

**List of preliminary accepted papers**  
*International Conference on Combustion Physics and Chemistry*  
*(Samara, Russia, 24-28 July, 2018)*

**Section “Measurements of the kinetic constants of gas-phase reactions”**

Type of report	Name	Title
<i>Plenary report</i>	Ahmed Musahid	Probing Combustion Chemistry with molecular beams and synchrotron radiation
<i>Plenary report</i>	Anderson Scott L.	Carbon Oxidation Kinetics by Single Nanoparticle Mass Spectrometry
<i>Plenary report</i>	Hansen Nils	Isomer-Resolved Probing of Complex Systems of Reactions
<i>Plenary report</i>	Eskola Arkke Johannes	Time-Resolved Kinetic Experiments Utilizing Photo-Ionization Mass-Spectrometers
<i>Plenary report</i>	Vasyutinskii O.V.	Vector Correlations in Molecular Photodissociation: Femtosecond Stereodynamics
<i>Plenary report</i>	Balucani Nadia	Reactions of oxygen atoms with aliphatic and aromatic hydrocarbons by crossed beam experiments
<i>Oral report</i>	Antonov Ivan	Developing novel PIMS apparatus to study oxidation kinetics at engine-relevant pressures
<i>Oral report</i>	Thomas A	Evolution of Polycyclic Aromatic Hydrocarbons via Low Energy Pathways
<i>Oral report</i>	Zagidullin M.V.	Pyrolysis of C <sub>10</sub> H <sub>7</sub> Br in high temperature microreactor: experiment and modeling.
<i>Oral report</i>	Medvedkov Ia.	Construction of a new molecular beam machine
<i>Oral report</i>	Chichinin, A.I.	Double-arm three-dimensional ion imaging apparatus for the study of ion pair channels in resonance enhanced multiphoton ionization
<i>Poster report</i>	Bashkirov E.K.	Products distribution in the reaction of atomic carbon with pyridine: theory and experiment
<i>Poster report</i>	Pershin A.	Ozone recovery in the presence of nitrous oxides
<i>Poster report</i>	Tolstov G.I.	O <sub>2</sub> (b) quenching by NO, NO <sub>2</sub> , CH <sub>4</sub> at temperatures 297-800K
<i>Poster report</i>	Torbin A.P.	Ozone recovery in presence of CO

## Section “Modern Quantum Chemistry and Statistical Methods in Applications to Combustion”

Type of report	Name	Title
<i>Plenary report</i>	Klippenstein Stephen	High Accuracy Theoretical Chemical Kinetics as a Tool for Combustion Modeling
<i>Plenary report</i>	Zhang Feng	RRKM/master equation calculations for some typical combustion reactions and the uncertainty analysis
<i>Oral report</i>	Masunov A.E..	Quantum Chemical Study of Supercritical Carbon Dioxide Effects on Combustion Kinetics
<i>Oral report</i>	Mebel A.M.	Oxidation of five-member rings in combustion
<i>Oral report</i>	Morozov A.N.	A Theoretical Study of Pyrolysis of exo-Tetrahydrodicyclopentadiene and its Primary and Secondary Unimolecular Decomposition Products
<i>Poster report</i>	Galimova G.	Reaction mechanism for the oxidation of C <sub>15</sub> H <sub>10</sub> with hydroxyl
<i>Poster report</i>	Oleinikov A.D.	The reaction of 1-naphthyl with 1,3-butadiene: a theoretical study
<i>Poster report</i>	Saleev V.A.	Ab initio study of magnesium surface oxidation
<i>Poster report</i>	Evseev M.M.	Formation Mechanisms of Phenanthrene and Anthracene
<i>Poster report</i>	Korotchenko A S	Formation mechanism of triphenylene
<i>Poster report</i>	Miftyakhova D. R	Formation mechanism of benzo(c)phenanthrene
<i>Poster report</i>	Ermolaeva T.	Quantum chemical study of some combustion reactions of higher alkanes
<i>Poster report</i>	Reshetov V.A.	Quantum chemical study of potential energy surfaces of oxidation of simple alkanes
<i>Poster report</i>	Sharipov A.S.	Quantum chemical study of the reactions of H <sub>2</sub> and H <sub>2</sub> O molecules with N <sub>2</sub> (A <sub>3</sub> Σ <sub>u</sub> <sup>+</sup> )

## Section “Gas-Phase Kinetics”

Type of report	Name	Title
<i>Plenary report</i>	Frenklach Michael	Modeling of Soot Oxidation
<i>Plenary report</i>	Konnov Alexander	Data consistency of the burning velocity measurements
<i>Plenary report</i>	Miyoshi Akira	Kinetics of Autoignition
<i>Plenary report</i>	Qi Fei	Recent Advances of Combustion Chemistry
<i>Plenary report</i>	Robertson Struan H.	Obtaining the Phenomenological Rate Coefficients from Direct Analysis of Experimental Data
<i>Plenary report</i>	Zhou Chong-Wen	Combustion Chemistry for Alkenes --What have we learned from butene isomers
<i>Oral report</i>	Vasu S.	Combustion reaction kinetics in supercritical CO <sub>2</sub> fluids
<i>Oral report</i>	Huang Can	Computing absolute cross-sections for important intermediates in low temperature oxidation
<i>Oral report</i>	Lopaev D.	Features of oxygen metastable molecules kinetics in O <sub>2</sub> plasma with increasing pressure
<i>Oral report</i>	Mikheyeva E.	Soot formation in pyrolysis of acetylene with hydrocarbon additions
<i>Oral report</i>	Skvortsov I.Yu.	Various nature silicon-containing additives influence on the process of formation of polyconjugate structures in polyacrylonitrile during its thermolysis into carbon fiber
<i>Oral report</i>	Shmakov A.G.	An Experimental and Numerical Study of Combustion Chemistry of Fatty Acids Esters
<i>Oral report</i>	Sharipov A.S.	Reaction kinetics of H <sub>2</sub> with O <sub>2</sub> in highly excited electronic states
<i>Poster report</i>	Azyazov V.N.	Active oxygen species in combustion
<i>Poster report</i>	Palov A. P.	Excitation of ro-vibronical levels of oxygen by argon impact
<i>Poster report</i>	Tyurenkova V.V.	Mathematical modeling of burning surface in parallel flow of oxidant
<i>Poster report</i>	Klucharev V.V.	New chemical ideology for the combustion science of 21 st century
<i>Poster report</i>	Petrov L.V.	Modeling of the formation of ultrafine particles as coals burning
<i>Poster report</i>	Varfolomeeva L.A.	The effect of tetraethoxysilane addition on the polyacrylonitrile-based fiber transformation into carbon fiber
<i>Poster report</i>	Popov E.N.	Theoretical calculations of rate constants of typical oxidation reactions

## Section “Chemical, plasma, and laser initiation of combustion”

Type of report	Name	Title
<i>Oral report</i>	Chukalovsky A.A.,	Nitrogen dissociation in glow discharge plasma
<i>Oral report</i>	Kobtsev V.D.	The reduction of ignition delay time caused by singlet-oxygen molecules in low pressure hydrogen-air mixtures
<i>Oral report</i>	Smygalina A.E.	Combustion of hydrogen with methane additives in spark ignition engine
<i>Oral report</i>	Upyrev V.	Stabilization of combustion front in supersonic flow using streamer's discharge
<i>Oral report</i>	Volobuev I.A.	Concept of low emission combustion chamber with using streamers discharge to increase combustion speed
<i>Oral report</i>	Titova N.S.	Numerical study of H <sub>2</sub> S-H <sub>2</sub> O-air mixture conversion to hydrogen via activation of air by an electric discharge
<i>Oral report</i>	Glotov O.G.	Combustion characteristics of model composite propellants with aluminum diboride
<i>Poster report</i>	Sludnova A.	Combustion initiation of a model fuel-air composition by the barrier discharge
<i>Poster report</i>	Zavershinskii I.P.	Plasma vortex reactor for production of heat energy and hydrogen
<i>Poster report</i>	Demyanov A.V.	Simulation of plasma initiation of ignition of methane-air mixtures under atmospheric pressure
<i>Poster report</i>	Tupikin A.V.	The impact of non-stationary electric field on hydrocarbon flames
<i>Poster report</i>	Kochetov I.V.	The role of thermal conductivity in plasma initiation of ignition
<i>Poster report</i>	Mikheyev P.A.	Dielectric barrier discharge configurations for plasma assisted combustion

## Section “Flame dynamics and structure”

Type of report	Name	Title
<i>Plenary report</i>	Gubernov V.V.	Diffusive-Thermal Instabilities of Hydrogen-Air flames.
<i>Plenary report</i>	Smirnov N.N.	Three-dimensional simulation of combustion, detonation and deflagration to detonation transition processes in cone and wedge induced focusing.
<i>Plenary report</i>	Korobeinichev O.V.	Physics and Chemistry of Combustion at Flame Spread over Solid Fuels
<i>Oral report</i>	Auzani A.	Modelling of Jet Fuel-Ethanol-Air Flame on Burner-Stabilised Flame
<i>Oral report</i>	Muppala SPR	A Numerical study of two turbulent flame speed models for

		H <sub>2</sub> /CH <sub>4</sub> /air premixed combustion
<i>Oral report</i>	Korus A.	Woody biochar as a tar reforming catalyst
<i>Oral report</i>	Drakon, A.	Inefficiency of suppression of methane-oxygen mixtures autoignition by halogenated hydrocarbons
<i>Oral report</i>	Kopyev E.P.	Burning of diesel fuel under vapor gasification conditions
<i>Oral report</i>	Maznoy A.	Combustion of premixed methane/air and LPG/air mixtures in cylindrical radiant burners with different porous structures: enviromental and radiative characteristics
<i>Oral report</i>	Prokofev V.G.	Spin Combustion of Gasless Systems with Melting Component: 3D Simulation
<i>Oral report</i>	Perminov V.A.	Mathematical modeling of the impact of forest fires on buildings and structures
<i>Oral report</i>	Makarov I.S.	Effect on the thermal behavior of cellulosic fibers of silyl substituted acetylene and alkoxy silanes
<i>Oral report</i>	Yanovskiy L.S.	Problems of Increasing the Efficiency of Combustion of Solid and Liquid Fuels in Small-sized Power Plants
<i>Oral report</i>	Baikov A.V.	The Estimation of Possibility Using Zeldovich Model for Solving Tasks of Internal Ballistics for Low Temperature Solid Propellant Gas Generators
<i>Poster report</i>	Titova N.S.	2D modeling of V-shaped turbulent methane-air flame.
<i>Poster report</i>	Matveev S.S.	Laminar burning velocities of n-decane with ethanol additions
<i>Poster report</i>	Anisimov V.M.	Maturation of workflow of combustion chamber with toroidal recirculation mixing zone
<i>Poster report</i>	Kolomzarov O. V.	Substantiation of the expediency of using the combustion chamber with a toroidal recirculation zone in the small GTE
<i>Poster report</i>	Zubrilin I.A.	Modelling of small gas turbine engine CO emissions based on reactor network
<i>Poster report</i>	Rybakov D.	Percolation model of combustion
<i>Poster report</i>	Nyashina G.S.	Environmental advantages of composite fuels based on industrial wastes and different ranks of coal
<i>Poster report</i>	Bolobov V.I.	Auto-ignition problem titanium of oxygen and possible ways of solving

## Section “Flame diagnostics”

Type of report	Name	Title
<i>Oral report</i>	Kozlov, D.N.	Local optical diagnostics of high-temperature gas media using laser-induced gratings
<i>Oral report</i>	Loukhovitski B.I.	Influence of internal molecular degrees of freedom on their electric and optical properties
<i>Oral report</i>	Smirnov V.V.	CARS and Fluorescent Study of Ignition of H <sub>2</sub> -O <sub>2</sub> Mixtures upon Photo-Dissociation of O <sub>2</sub> Molecules
<i>Oral report</i>	Volynets A V	Actinometry of O atoms with Kr at elevated pressures (10 - 100 Torr) in pure O <sub>2</sub> discharge
<i>Oral report</i>	Shafirovich Evgeny	Combustion Joining of Lunar Regolith Tiles
<i>Oral report</i>	Shaimukhametov Ramil	The Acoustic Spectrums of the combustion Process in the IC-Engines
<i>Oral report</i>	Nuzhnov Yu.V.	To the development of the Kolmogorov K-62 theory under the conditions of intermittency of dissipative fluid
<i>Poster report</i>	Malikov V.	Research materials and structures of space vehicles by multifrequency measuring system on the basis of eddy current transducers
<i>Poster report</i>	Kobtsev V.D.	Methane-air flame thermometry using Planar Laser-Induced Fluorescence (PLIF)
<i>Poster report</i>	Ghildina A.R.	Measurements of krypton metastables in dielectric barrier discharge
<i>Poster report</i>	Yatsenko P.I.	Application of ARAS and MRAS methods to study the kinetics of CF <sub>2</sub> radicals formation at pyrolysis C <sub>3</sub> F <sub>4</sub>