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Schedule

	Tuesday, June 25	Wednesday, June 26	Thursday, June 27	Friday, June 28
8.00	Workshop registration <i>(Athen)</i>	ECM registration <i>(Athen)</i>	ECM registration <i>(Athen)</i>	
8.50	Welcome from the Organizers	Welcome from the Organizers		
9:00	Topical Workshop: <i>Kinetic studies using laminar flames</i> <i>(Stora salen)</i>	Plenary lecture No. 1 <i>K. Kohse-Höinghaus</i> <i>(Stora salen)</i>	Plenary lecture No. 3 <i>S.M. Frolov</i> <i>(Stora salen)</i>	Plenary lecture No. 5 <i>S. Hochgreb</i> <i>(Stora salen)</i>
10:00		Refreshment <i>(Athen)</i>	Refreshment <i>(Athen)</i>	Refreshment <i>(Athen)</i>
10:30		Posters <i>(Athen)</i>	Posters <i>(Athen)</i>	Posters <i>(Athen)</i>
10.40	Refreshment <i>(Athen)</i>			
12:30		Lunch <i>(Athen)</i>	Lunch <i>(Athen)</i>	Lunch <i>(Athen)</i>
12:50	Lunch <i>(Athen)</i>			
13:30		Plenary lecture No. 2 <i>E. Ranzi</i> <i>(Stora salen)</i>	Plenary lecture No. 4 <i>S. Candel</i> <i>(Stora salen)</i>	Lab tour 1
14:30		Refreshment <i>(Athen)</i>	Refreshment <i>(Athen)</i>	Lab tour 2
15:00		Posters <i>(Athen)</i>	Posters <i>(Athen)</i>	
15.30	Refreshment <i>(Athen)</i>			
16.00	ECM registration <i>(Athen)</i>			
17.00	Welcome reception <i>(Athen)</i>	Meeting of the European Federation of Combustion Sections <i>(Lilla salen)</i>	General Assembly of the Scandinavian-Nordic Section of the Combustion Institute <i>(Lilla salen)</i>	
19.00			Banquet <i>(Stora salen)</i>	

Plenary lectures

PL1

Clean Combustion – Challenges and Research Opportunities for Chemists

Katharina Kohse-Hoinghaus¹; Friederike Herrmann¹; Bernhard Jochim²; Kai Moshhammer¹; Daniel Mayer²; Heinz Pitsch²

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PL2

Lumping Procedures in the Detailed Kinetics of Pyrolysis, Gasification and Combustion of Solid Fuels

Eliseo Ranzi

Politecnico, CMIC Department, Milan, Italy

PL3

Experiments and Numerical Simulation of Deflagration-to-Detonation Transition and Detonations in Gaseous and Two-Phase Systems

Sergey Frolov

Semenov Institute of Chemical Physics, Department of Combustion and Explosion, Moscow, Russian Federation

PL4

Progress in Swirling Flames and Annular Combustor Dynamics

Sebastien Candel¹; Jean-François Bourgoignie¹; Thierry Schuller¹; Daniel Durox¹; Jonas Moeck²

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PL5

On Mixing and Shaking: Structure and Dynamics of Turbulent Stratified Flames

Simone Hochgreb

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Poster session 1

P1-1

Measurements In The Post-Oxidation Zone Of Rich CH₄/O₂/N₂/H₂O Premixed Flames

Thibault Frederic Guiberti¹; Philippe Scoufflaire¹; Nasser Darabiha¹; Thierry Schuller¹; Bernard Labegorre²

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²Air Liquide, CRCD, Les Loges en Josas, France

P1-2

Structure of Premixed Fuel-Rich CH₄/O₂/N₂/CO₂ Flames Stabilized on a Flat Burner at Atmospheric Pressure

Andrey Shmakov¹; Denis Knyazkov¹; Oleg Korobeinichev¹; Tatyana Bolshova¹; Artem Dmitriev¹;

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P1-3

Reduced Kinetic Models for Surrogate Aviation Fuels

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²Princeton University, Mechanical and Aerospace Engineering, Princeton, United States;

³University of South Carolina, Mechanical and Aerospace Engineering, Columbia, United States

P1-4

A Reduced Mechanism for Natural-Gas Fuel in Homogeneous Charge Compression Ignition (HCCI) Combustion Engines

Keyvan Bahlouli¹; Rahim Khoshbakhti Saray²; Ugur Atikol¹

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²Sahand University of Technology, Mechanical Engineering, Tabriz, Islamic Republic of Iran

P1-5

Simulating Combustion in an HCCI Engine by Using Zero Dimensional Stochastic Reactor Model

Usame Demir ; Gokhan Coskun ; Hakan Soyhan

Sakarya University, Mechanical Engineering, Sakarya, Turkey

P1-6

Kinetics and Mechanism of the Reaction of Recombination of Vinyl and Hydroxyl Radicals

Vadim Knyazev

The Catholic University of America, Chemistry, Washington, United States

P1-7

Experimental and Kinetic Modeling Study of 2-butanol Pyrolysis

Jianghuai Cai¹; Wenhao Yuan²; Lili Ye¹; Zhanjun Cheng¹; Yizun Wang²; Lidong Zhang¹; Feng Zhang¹;

Yuyang Li²; Fei Qi¹

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²University of Science and Technology of China, State Key Laboratory of Fire Science, Hefei, China

P1-8

Experimental and Modeling Study of the Structure of Laminar Premixed Flames of Tetrahydrofuran/Oxygen/Argon

Luc-Sy Tran ; Marco Verdicchio ; Pierre-Alexandre Glaude ; Frédérique Battin-Leclerc ; Baptiste Sirjean

CNRS, LRGP, Nancy, France

P1-9

A Kinetic Analysis of CO₂ addition in CH₄/O₂ Combustion

Tony Yuan ; Ting-yiu Liu ; Yo-hsiang Su ; Jyun-wei Huang

National Cheng Kung University, Department of Aeronautics and Astronautics, Tainan, Taiwan

P1-10

A Kinetic Modeling Study of Major Hydrocarbon Products up to Pyrene from Propyne Pyrolysis

George Vourliotakis¹; Marina Braun-Unkloff²; Maria Founti¹

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P1-11

Application of a Two-steps Multi-reaction Scheme for Simulating a Biomass Pyrolysis Process

Giuliano Cammarata ; Giuseppe Petrone

University of Catania, Department of Industrial Engineering, Catania, Italy

P1-12

Method for the Reduction of Kinetics Mechanisms Using Genetic Algorithms

Nejra Sikalo ; Olaf Hasemann ; Christof Schulz ; Andreas Kempf ; Irenaeus Wlokas

University of Duisburg-Essen, Institute for Combustion and Gasdynamics, Duisburg, Germany

P1-13

Kinetic Model for Surrogate Diesel Fuel Comprising n-decane and α -methyl-naphthalene

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P1-14

Model Optimization Based on Reaction Rate Rules

Liming Cai ; Heinz Pitsch

RWTH Aachen, Institute for Combustion Technology, Aachen, Germany

P1-15

Influence of Combustion Chamber Disturbances to Patterns in the Hot Gas Path

Christoph Hennecke ; Dominik Frieling ; Friedrich Dinkelacker

Universität Hannover, Institute of Technical Combustion, Hannover, Germany

P1-16

Effect of Hydrogen on the Stabilization Mechanism of Natural Gas jet-in-hot-coflow Flames

Luis Arteaga Mendez ; Mark Tummers ; Dirk Roekaerts

Delft University of Technology, Department of Process and Energy, Delft, Netherlands

P1-17

Optical Detection of KCl Vapor in 4 MW CFB Boiler During Straw Combustion and Ferric Sulfate Injection

Tapio Sorvajarvi¹ ; Joni Maunula² ; Jaani Silvennoinen² ; Juha Toivonen¹

¹Tampere University of Technology, Physics, Tampere, Finland;

²Metso Power Oy, Metso Power Oy, Tampere, Finland

P1-18

Influence of Thermal Boundary Conditions on Scalar Structure in the Stabilization Region of a Piloted Stratified Turbulent Flame

Thabo Stahler¹ ; Gaetano Magnotti² ; Robert S. Barlow² ; Dirk Geyer³ ; Andreas Dreizler¹

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³Hochschule Darmstadt, Thermodynamik und Alternative Antriebe, Darmstadt, Germany

P1-19

Infrared Cross-sections and Integrated Band Intensities of Propylene at High Temperatures

Et-touhami Es-Sebbar ; Majed Alrefae ; Aamir Farooq

KAUST, Clean Combustion Research Center, Thuwal, Saudi Arabia

P1-20

2-dimensional Tomographic Mapping of OH*-chemiluminescence and Thermal Radiation of Soot in Laminar Diffusion Flames

Nikolay B. Anikin¹ ; Thomas Häber² ; Daniel Schwamberger² ; Rainer Suntz¹ ; Henning Bockhorn²

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²Karlsruhe Institute of Technology, Engler-Bunte-Institute, Combustion Technology, Karlsruhe, Germany

P1-21

Flame Index Measurements to Assess Models of Partially-premixed Combustion

David A. Rosenberg ; Patton M. Allison ; James F. Driscoll

University of Michigan, Department of Aerospace Engineering, Ann Arbor, United States

P1-22

Two-line Atomic Fluorescence Thermometry Using a PIV Seeding System for InCl₃-Hydrate

Atieh Manteghi; Yuri Shoshyn; Nico Dam; Philip de Goey
Eindhoven University, Mechanical Engineering, Eindhoven, Netherlands

P1-23

Laser-induced Phosphorescence Applications in Surface Temperature Measurements of a Porous Media Burner

Ala Jaber¹; Lars Zigan¹; Ahmad Sakhrieh²; Alfred Leipertz¹
¹University of Erlangen, Institute of Engineering Thermodynamics and Erlangen Graduate School in Advanced Optical Technologies (SAOT), Erlangen, Germany;
²University of Jordan, Department of Mechanical Engineering, Amman, Jordan

P1-24

Effects of Transverse Acoustic Forcing on the Vortex Breakdown Zone: Investigation on an Annular Swirling Jet

Aditya Saurabh; Christian Oliver Paschereit
Technische Universität Berlin, Chair of Fluid Dynamics, Hermann-Föttinger-Institut, Berlin, Germany

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Response to Acoustic-Forcing of Laminar Co-flow Jet Diffusion Flames

Robin Chrystie; Suk Ho Chung
King Abdullah University of Science & Technology, Clean Combustion Research Center, Thuwal, Saudi Arabia

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A Study of Filtration Combustion Front Behavior in Porous Media Burner

Junchun Zhang; Leming Cheng; Chenghang Zheng; Zhongyang Luo; Kefa Cen
Zhejiang University, State Key Laboratory of Clean Energy Utilization, Hangzhou, China

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Self-Organizing of the Reactionary Zones of the Energetic Materials and Concept of the Smart Solid Micro-Propulsion System

Alexander Lukin
Western-Caucasus Research Center, Combustion & AeroSpace Propulsion, Tuapse, Russian Federation

P1-28

Pulsating Instability of Magnetic Deflagration in Crystals of Molecular Magnets

Mikhail Modestov; Vitaly Bychkov; Mattias Marklund
Umeå University, Physics, Umeå, Sweden

P1-29

Influence of the Central Recirculation Zone Strength in the Blow off Mechanism Using Different Fuels

Agustin Valera-Medina¹; Nick Syred¹; Anthony Giles¹; Phil Bowen¹; Anthony Griffiths²
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²Cardiff University, School of Engineering, Cardiff, United Kingdom

P1-30

Simultaneous Dual-Plane OH-PLIF and Stereoscopic PIV Measurements of Flame Propagation in a Spark-Ignition Engine

Brian Peterson¹; Elias Baum¹; Benjamin Böhm²; Andreas Dreizler¹
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²Technische Universität Darmstadt, Energie- und Kraftwerktechnik, Darmstadt, Germany

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Combustion and emission of a compression ignition engine fueled with diesel and hydrogen-methane mixture

Zhou Jian Hao; Cheung Chun Shun; Leung Chun Wah
The Hong Kong Polytechnic University, Mechanical Engineering, Hong Kong, Hong Kong

P1-32

Development of the Gradient Combustion Model for Large Eddy Simulation Method in ICE

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Self-ignition and knock in normally aspirated and strongly charged SI engine

Zheng-Yang Ling; Alexey Burluka

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P1-34

Auto Ignition of Diesel Surrogate Fuels Under HCCI Conditions in a RCM: Impact of Cetane Number on Ignition Delay and Heat Release Rate

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Investigations of Operational and Optical Indexes of the Combustion Process for the Multiple Injection Different Strategies in CI-Type Model Engine

Krzysztof Wislocki; Jacek Kazmierowski; Ireneusz Pielecha; Przemyslaw Borowski; Jakub Czajka
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P1-36

Direct Numerical Simulation of PRF70/air Ignition in PPC Engine Conditions

Fan Zhang; Rixin Yu; Xuesong Bai

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P1-37

Combustion LES of a Multi-Burner Annular Aero Engine Combustor

Christer Fureby; Ekaterina Fedina

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P1-38

Experimental Investigation of Combustion Regimes Using a Dual Fuel Strategy

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The Combustion of High-asphaltene Heavy Oil Fuels

Lea-Langton Amanda¹; Keith Bartle¹; Jenny Jones¹; Mohammed Pourkashanian²; Andrew Ross¹;

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P1-40

Numerical Study of Flame Dynamics through a 2D-Lattice of Alkane Droplets in air

Colette Nicoli¹; Pierre Haldenwang²; Bruno Denet²

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²Marseille University, M2P2, Marseille, France

P1-41

A Study of Strategies for Methane Injection in a Direct Injection Spark Ignition (DISI) Engine

Fernanda P Martins¹; Pedro T. Lacava¹; Cláudia R Andrade¹; Francisco J. Souza²

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2D-Mapping of the Droplets Sauter Mean Diameter in a Hollow-cone Spray Using SLIPI-LIF/MIE

Yogeshwar Nath Mishra; Edouard Berrocal; Elias Kristensson; Marcus Aldén
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P1-43

Modeling of a Detonation of Methane-air Mixture

Anatoliy Trotsyuk; Pavel Fomin; Anatoly Vasil'ev

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Department of High-speed Processes, Laboratory of Gas Detonation, Novosibirsk, Russian Federation

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Experimental Investigation on Effects of Strut Injection in Supersonic Model Combustor Equipped with Distributed Cavity Injection of Supercritical Kerosene

MingBo Sun

National University of Defense Technology, Science and Technology on Scramjet Laboratory, Changsha, China

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Promotion of Shock-Induced Detonation of Methane and Acetylene by Halogenoalkanes

Alexander Drakon; Alexander Emelianov; Alexander Eremin

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P1-46

Numerical Study on Backdraft Phenomena

Hui Ying Wang¹; H. Sahraoui²

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Inhibition of Methane-Air and Hydrogen-Air Flames by K₄[Fe(CN)₆] Aerosol

Oleg Korobeinichev¹; Andrey Shmakov¹; Anatoliy Chernov²; Tatyana Bolshova¹

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P1-48

Smouldering Combustion of Soil Organic Matter: Inverse Modelling of the Thermal and Oxidative Degradation Kinetics

Xinyan Huang; Guillermo Rein

Imperial College London, Mechanical Engineering, London, United Kingdom

P1-49

Characterising Particulate Line Losses Through A New Proposed Aircraft Engine Exhaust Sampling System

David Walters¹; Yura Sevcenco¹; Andrew Crayford¹; Mark Johnson²; Richard Marsh¹; Phil Bowen¹

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P1-50

Temperature Effects in Shock Tube Pyrolysis of Benzene-alcohol Mixture

Alexander Eremin; Evgeny Gurentsov; Ekaterina Mikheyeva

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P1-51

Effects of Silica Deposition on the Performance of Domestic Equipment

Sander Gersen¹; Martijn van Essen¹; Pieter Visser¹; Howard Levinsky²; Mikhail Dutka³; David Vainchtein³; Jeff de Hosson³

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P1-52

Soot and Inorganic Particulate Emissions From the Combustion of Agro-pellets in a Domestic Pellet-fired Boiler

Angela Garcia-Maraver¹; Montserrat Zamorano¹; Ulisses Fernandes²; Miriam Rabacal²; Mario Costa²

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P1-53

Soot Measurements in High Pressure Diffusion Flames

Scott Steinmetz¹; Tiegang Fang²; William Roberts¹

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²North Carolina State University, Mechanical Engineering, Raleigh, United States

P1-54

Study of Non-unity Lewis Number Effects in H₂-O₂ Reactive Mixing Layers Using Direct Numerical Simulation

Mohammad Pezeshki; Kai H. Luo

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P1-55

Pdf Modelling of Soot Formation in Turbulent Non-premixed Flames Using Tabulated Chemistry

Michael Stoellinger¹; Dirk Roekaerts²

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²Delft University of Technology, Process and Energy, Delft, Netherlands

P1-56

Multidimensional Flamelet Lookup Tables Using B-Spline Interpolation

Mathis Bode¹; Fabrizio Bisetti²; Nathanial Collier³; Heinz Pitsch¹

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P1-57

Novel Volume Fraction Model for the Large Eddy Simulation of Compressible Turbulent Premixed Flames

Charles Turquand d'Auzay; Ben Thornber

Cranfield University, Department of Engineering Physics, Cranfield, Bedfordshire, United Kingdom

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Dynamic Behavior of Lift and NO formation in Low Swirl Turbulent Premixed Methane-Air Flames

Alexandre Alves¹; Pedro Teixeira Lacava¹; Cristiane Aparecida Martins¹; Lella Ribeiro dos Santos¹;

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P1-59

Large Eddy Simulation of a Meso-scale Combustion Chamber

Vincent Moureau; Pierre Bénard; Ghislain Lartigue; Yves D'Angelo

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P1-60

Numerical Modeling of Selective Non Catalytic Reduction DeNO_x Process

Benjamin Farcy¹; Luc Vervisch¹; Pascale Domingo¹; Nicolas Perret²; Abdallah Abou-Taouk³

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P1-61

Analysis of Swirl Effects on V- to M-shape Bifurcation of Premixed Confined CH₄/H₂/air Flames

Thibault Frederic Guiberti; Daniel Durox; Laurent Zimmer; Thierry Schuller

CNRS, Ecole Centrale Paris, EM2C Laboratory, Chatenay-Malabry, France

P1-62

Large Eddy Simulation in Turbulent Bluff Body Flames Near Lean Blow Off

Erdzan Hodzic; Christophe Duwig; Robert-Zoltan Szasz; Emma Alenius; Laszlo Fuchs
LTH Lund University, Energy Sciences, Lund, Sweden

P1-63

Large Eddy Simulation of a Turbulent Jet Diffusion Flame Using the Flamelet-Progress Variable Model

Jordi Ventosa; Oriol Lehmkuhl; Carles David Pérez-Segarra; Assensio Oliva
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Study of the Autoignition of a Hydrogen Jet in a Turbulent Co-flow of Heated Air Using LES Modelling

Jordi Muela; Jordi Ventosa; Oriol Lehmkuhl; Assensio Oliva
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P1-65

Flame Propagation Behavior of Lean Premixed Burners with Swirling Flow Measured by High-Speed PIV

Masaharu Komiyama; Kenichiro Takeishi; Yohei Ogawa
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P1-66

Multiple Mapping Conditioning – The Concept and its Development

Bruntha Sundaram¹; Leila Dialameh¹; Matthew Cleary²; A.Y. Klimenko¹; Yipeng Ge³

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P1-67

Combustion and Mechanisms for NO_x Formation in Ferrosilicon Electric Arc Furnaces

Balram Panjwani; Jan Erik Olsen
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P1-68

A Comprehensive DNS and Modeling Study of Laminar Premixed Burner-stabilized Flames

Daniel Mayer¹; Nijso Beishuizen²; Heinz Pitsch¹

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²Bosch Thermotechniek B.V., Research & Development, Deventer, Netherlands

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Experimental and Numerical Characterization of H₂/Air Spherically Expanding Laminar Flame at Lean Conditions

Jordan A. Denev; Vlade Vukadinovic; Iliyana Naydenova; Nikolaos Zarzalis; Henning Bockhorn
Karlsruhe Institute of Technology, Engler-Bunte-Institute, Combustion Division, Karlsruhe, Germany

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Effects of Hydrogen Enrichment and Steam Dilution on Methane-air Flames

Moah Christensen; Vladimir A. Alekseev; Elna J. K. Nilsson; Alexander A. Konnov
Lund University, Division of Combustion Physics, Department of Physics, Lund, Sverige

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Non-Premixed Counterflow Flame Simulations: Scaling Rules for Fast Batch Simulations

Thomas Fiala; Thomas Sattelmayer
TU München, Lehrstuhl für Thermodynamik, Garching, Germany

P1-72

Asymptotic Theory for Combustion of Stoichiometric CH₄-CO Mixtures

Rob Bastiaans¹; Alexander Konnov²; Philip de Goey¹

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²Lund University, Dept of Physics, Lund, Sweden

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Structure and NO Emissions From Methane Inversion Diffusion Flames With Cooled Co-flowing Combustion Products

*Chris Barks*¹; *Andrzej Sobiesiak*¹; *Xisheng Zhao*²; *Dale Haggith*³

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²University of Windsor, MAME, Windsor, Canada;

³University of Windsor, MAME, Windsor, Canada

P1-74

Experimental and Numerical Investigation of Laminar Burning Velocity of Fuel/Air/Inert Gaseous Mixtures of Variable Initial Temperature and Pressure

*Venera Giurcan*¹; *Domnina Razus*¹; *Maria Mitu*¹; *Codina Movileanu*¹; *Dumitru Oancea*²

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P1-75

Influence of Heat Transfer on Jet Flame Stabilization

*Sylvain Lamige*¹; *Cédric Galizzi*¹; *Dany Escudé*¹; *André Frédéric*¹; *Manuel Kühni*¹; *Kevin M. Lyons*²

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P1-76

Superadiabatic Combustion in SiC (Silicon Carbide) Tube to Produce Hydrogen from Natural Gas

Pil Hyong Lee; *Hyun Jin Im*; *Sang Soon Hwang*

Incheon National University, Mechanical Engineering, Incheon, Republic of Korea

P1-77

Stress Test of Pilot Unit for Removal of VOCs and CO by Catalytic Oxidation

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The Effects of Hydrogen Addition on the Structure of a Laminar Methane-nitrogen Jet in Hot Coflow Under MILD Conditions

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Numerical Study on Combustion Characteristics of Oxy-fuel Flameless Combustion by Dilution Rate Effects

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Transported PDF Simulations of the Delft Jet-in-Hot-Coflow Burner Based on 4D-FGM Tabulated Chemistry

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Preliminary Design of a Carbon Looping Combustion Process (CarboLoop)

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Experimental Investigation of Characteristic Parameters of Combustion of Natural Gas With Oxygen-Enriched Air

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Emission Characteristics of Hydrogen-Enriched Methane Fuelled Partially Premixed Bluff Body Burner

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Numerical Study of Mechanically-activated Microgrinded Coal Combustion

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Ignition and Combustion Characteristics of Diesel Fuel and Reference Fuels in a Constant Volume Bomb under Diesel-like Condition

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Measurement of Pulverized Coal Char Combustion Rates in Different Diluent Gases: The Influence of Gas Diffusivity

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Functional Materials for Catalytic Combustion

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Atmospheric Generation of Excited Oxygen for Combustion Intensification by a RF Plasma Discharge

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Experimental Investigation of Swirling Effects in Central Air Core on Atomization in an Annular Hybrid Atomizer

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A Combined Modeling and Experimental Study of the Combustion of 1,3 butadiene/butanol

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Poster session 2

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On the Numerical Solution of the Chemical Master Equation

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Effect of Ethanol Addition to Low-pressure, Premixed Flat Acetylene Flames

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Calculations of Initial Mixture Selection for Constant Volume Vessel Combustion

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NO Formation in Premixed CH₄/Air Flames

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Effect of Iron-Containing Species on Autoignition of Dimethyl Ether Mixtures with Air

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A Skeletal Mechanism for Inhibition and Suppression of H₂/O₂/N₂ Flames by Trimethylphosphate Additives

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Oxidation at Low and Intermediate Temperatures of Alkyl-benzene and Alkyl Cyclohexane Compounds in a Jet-stirred Reactor

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An Experimental and Modeling Investigation of the Low Temperature Oxidation of the Isomers of Hexane

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Ozone-assisted Combustion in a Turbulent Low-swirl Flame Studied With OH and CH₂O Planar Laser-induced Fluorescence and Combustion LES

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Methane Conversion at Elevated Pressures and Effects of Propene as Additive: Experiment and Simulation

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Experimental and Kinetic Modelling Study of n-Butanal Auto-ignition in a Shock Tube

*Matteo Pelucchi*¹; Chiara Saggese¹; Alessio Frassoldati¹; Tiziano Faravelli¹; Eliseo Ranzi¹; Kieran P. Somers²; Ultan Burke²; Henry J. Curran²; Kenji Yasunaga³
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The Study of Octane Appetite and Fuel's Anti-knock Performance

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Influence of the Ammonia in the Gaseous Fuel on the Production of NOx

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Reaction Models for iC10H22 and i-C11H24 Oxidation

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Mixture Preparation of Gasoline Partially Premixed Combustion Mode

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Evaluation of Equivalence Ratio Measurement Using OH* and CH* Chemiluminescence in Premixed N-butanol/Air Counterflow Flames

Dimitrios Katsikidakos; Georgios Charalampous; Yannis Hardalupas; A.M.K.P. Taylor
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High Precision Temperature Measurements of 'Charge Cooling' in an Optical-access GDI Engine With Laser Induced Gratings

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A Comparison of Different Organic Tracers for LIF Imaging in Gases: Photophysical Properties and Their Impact on Use in Quantitative Scalar Imaging

Stephan Faust; *Martin Goschütz*; Sebastian A. Kaiser; Thomas Dreier; Christof Schulz
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Time-Domain Based Absorption Spectroscopy: A Comparison of ns- and ps-Pumped Supercontinuum Sources for IC Engine Applications

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Calibration of Acetone as Tracer for Planar Two-line Laser-induced Fluorescence Measurements Under High Temperature and Pressure

Johannes Trost ; Susanne Lind ; Lars Zigan ; Stefan Will ; Alfred Leipertz

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Investigation of Photofragmentation Laser-induced Fluorescence Based on Picosecond Laser Pulses

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Detection of Naturally Occurring Flame Ions Using a High-temperature Atmospheric Pressure Interface Coupled to ToF Mass Spec

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Development of Single-shot CN PLIF Imaging in Premixed Turbulent Flames Using an Alexandrite Laser System

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Numerical Investigation of the Laminar Flame Perturbation by a Sampling Nozzle

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Diagnostics of Combustion Instability in a Model Gas Turbine Swirl Combustor

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Stability Ranges of Fully and Partially Premixed Syngas Flames

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Pseudo-combustion Instabilities of Doping Fronts in Organic Semiconductors

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Numerical study of heat transfer and flame stabilization of laminar premixed flames anchored to a heat-flux burner

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Combustion Stability of Low Emission Combustion System: Flame Transfer Function Approach

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Instabilities in a Confined Flat-flame System

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Characteristics of Heat Release in 3D-highly Porous Reactors as Compared to Free Diesel Injection Conditions

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Two-zone Thermodynamic Model for Predicting Knock in Spark Ignition Gas Engines

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OH*-Chemiluminescence of Hydrogen Autoignition in a Pressurised Flow-Reactor

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A Comparison of Various Models of the Influence of Turbulent Fluctuations in the Local Mixture Fraction Ratio on Burning Rate in a Partially Premixed Flame

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Large-Eddy Simulation of the MERCATO Combustor

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Influence of the Swirler Design on the Combustion Behavior of Prevaporized Liquid Fuel

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Experimental Investigation of Low Octane Fuel Composition Effects on Load Range Capacity in Partially Premixed Combustion

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Large Eddy Simulation of an IC Engine: An Approach for Moving Boundaries in IC Engine Simulations

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Impact of HVOs on the Emissions of a Modern Vehicle and a Common-Rail Diesel Engine

Marina Kousoulidou; Stavros Amanatidis; Elias Saltas; Athanasios Dimaratos; Zisis Samaras

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Flame Structure of Ethanol-air Premixed Mixtures at High Pressures in Microgravity

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Experimental Investigation into n-hexane Injection and Auto-ignition in a Rapid Compression Machine

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LES-CMC of a Dilute Acetone Spray Flame With Pre-vapor Using Two Conditional Moments

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Effect of Multiple Hydroxyl Groups on Flame Temperature Profiles and NO_x Emissions

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Mechanisms and Regimes of Ignition by Transient Energy Deposition

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Influence of Methane Addition on Spontaneous Ignition of Hydrogen Jets in Air

Wojciech Rudy; Andrzej Dabkowski; Rafal Porowski; Urszula Niedzielska; Andrzej Teodorczyk

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Experimental and Numerical Investigation of Transient Variable-density Free Jets

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Combustion Oil Layer on the Surface of Water

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Mathematical Modeling of Crown Forest Fires Spread Taking Account Fires Breaks

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A Gas-Particle Mixture Generator for Fire-Extinguishing Purposes

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A Comprehensive Modeling Study of Soot Formation from Different Fuels

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Characterization of Polycyclic Aromatic Hydrocarbons (PAH's) Formation in Farnesane-Kerosene Wick-Fed Diffusion Flames

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A Laser-Based Study of Soot Properties during Soot Growth in a Premixed Ethylene/Air Flame

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An Automated Method to Compare the Relative, Instantaneous Distributions of Soot and OH Sheets From Simultaneous Laser Imaging in a Turbulent, Buoyant Flame

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Comparison of the Regulated and Non-regulated Emissions from Diesel and Water-in-Diesel Microemulsion Fuels

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Experimental and Numerical Study of the Evolution of Soot Particle Size Distributions in Premixed C2 Hydrocarbon Flames

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High Speed LIF-OH imaging in Turbulent Inhomogeneous Partially Premixed Flames

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Validation of Numerical Simulations for a Residential Wood Log Stove

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Large Eddy Simulation of Turbulent Premixed Flames in the Framework of SGS Model Based on Coherent Structures

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Large Eddy Simulation of a Bluff Body Premixed Propane Turbulent Flame

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LES of a Piloted, Non-premixed Turbulent Flame Using Eulerian Stochastic Fields and RCCE-ANNs Chemistry Tabulation.

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Comparison of Different Assumptions for Tabulated Chemistry Based on Laminar Igniting and Extinguishing Diffusion Flamelets

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Experimental Study of Spark Ignition in Turbulent Non-Premixed Flows by the Measurement of Velocity and Mixture Fraction Fields

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Turbulent Flame Speed for Ethanol-iso Octane Mixtures

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Finite Rate Chemistry Modelling of a Partially Premixed Swirling Flame

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Large Eddy Simulation of Turbulent Premixed Combustion

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Turbulent Flame Speed as an Indicator for Flashback Propensity: An Example for Wet Gas Turbine Applications

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High Speed Combustion in Confined Hydrogen/Methane Mixtures

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Simulation of Swirl Combustion in a Closed Vessel

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RANS Simulations of Confined Preheated Lean Methane/Air Turbulent Flames Under Elevated Pressures

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Simulation and Analysis of Premixed Flames as Gasdynamic Discontinuities in Pseudo-Turbulence

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Modification of Soot Production inside Laminar Diffusion Flames by Static Non-Uniform Magnetic Fields

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A New Methodology to Incorporate Differential Diffusion in CFD Simulations of Reactive Flows

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Mild/Oxy-fuel Combustion of a Model Biogas from a Low Temperature Biomass Pyrolysis Process

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Jakub Bibrzycki; Anna Katelbach-Wozniak; Magdalena Niestroj; Andrzej Szlek

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How Important is the Ipso Addition of OH to Methylated Benzenes?

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Study of Effect of Methyl Pentanoate Addition on Formation of PAH Precursors in a n-Heptane/Toluene Flame

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Oleg Korobeinichev¹; Sergey Yakimov¹; Denis Knyazkov¹; Andrey Shmakov¹; Tatyana Bolshova¹;

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An Experimental and Kinetic Modeling Study on Premixed Methylcyclohexane Flames at Low Pressure

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A Chemical Mechanism for Oxidation of Dimethyl Ether (DME)

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An Experimental and Modelling Study of Acetone Oxidation and Pyrolysis

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A Shock Tube and Rapid Compression Machine Study of Methanol Oxidation at High Pressures

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Volumetric Velocimetry in Lifted Turbulent Premixed Low-swirl Flames

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Some Issues in Chemiluminescence-based Flame Stoichiometry Sensors

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Nader Karimi; *Epaminondas Mastorakos*; *Ann Dowling*

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Experimental Study of the Control of HCCI Combustion by Ozone Addition

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Comparison Between Nanosecond Discharges Generated by Plasma Igniter and Standard Spark Ignition in a Real Commercial SI Engine

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Examining Heat Transfer Process of DFI Combining LIF Measurements of Hydroxyl Radicals and Heat Flux Measurements

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Large Scale and Intermittent Combustion

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A Comparative Study of the Influence of Reduced Mechanisms on LES Predictions of a Lean Stratified Premixed Low-Swirl Flame

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Hybrid Transported-tabulated Strategy to Downsize Detailed Chemistry for Numerical Simulation of Flames

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On the Physico-Chemical Effects in a Generic Steady-State Scramjet Combustor: Experiment and CFD

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Flame Dynamics of Swirling Non-Premixed Hydrogen-Carbon monoxide Syngas Flames

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Numerical Analysis of Flame Surface Density, Flame Normal and Flame Index in Syngas Non-premixed Impinging Flames

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Experimental Investigations of the Impact of Equivalence Ratio Oscillations on a Bluff Body Flame

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DNS of Hydrogen Impinging Jets at Different Nozzle-Plate Distances

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Measurements and Analysis of a Compressible, Turbulent Premixed Flame Using Decomposition Techniques and Large-Eddy Simulation

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Quantifying with DNS the Influence of Dilution and Temperature Heterogeneity on Early Flame Propagation and on Cyclic Variability in Lean-Burn Spark-Ignited Engines

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Adaptation of the Heat Flux Method for the Measurement of Adiabatic Laminar Burning Velocities of Liquid Fuels

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Break-down of the Linear Velocity-stretch Relationship in Slender Jet Premixed Flames of Methane – Air Mixtures

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Asymptotic Study of the Transition from Slow to Fast Burning in Narrow Channels

Leonid Kagan; *Gregory Sivashinsky*

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Experimental and Numerical Study of Steam-Enhanced Regime of Liquid Hydrocarbon Fuel Combustion in a Pilot Burner

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Self-similar Chemistry Tabulation of Multi-component Fuel Premixed Flamelets Including Filtering Effects

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High Speed OH-PLIF Imaging In Inverse Diffusion Flames

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Numerical Simulation of the Influence of Partial Premixing on the Propagation of Partially Premixed Flames

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Collaborative Study for Accurate Measurements of Laminar Burning Velocity

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*Fokion Egolfopoulos*³; *Fabrice Foucher*⁴; *Fabien Halter*⁴; *Christine Mounaim-Rousselle*⁴; *Bruno Renou*⁵;

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Numerical Simulation of Lifted Tribrachial n-Heptane Laminar Flames in Heated Coflow

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Numerical Investigation Towards a HiTAC Condition in a 9MW Heavy Fuel-oil Boiler

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Diluted Combustion for Reduced NO_x-emissions and Increased Energy Efficiency in Regenerative Glass Melting Furnaces

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Turbulent Spray Combustion of Ethanol and Acetone Flames in Flameless Conditions

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Pressure Effect on the Flame Stabilization in Porous Inert Media at Ultra Lean Conditions

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Pressurized Oxy-fuel and Air-fired Combustion of Lignite and Hard Coal at Flexible Change of Combustion Regime

Janusz Lasek; Jaroslaw Zuwala; Krzysztof Glód

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Utilization of Sulfate Additives in Biomass Combustion: Fundamental and Modeling Aspects

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Oxy-fuel Combustion Characteristics of Pulverized-coal in a Drop Tube Furnace

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Low-Rate Regime For Porous Carbon Particle Combustion In Air

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High Ash Coal Pyrolysis and Gasification Studies in Argon, Steam and Air Ambience for Syngas Production

Jayaraman Kandasamy; Elisa Bonifaci; Nazim Merlo; Iskender Gökalp

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Release of Alkali Metals During Biomass Gasification

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Effect of Blending of Hexanol and Naphthenic Cut on Combustion Characteristics of Fisher Tropsch Synthetic Paraffinic Kerosene

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Combustion Knowledge Base: Future of Combustion World

Victor Abruikov; *Elena Karlovich*; *Sergey Abruikov*

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HO₂ Measurement by Nozzle Sampling and cw-CRDS

Mokhtar Djehiche ¹; N. Linh Le Tan ¹; Alexandre Tomas ²; Patrice Coddeville ²; Laure Pillier ¹; Mahmud Idir ¹; Christa Fittschen ³; Guillaume Dayma ¹; Philippe Dagaut ¹

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Study on the Influence of Lubricant on Auto-ignition in Fuel/Air Mixtures

Marc Werler; Max Magar; Robert Schiessl; Ulrich Maas

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High-Speed Camera Visualization of Mixing in Jet-Stirred Reactors with Different Geometries

Wassim W. Ayass; S. Mani Sarathy

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Shock Tube Investigation of Decomposition of Cyclohexene at High Temperature

Bo Shu; Mohammad Aghsaee; Mustapha Fikri; Christof Schulz

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A High-repetition-rate Time-of-flight Mass-spectrometry Study of 3-pentanone Pyrolysis and Oxidation Behind Reflected Shock Waves

Mohammad Aghsaee; Bo Shu; Mustapha Fikri; Christof Schulz

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Ready - a Reactive Dynamic Simulation for Hydrogen Combustion

João Brandão; César Mogo

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Synergy between Nitrogen Oxides and Soot Precursors: Influence on Pollutants Emissions

María Abián; Eduardo Peribáñez; Ángela Millera; Rafael Bilbao; María U. Alzueta

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Some Observations of the Combustion Chemistry of C1-C2 Oxygenated Fuels in Laminar Premixed Flames

George Vourliotakis; George Skevis; Maria Founti; Anna Gazi

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Influence of the Oxygen Presence on PAH and Soot Formation from Acetylene Pyrolysis

Nazly E. Sánchez; Alicia Callejas; Ángela Millera; Rafael Bilbao; María U. Alzueta

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Tars from Biomass Gasification: Kinetic Studies of Combustion of Anisole

Milena Nowakowska; Olivier Herbinet; Anthony Dufour; Pierre-Alexandre Glaude

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Reduction of a Detailed Chemical Reaction Mechanism for Chemical Vapor Deposition (CVD)

Vlatcheslav Bykov; Ulrich Maas

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Theoretical Kinetic Study of the Low Temperature Reactions of Hydroxyalkylperoxy Radicals (HOROO)

*Juan Lizardo-Huerta*¹; *Baptiste Sirjean*²; *René Fournet*¹; *Roda Bounaceur*²

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Comparison of the Performance of Several Recent Hydrogen Combustion Mechanisms

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Optimization of a Hydrogen Combustion Mechanism

Tibor Nagy; *Carsten Olm*; *István Gy. Zsély*; *Tamás Varga*; *Róbert Pálvölgyi*; *Éva Valkó*; *Gergely Vincze*; *Tamás Turányi*

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Range-Resolved Detection of Potassium Chloride (KCl) Using Picosecond Differential Absorption Lidar (DIAL)

Billy Kaldvee; *Tomas Leffler*; *Christian Brackmann*; *Andreas Ehn*; *Marcus Aldén*; *Joakim Bood*
Lund University, Physics department, Lund, Sweden

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Correlation Between the Primary Break-up of Liquid Jets and Downstream Spray Characteristics in Air-blast Atomizers

Constantinos Hadjiyiannis; *Srikrishna Sahu*; *Georgios Charalampous*; *Yannis Hardalupas*; *Alex Taylor*
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Assessment of a Fast Electro-optical Shutter for Spontaneous Raman Scattering in Flames

Amath Lo; *Hassan Ajrouche*; *Pierre Vervisch*; *ARMELLE CESSOU*

CORIA CNRS Université & INSA de Rouen- Normandie Université, Combustion, St Etienne du Rouvray, France

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Chemiluminescence Sensor for Temporally Resolved CH^{*}/CO₂^{*} Measurements Coupled with Planar Heat Release Rate Imaging

Markus Roeder; *Thomas Dreier*; *Christof Schulz*

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A New Evaluation Concept for Phosphor Thermometry Based on Shape Matching of Decay Curves

Kristin Pfeiffer; *Christoph Knappe*

Lund University, Division of Combustion Physics, Lund, Sweden

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Development of a Noise Generator Dedicated to Direct and Indirect Combustion Noise Separation

Wenjie Tao; *Franck Richecoeur*; *Sébastien Ducruix*; *Thierry Schuller*

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Laser-diagnostic Investigation of Ammonia-seeded Premixed Methane-air Flames

Christian Brackmann; *Bo Zhou*; *Zhongshan Li*; *Marcus Aldén*

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Collisional Broadening Measurements of Selected CO and Acetylene NIR-transitions for Major Pertubers in Combustion Processes

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Investigation on the Ignition Sensitivity of 2-MTHF, Heptane and di-n-butylether

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Simultaneous One-dimensional Fluorescence Quantum Yield Measurements of OH and CO in a Premixed Flame

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²Lund University, Physics, Lund, Sverige

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Assessment of Multiple Acoustic Waves Effects on Turbulent Premixed Flames

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Combustion Instability of Paraffin Propellant Grain

Genivaldo Pimenta Santos; *Pedro Teixeira Lacava*

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Experimental and Numerical Study of Limit-cycle Thermoacoustic Oscillations in a Gas Turbine Model Combustor

Michael Stöhr; *Wolfgang Meier*

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Experimental Investigation of Instabilities in Natural-gas/air and Oxy-fuel Flames Under High Pressure Using High Speed Simultaneous PIV/OH* Chemiluminescence

Bhavin Kapadia; *Peter Kutne*; *Isaac Boxx*; *James Gounder*; *Wolfgang Meier*; *Manfred Aigner*

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Thermo-acoustic Transfer Function of Flames Embedded in Porous Media

Wendy Vroemen; *Viktor Kornilov*; *Philip de Goey*

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Phase-locked PIV Measurements of Thermo-acoustic Instabilities in a Backward Facing Step Combustor

Ramgopal Sampath; *Shreenivasan Obla*; *Satyanarayanan Chakravarthy*

Indian Institute of Technology Madras, Department of Aerospace Engineering, Chennai, India

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Comparative Analysis of Supercharged Modes in a Hybrid Pneumatic Combustion Engine

Shadi Saboji; *Christian Caillol*; *Pascal Higelin*

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Experimental and Modelling Studies of Auto-Ignition and Soot Formation of Diesel Surrogate Fuels

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Impact of Flame Stretch Sensitivities on the Turbulent Flame Speed in Spark-ignition Engines

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**The Effect of Umbrella Angle on Mixing Preparation in a Light Duty PPC Engine:
A Large Eddy Simulation Study**

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Modeling Study of the Possibility of HCCI Combustion Improvement via Photochemical Activation of Oxygen Molecules

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Evaluation of Tracer Combinations for Multi-parameter Laser-induced Fluorescence Measurements at IC Engine Conditions

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Hydrocarbon specification of Exhaust Gases from a Gas Turbine Engine Using Conventional and Alternative Aviation Fuels

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Numerical Simulation of Flame Front Propagation in a Spark Ignition Engine

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A Micro Gas Turbine Combustor for the Use of Product Gases from Biomass Gasification

Timo Zornek; *Thomas Monz*; *Manfred Aigner*

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Experimental Characterization of Ethanol Pulsed Spray Flames on an Open Swirler Burner

Newton Fukumasu; *Guenther Krieger Filho*; *Jurandir Yanagihara*

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Combustion of Single Aluminium Droplet in Non-uniform Flowfield

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LES of the Sydney Piloted Spray Burner

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Simultaneous Application of the Optical Connectivity Method and Near Field Spray-Shadowgraphy for the Investigation on the Break-up of Diesel Spray

Max Kaiser; *Ansgar Heilig*; *Friedrich Dinkelacker*

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The Effects of Thermal Equation of State on the Afterburning of TNT at Different Heights of Blast

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Experimental Investigation on Combustion Performance of Heated Kerosene in Supersonic Flow

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Controlling combustion, Explosion and Detonation of Gases by Kinetic Methods

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Effects of Reduced Chemical Kinetics in Deflagration to Detonation Transition

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Heat Flux Measurements for Laminar Premixed Ethanol/air Flames Using Thermographic Phosphor

Mohammed Mohammed; Ulf Bergmann; Burak Atakan

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Experimental study on fire spread and burning behavior of oil spills on water

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Experimental and Kinetic Modeling Study of PAH Formation in Coflow Diffusion n-butanol Doped Methane Flames

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Experimental Investigation of Soot Formation and Oxidation in Non-stationary Turbulent Flames in Technical Combustion Chambers

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On the Mechanism of Flame Synthesis of Iron Oxide Nanoparticles

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Experimental Study on the Sooting Tendency of Diesel and Gasoline Surrogate Hydrocarbons in Laminar Diffusion Flames

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New Phenomenological Model of Temperature Dependence of Carbon Nanoparticle Formation in Shock Wave Pyrolysis Processes

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LES of LO_x/CH₄ Mixing and Combustion Under Supercritical Conditions

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Validation of Tabulated Non-Premixed Combustion Models with Direct Numerical Simulation Including Detailed Chemistry Solving

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On the Alignment of Flamelet Normals with the Principal Compressive Strain-Rate of the Turbulent Flow Field

Thomas Sponfeldner¹; Frank Beyrau¹; Isaac Boxx²; Yannis Hardalupas¹; Wolfgang Meier²; A.M.K.P. Taylor¹

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Cross-checking of procedures for interface characterization in the context of MultiSEctioning strategy.

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Direct Numerical Simulation of Multi-component Fuel Mixture Combustion With Detailed Chemistry

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Characteristics of Acoustic Fluctuations Associated With Premixed Turbulent Bluff Body Stabilized Flames

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Large-Eddy Simulation of a Piloted Premixed Jet Burner

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Assessment of a Simple Model for Evaluating Turbulent Scalar Flux in Premixed Flames against DNS Data

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Flame Speed Analysis in a Methane/Air Low Swirl Premixed Flame

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Source Term Parameterization for PCA Combustion Modelling

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A Transport Equation for Flame Turbulence Interaction in Premixed Turbulent Combustion

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Simulations of Stationary Combustion of Cryogenic Propellants in Rocket Combustion Chamber with Porous Injector Head

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Numerical Simulation of Non-premixed, Turbulent Hydrogen-air Flame Using an Extension of the Linear Eddy Mixing Model

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Large Eddy Simulation of a Bluff Body Stabilized Lean Premixed Flame

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Burning Velocities of Rich Near-limiting Flames of Hydrogen

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Effect of Curvature on Flamelet modeling of Char Burnout

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Effects of Resolution and Frame Rate on the Determination of Laminar Flame Speed Using Propagating Spherical Flames

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Effect of Oxygen Fraction in Ambient Coflow on Combustion Characteristics of Diffusion Microflames

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Measurement of Laminar Flame Speeds of Low Calorific Value Fuels Using a Flat Flame Burner and the Direct Shadowgraph Method

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Stabilization of a Sub-limit Lean Premixed Flame by Centralized-microwave Burner

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Computational Study on the Stability of Lean CH₄-Air and H₂-CH₄-Air Laminar Premixed Flames

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Flame Structure Analysis of Oxygen-enhanced Non-premixed Flames

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Measurements and Numerical Study of Laminar Burning Velocities of Iso-octane and Ethanol Blends

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MILD Combustion of Pulverised Coal in a Recuperative Furnace

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Effect of Air Preheating Temperature on Flameless Combustion of Low Calorific, Alternative Fuels

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Turbulence-Chemistry Interactions in MILD Combustion

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FT-IR Measurements Performed at the Exhaust of a Meso-scale Combustor working at 0.1 and 0.3 MPa

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Chemiluminescence Imaging in a 5 MW Pilot Facility for the Development of Advanced Ultra-Low NO_x Burner

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Simulation of Wood Logs Combustion in a Stove at Peak Pyrolysis Conditions

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Lumped Kinetic Scheme for Homogeneous Reactions of Volatiles and Tar from Biomass and Wastes

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Computational Fluid Dynamic Simulation of Wooden Biomass Combustion

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Experimental and Numerical Investigation of the Catalytic Fuel-rich / Gaseous Fuel-lean Combustion of Hydrogen/air Mixtures

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Modelling of Heterogeneous Combustion Process of Biomass

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The Dimension of Low-dimensional Manifolds in State Space: Study Using DNS Data

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Numerical Investigation of the Pore Size Distribution Influence on CO Conversion at Pt based Surfaces in Automotive Applications

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A Tool for Automatic Mechanism Reduction and Optimization Using Chemistry Guided Reduction and Sensitivity Analysis

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Comparison of the Performance of Several Recent Wet CO Combustion Mechanisms

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Hydrogen/Oxygen Reactions at High Pressures and Intermediate Temperatures: Flow Reactor Experiments and Kinetic Modeling

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Chemical Kinetics Reduction Using a RCCE-CSP Methodology. An Application to Laminar Premixed Propane-air Flames

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Parallel Computing of Chemical Reactions on Graphic Processing Units

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Kinetics Development for the P₂O₃/P₂O₅ -catalyzed Pyrolysis of Acetic Acid to Ketene Formation

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Plasma Assisted Ignition Inside an RCM

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Experimental and Modeling Studies of Rich Benzene/O₂/Ar and Benzene/Ethanol/O₂/Ar Flames at Low Pressure

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Laminar Burning Velocities of Methanol Under Oxy-fuel Conditions

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Automatic Mechanism Generation Using Pathways: Comparison with Hand-generated Hexadecane Mechanism

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An Experimental Study of THF Autoignition in a Rapid Compression Machine

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Experimental Study of Atmospheric Laminar Sooting Premixed n-butane Flames

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Evaluation of the Influence of Thermodynamic Data for Propane and Propene Ignition Delay Time

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Experimental Investigation on Auto-ignition of Acetone

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Flow Field Measurements of Pulverized Coal Combustion in Oxyfuel Condition Using Laser Diagnostic Techniques

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Laser Induced Ignition of Methane Free Jets

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Evidence of Time Interferences in Vibrational CARS at Low Temperatures

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Absorption Measurements in Atmospheric Flat Flames with Fiber Laser Intracavity Absorption Spectroscopy

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Characterization of a Laser Based Sensor System for Online Fuel Gas Composition Measurements and First Tests at a Marine Engine

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Evaluation of Combustion Models for Efficiency of Refinery Furnaces

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Gas Phase Phosphorescence Thermometry Applied in Free Air Jet and Pressurized Test Cell

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Use of Thermographic Phosphors for Simultaneous Velocity, Temperature and Mixture Fraction Imaging

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Flame Stability Characteristics of the Hydrogen-Methane-Carbon Dioxide Mixtures

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Experimental Investigation of Flashback in a Gas Turbine Model Combustor

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Experimental and Numerical Investigation of Combustion Instabilities in Swirl-stabilized Flames Operated in Partially-premixed Mode

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Experimental Investigation of Intrinsic Flame Stability

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Combustion Instability in a Lean Premixed Low-swirl Combustor with Mixture Inhomogeneity

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Premixed Flame Response to Transverse Sum-of-Sines Forcing

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Effect of the Fuel Staging on the Flame Shape in a Staged Liquid-fueled Burner

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Influence of Combustion Cyclic Variations on Pollutant Formation in Gasoline Internal Combustion Engines

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Cold Flow CFD Simulation of Micro Turbine

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Auto-ignition and Combustion Characteristics of N-butanol Triggered by Low- and High-temperature Reactions of Premixed N-heptane

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Analysis of a Co-Flowing Fuel Injection with a Concentric Carrier-Air Inlet in Autoignition Driven Combustion Chambers

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Endoscopic Imaging of Early Flame Propagation in a Near-production Engine

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Evaluation of Different Combustion Models for System Simulation Modeling of Spark Ignition Engines

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Validation of Flamelet and Multi-zone Combustion Models for Direct-Injection HCCI Engines

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On the Performance of Biodiesel Blends – Experimental Data and Simulations Using a Stochastic Fuel Test Bench

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Large Eddy Simulation of n-Heptane Partially Pre-Vaporized Turbulent Spray Flame Using FGM

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Turbulent Ethanol Spray Combustion Flame Simulation Applying Non-Premixed Model and Simplified Chemical Mechanism

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Characterization of Droplet Size Distribution for a Gas Turbine Pressure Swirl Nozzle

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Flame Acceleration and Transition to Detonation in Gas-Particle Mixtures

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Large Eddy Simulation of Turbulent Detonations

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Bifurcation Structures of Gaseous Detonation in Multifuel Systems

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Validated CFD Simulation of Flame Temperatures of a Multiple N-heptane Pool Fire

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Simulating the Near-Wall Flame Extinction for Gas Engine Application

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Joint LIF/LII Measurements in Sooting Swirl Flames to Improve Understanding of Soot Formation

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High-Fidelity Simulations of Sooting Diffusion Flames Using the Method of Moments with Interpolative Closure

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Effects of Turbulent Mixing on Soot Formation and Growth in Nonpremixed Jet Flames

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Soot and Nanomaterials Synthesis in the Flame

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Effect of Synthesis Conditions on the Content of Polycyclic Aromatic Hydrocarbons on Carbon Black Nanoparticles

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Scalar Dissipation Rate Transport in the Context of LES of Premixed Turbulent Flames: A DNS Analysis

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A-priori DNS Modelling of the Strain Rate Term of the Flame Surface Density Transport Equation in the Context of LES

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Temperature Measurements of the Bluff Body Surface of Cambridge-Sandia Stratified Swirl Burner Using Phosphor Thermometry

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Large Eddy Simulations of a Natural-Gas-Fired Large-Scale Laboratory Furnace

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Hybrid LES-RANS Transported PDF Method for Non-premixed Methane / Air Flames Using Different Chemistry Mechanisms

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Quenching of Premixed Turbulent Flames in Curved-Wall Jet Burner

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Rayleigh Scattering Temperature Measurements in a Swirl Stabilized Burner

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Effects of Oxygen Enrichment on Stability and Pollutant Emissions of Turbulent Non-premixed Swirling Flames

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Turbulent Non-premixed Counter-flow Syngas-air Flames Structure and Emissions

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Numerical Studies of Turbulent Flame Speed for Premixed Hydrogen-air Flames at Elevated Pressures

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Effects of Chemistry Reduction on a Turbulent and Sooting Propane Flame

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The Effect of Modulation of the Inlet Velocity and Equivalence Ratio Gradients on the Stabilization of Stratified Axisymmetric Bluff-Body Flames

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Measurement of Joint Temperature-Volume Fraction Statistics of Soot in Turbulent Non-Premixed Jet Flames

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LES of a Lean Premixed Stratified Flame Exposed to Different Shear Conditions in the Upstream Mixing Layer

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Dynamic Effects of Burned Gas Recirculation on NO_x Emissions From Natural Gas–H₂–Oxygen Flames in a Burner With Separated Jets

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The Internal Structure of a Flame Front and Combustion Constants

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Conjugate Heat Transfer Simulations of Perforated Plate Burners Using Flamelet Generated Manifolds

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Combustion Wave Propagation in H₂–O₂ Mixtures: Basic Principles and Some Kinetic Aspects

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Experimental Study of Kinetics of Carbon Particles Formation in the Pyrolysis Flames

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Experimental study of Radiation Absorption on Laminar Flame Speed of CO₂ Diluted Methane Flames at Elevated Pressure

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Absolute CH* and OH* Chemiluminescence Measurements from Pre-Mixed Methane/Air Flames in a Constant Volume Combustion Bomb

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Laminar Burning Velocities of Gasoline Alternative Fuels for Increased Gas Temperatures

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Numerical Investigation of a 5,4 kW Flameless Furnace

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Numerical Comparative Study of Heat Transfer in Flameless and Conventional Combustion in a 30 kW Furnace

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Mathematical Analysis of Stabilized Cool Flames Using Detailed Reaction Mechanisms

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Numerical Prediction of Burning Velocity and Flame Thickness in a Radial-flow Porous Burner

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Basic Studies on the Development of Micro Combustion Systems for Biomass

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Experimental Measurements and Attempt of Modeling Using CeSFaMB Software of the Product Gas Components on the 2MW Gasifier Plant

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Experimental and Theoretical Study of Thrust Characteristics of Novel MEMS Microthruster on Solid-Fuel Mixtures

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Spark Ignition of Flowing Kerosene Jet-A1 – Air Mixtures at High Altitude Relight Conditions

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Eulerian-Lagrangian Simulation of Wood Gasification in a High-temperature Entrained Flow Reactor

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Influence of the Interaction of Components on the Behavior of Arundo Donax Steam Assisted Pyrolysis

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Experimental Investigations of Ignition Delay Times of DME at High Pressures

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Flame Propagation Through Stratified Mixtures

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Experimental and Numerical Investigation of the Interaction of Catalytic Recombiners with Carbon Monoxide-Hydrogen-Air Mixtures

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Tabulation Strategies for Simplified Chemistry in Combustion: Adaptively Refined and Equidistant Approach

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