3K01: 71OT-0346 Low Temperature Oxidation of Methylpropyl Ether
09:40	3A02: 71CK-0129 Impact of Vinyllic Radicals + NO on the Formation of Cyanide-Based Species	3B02: 71TF-0066 Assessment of Conditional Source-term Estimation for High-Pressure Turbulent Combustion Modeling	3C02: 71TF-0123 Flame Stabilization Behavior of a Reacting Premixed Jet in a Hot Vitiated Crossflow	3D02: 71FI-0144 A comparative study of moisture evaporation models in the drying and pyrolysis of moist solid fuels	3E02: 71IC-0102 Modeling Pre-spark Heat Release and Low Temperature Chemistry of Iso-Octane in a Boosted Spark-Ignition Engine	3F02: 71LF-0115 Numerical Study of Unsteady Negative Edge Flames in a Periodic Flow	3G02: 71HC-0316 Evaluation of Free-floating Droplet Acceleration in ISS Droplet Combustion Experiments	3H02: 71DI-0577 Filtered Rayleigh scattering of cellular flames in tubular burner	3J02: 71MC-0076 Effects of Dilution and Pressure on Combustion Within Externally Heated Microchannels	3K02: 71OT-0518 Investigation of Combustion Behavior of a Hot Air Balloon Burner

	Chemical Kinetics	Turbulent Flames II	Turbulent Flames	Fire	Engines	Laminar Flames	Heterogeneous Combustion	Diagnostics	Micro-Combustion/ New Concepts	Other
10:00	3A03: 71CK-0581 Branching ratio for $\text{N}_2\text{O} + \text{O} \rightarrow$ Products determined from flow reactor experiments at intermediate temperatures	3B03: 71TF-0085 Assessment of Enthalpy-Based Conditional Moment Closure Models in Predicting Ignition of Lean and Stoichiometric PRF-Air Mixtures with Temperature Inhomogeneity	3C03: 71TF-0503 Analysis of blow-out mechanisms of turbulent swirl-stabilized non-premixed flames	3D03: 71FI-0297 Modeling Flame Merging Behavior of Two Buoyant Flames as a Function of Horizontal and Vertical Separation Distance	3E03: 71IC-0225 NMR Spectroscopy for the Analysis of Real Fuels: A Case Study of FACE Gasoline Fuel	3F03: 71LF-0541 Impact of the Lewis Number on Flame Acceleration at the Early Stage of Burning in Pipes	3G03: 71HC-0043 Theory of Combustion of Normal-Alkane Droplets Supported by Cool-Flame Chemistry	3H03: 71DI-0345 Filtered Rayleigh Scattering Thermometry in Highly Turbulent Premixed Flames	3J03: 71MC-0537 Ignition and Self-Sustained Catalytic Combustion of Methane/Oxygen Mixtures in a Platinum Microtube	3K03: 71OT-0251 Simultaneous Measurement of Concentration and Velocity of High-pressure Hydrogen Releases

	Chemical Kinetics	Fire II	Turbulent Flames	Fire	Engines	Laminar Flames	Heterogeneous Combustion	Diagnostics	Micro-Combustion/ New Concepts	Environmental
11:05	3A05: 71CK-0483 Autoignition experiments and kinetic modeling of selected highly-branched C8–C16 iso-alkanes for surrogate fuels applications	3B05: 71FI-0417 Flame Spread across Materials Commonly Used on Spacecraft at Varied Oxygen and Pressure Levels along the Normoxic Curve in Simulated Microgravity	3C05: 71TF-0195 The effects of resolution on the fidelity of two-dimensional flame surface density measurements in premixed flame subjected to extreme levels of turbulence	3D05: 71FI-0261 Identifying processes controlling ignition of fuel beds by firebrands	3E05: 71IC-0232 A comparison of multiple swirl-venturi lean direct injection combustor configurations for aero gas turbine engines	3F05: 71LF-0573 Modeling of Supercritical CO ₂ -Diluted Oxy-Methane Burning in Micro-channels	3G05: 71HC-0470 Ignition of solid fuels: a new approach to study the time delay	3H05: 71DI-0543 Capturing spatial temperature distributions with broadband single-beam absorption spectroscopy	3J05: 71MC-0131 Hydrocarbon-Fueled Portable Power Generator With No Moving Parts	3K05: 71EA-0480 Numerical investigation of supercritical water oxidation in a hydrothermal flame configuration
11:25	3A06: 71CK-0141 Ignition Delay Times of Gas-to-liquid Jet Fuels Behind Reflected Shock Waves	3B06: 71FI-0317 Effect of char oxidation on near limit flame spread in microgravity	3C06: 71TF-0197 Experimental assessment of the state-space structure of CH ₂ O, CH, and OH within premixed flames subjected to extreme turbulence	3D06: 71FI-0011 Critical Conditions for Ignition of Structural Materials by Piles of Smoldering Firebrands	3E06: 71IC-0400 Radiation modeling for gas turbine relevant conditions	3F06: 71LF-0569 Propagation and Morphology of Supercritical CO ₂ -diluted Oxy-Methane Flames in Obstructed Channels	3G06: 71HC-0070 Understanding the Physical Interpretation of Proper Orthogonal Decomposition and Dynamic Mode Decomposition for Liquid Injection	3H06: 71DI-0014 Simultaneous temperature and concentration measurements using AOM-coupled laser absorption spectroscopy	3J06: 71MC-0351 Rich-burn, Flame-assisted fuel cell, Quick mix, Lean-burn (RFQL) Furnace	3K06: 71EA-0175 Advanced Quality Methods for Thermal Oxidizer Operation

	Chemical Kinetics	Fire II	Turbulent Flames	Fire	Engines	Laminar Flames	Heterogeneous Combustion	Diagnostics	Micro-Combustion/ New Concepts	Environmental
11:45	3A07: 71CK-0412 Experimental and Modeling Study of the Ignition of a Standard Oxygenated Gasoline Fuel	3B07: 71FI-0114 Low-gravity near-blowoff opposed and concurrent flame behavior of burning cotton in parabolic aircraft testing and microgravity drop tower testing	3C07: 71TF-0008 Distributed Turbulent Combustion Studies Using PLIF Diagnostics	3D07: 71FI-0508 Effects of Fuel Morphology on Ember Generation Characteristics at the Tree-scale	3E07: 71IC-0218 The Fuel Sensitivity of Operability Limits in Gas Turbine Combustion	3F07: 71LF-0493 The Role of Wall Conditions in Finger Flame Acceleration in Channels: A Computational Study	3G07: 71HC-0233 H ₂ and CO kinetic coupling during catalytic combustion of syngas/air over palladium oxide	3H07: 71DI-0274 A Novel Two-Color Pyrometry System for Optical Measurements in Flames	3J07: 71MC-0381 Meso/Micro-scale Combustion of Natural Gas for Fuel Cell Applications	3K07: 71EA-0388 Numerical investigation of petroleum and ice interaction based on the Lattice Boltzmann method
12:05	3A08: 71CK-0340 Autoignition behavior of iso-olefins	3B08: 71FI-0497 Temperature and motion tracking of metal spark sprays	3C08: 71TF-0360 Multi-Scalar Measurements of Premixed Flames in Extreme Turbulence Using Raman/Rayleigh Diagnostics	3D08: 71FI-0459 Fire ember pyrometry using a color camera	3E08: 71IC-0383 Nonlinear dynamics of closely spaced thermoacoustic modes in the presence of noise	3F08: 71LF-0435 Computational Simulations of Non-equidiffusive Premixed Combustion in Obstructed Channels with Open Extremes	3G08: 71HC-0399 Partial Oxidation of Methane within an Opposed Flow Reactor with an Embedded Catalyst Mesh	3H08: 71DI-0078 Temperature Calculation of Composite Materials Under Kerosene Flame Attack Using a Multispectral Infrared Camera	3J08: 71MC-0226 Microreactor combustion of simple hydrocarbons	3K08: 71EA-0004 A Case Study of Wildfire/Atmosphere Coupling on Complex Topography

	Chemical Kinetics	Fire II	Turbulent Flames	Fire	Engines	Laminar Flames	Heterogeneous Combustion	Diagnostics	Micro-Combustion/ New Concepts	Environmental
12:25	3A09: 71IC-0010 Universal Ignition Delay Times of Gasoline, Jet Fuel and Diesel	3B09: 71FI-0210 Effects of Pit Geometry on Fire	3C09: 71TF-0259 Flow Visualization of Fire Propagation in Mixed Vegetative Fuel Beds.	3D09: 71FI-0161 Interaction of moisture content, fuel bed structure, and ventilation on the burning rate	3E09: 71IC-0313 Light-round ignition sequences of premixed annular gas turbine combustors	3F09: 71LF-0536 Characteristics of Flames in Quasi-2D Channels: Propagation Rates and Scaling Parameters	3G09: 71HC-0373 Plasma-Catalysis Chemical Looping CH4 Reforming with water splitting Using Ru/CeO2 nano-catalyst	3H09: 71DI-0179 High-Precision Aerosol Phosphor Thermometry with Ce3+ and Pr3+ Co-doped into a Lutetium Aluminum Garnet	3J09: 71MC-0492 Micro-reactor design optimization and manufacturing for studying high temperature unimolecular decomposition of large molecules	3K09: 71EA-0440 Structural analysis of soot generated in a coflow diffusion flame formed using biodiesel, diesel, and diesel-biodiesel blends
	Meeting Adjourns at 12:45									