

43rd Symposium (Japanese) on Combustion - Scientific Program

Schedule Table

DAY 1st - December 5 (Mon)

Main Auditorium						
9:30–9:50	Opening Session (5th Floor - Main Auditorium)					
9:50–11:00	Invited Lecture (5th Floor - Main Auditorium)					
Room A	Room B	Room C	Room D	Room E	Room P	
11:10–12:30	A11: Laminar Flames I A111–A114	B11: Com-bustors I B111–B114	C11: Diagnostics & Modeling I C111–C114	D11: Pollutant I D111–D114	E11: Reaction Kinetics I E111–E114	Posters 50th-anniv exhibit 'Flame Art' Sponsor exhibit & brochure
12:30–13:40	(lunch)					
13:40–15:00	A12: Laminar Flames II A121–A124	B12: Com-bustors II B121–B124	C12: Diagnostics & Modeling II C121–C124	D12: Pollutant II D121–D124	E12: Reaction Kinetics II E121–E124	
15:00–15:50						P1: Poster Session I P101–P126
16:00–17:20	A13: Laminar Flames III A131–A134	B13: Internal Combustion Engines I B131–B134	C13: Diagnostics & Modeling III C131–C134	D13: Pollutant III D131–D134	E13: Reaction Kinetics III E131–E134	exhibits

* Workshop: "Pulse Detonation Engine – Current Status and Prospects"
- DAY 1st: 17:30-19:00 (Room B)

DAY 2nd - December 6 (Tue)

Room A	Room B	Room C	Room D	Room E	Room P	
9:00–10:20	A21: Laminar Flames IV A211–A214	B21: Internal Combustion Engines II B211–B214	C21: Diagnostics & Modeling IV C211–C214	D21: Propellants Combustion I D211–D214	E21: Fire Research I E211–E214	Posters 50th-anniv exhibit 'Flame Art' Sponsor exhibit & brochure
10:30–11:50	A22: Laminar Flames V A221–A224	B22: Internal Combustion Engines III B221–B224	C22: Micro-gravity I C221–C224	D22: Propellants Combustion II D221–D224	E22: Fire Research II E221–E224	
Main Auditorium						
12:00–12:40	Regular General Meeting of CSJ (5th Floor - Main Auditorium)					
Room A	Room B	Room C	Room D	Room E	Room P	
13:10–14:50	A23: Ignition & Inhibition I A231–A235	B23: Internal Combustion Engines IV B231–B235	C23: Micro-gravity II C231–C235	D23: Solid Combustion & Incinerations I D231–D235	E23: Fire Research III E231–E235	P2: Poster Session II P201–P224
14:50–15:40						
Main Auditorium						
16:00–18:15	50th Anniversary Ceremony & Special Lectures (5th Floor - Main Auditorium)					
Party Hall						
18:30–20:30	50th Anniversary Party (2nd Floor - Party Hall)					

DAY 3rd - December 7 (Wed)

	Room A	Room B	Room C	Room D	Room E	Room P
9:00–10:20	A31: Turbulent Combustion I A311–A314	B31: Ignition & Inhibition II B311–B314	C31: Spray Combustion I C311–C314	D31: Solid Combustion & Incinerations II D311–D314	E31: Combustion Synthesis E311–E314	50th-anniv exhibit 'Flame Art' Sponsor exhibit & brochure
10:30–11:50	A32: Turbulent Combustion II A321–A324	B32: Ignition & Inhibition III B321–B324	C32: Spray Combustion II C321–C324	D32: Detonations I D321–D324	E32: New Concepts E321–E324	
11:50–13:00	(lunch)					
13:00–14:20	A33: Turbulent Combustion III A331–A334	B33: Ignition & Inhibition IV B331–B334	C33: Spray Combustion III C331–C334	D33: Detonations II D331–D333	E33: Alternative Fuels I E331–E334	
14:30–15:30	A34: Turbulent Combustion IV A341–A343	B34: Catalytic Combustion B341–B343	C34: Spray Combustion IV C341–C343	D34: Detonations III D341–D343	E34: Alternative Fuels II E341–E343	

Plenary Programs**DAY 1st** - December 5 (Mon)**Opening Session** 9:30–9:50

Chair: Prof. Ritsu Dobashi (University of Tokyo)

Opening Remarks and Salutation

Prof. Mituo Koshi, Chairman, Local organizing committee
(University of Tokyo)Prof. Toshikazu Kadota, President, Combustion Society of Japan
(Osaka Prefecture University)**Invited Lecture** 9:50–11:00

"Ignition, ignition and ignition; forced or auto or self or spontaneous ignition"

Prof. Michikata Kono, University of Tokyo

DAY 2nd - December 6 (Tue)**Regular General Meeting of CSJ** 12:00–12:40**Fiftieth Anniversary Ceremony** 16:00–18:15

Order

Formula

Prof. Toshikazu Kadota, President, Combustion Society of Japan

Complimentary Speech

Prof. Brian S. Haynes, President, the Combustion Institute

Congratulatory Adresses

Prof. Hyun Dong Shin, KAIST

Anniversary Lecture

"Combustion Research of Japan - History of Recent 50 Years -"

Prof. Toshisuke Hirano, President, Chiba Institute of Science

Special Anniversary Lecture

"Fifty Years of Magnificent Combustion Research in Japan"

Prof. Chung K. Law, Princeton University

Closing remarks

Prof. Masahiko Mizomoto, Vice President, Combustion Society of Japan

Fiftieth Anniversary Party 18:30–20:30

Tower-Hall Funabori

Regular Sessions

DAY 1st - December 5 (Mon)

A11 : Laminar Flames I December 5 (Mon) 11:10–12:30

chair: Toshihisa UEDA (Keio University)

A111 Response of a Cylindrical Premixed Flame to Fluctuating Equivalence Ratio

SUENAGA, Yosuke;^{1*} TAKAHASHI, Yoichi;² KITANO, Michio³ (¹Hachinohe National College of Technology, ²Honda R&D Co. Ltd., ³Iwate University)

A112 Effects of Flow Field and Flame Shape on Flame Speed of Propagating Flame in a Vortex Ring

DOI, Yuta; * ASATO, Katsuo; FURUKAWA, Satoshi (Gifu University)

A113 Flow Field in Swirl-Type Tubular Flame Burners

MUKAE, Yoshihisa; * SIMOKURI, Daisuke; ZHANG, Yuyin; ISHIZUKA, Satoru (Hiroshima University)

A114 A Numerical Simulation on Propane/Air Premixed Flames in Swirl-Type Tubular Flame Burner

ZHANG, Yuyin;^{1*} ZHU, Huayang;² KEE, Robert J.;² ISHIZUKA, Satoru¹ (¹Hiroshima University, ²Colorado School of Mines)

A12 : Laminar Flames II December 5 (Mon) 13:40–15:00

chair: Kaoru MARUTA (Tohoku University)

A121 Numerical Simulation on Oxidation of Diesel Soot Particles

YAMAMOTO, Kazuhiro;^{1*} YAMASHITA, Hitoshi;¹ OBUCHI, Akira;² UCHISAWA, Junko² (¹Nagoya University, ²National Institute of Advanced Industrial Science and Technology)

A122 Numerical Simulation of CH₄/air Premixed Flame Using Reduced Mechanism at High Pressure and High Temperature

OGAMI, Yasuhiro; * KOBAYASHI, Hideaki (Tohoku University)

A123 Study on Accuracy Improvement of Numerical Calculation of Combustion using Simplified Reaction

SATO, Hiroshi; * NISHIOKA, Makihito (University of Tsukuba)

A124 Study on Flame Structure of Curvature-Controlled Premixed Flame

HAYASHI, Naoki;^{1*} YAMASHITA, Hiroshi;¹ NAKAMURA, Yuji;² YAMAMOTO, Kazuhiro¹ (¹Nagoya University, ²Hokkaido University)

A13 : Laminar Flames III December 5 (Mon) 16:00–17:20

chair: Satoshi KADOWAKI (Nagaoka University of Technology)

A131 Combustion characteristics of methane-air mixtures in radial microchannels

Sudarshan Kumar;^{1*} S. Hasegawa;¹ Achintaya Mukhopadhyay;² S. S. Minaev;³ Kaoru Maruta¹ (¹Tohoku University, ²Jadavpur University, ³SB RAS)

A132 Combustion Characteristics of Hydrogen-Premixed Microscopic-Spherical Laminar Flames

NAKAHARA Masaya; KIDO Hiroyuki; YOSHIMITSU Shintaro * (Kyushu University)

A133 Combustion Structure of Microscopic Pre-mixed Flames

ISEKI, Masato; * FUCHIHATA, Manabu; IDA, Tamio (Kinki University)

A134 Behaviors of Flame Propagating through a Narrow Channel

NARISAWA, Nobuyuki; * NISINA, Yusuke; YOSHIHASHI, Teruo; OBARA, Tetsuro; OHYAGI, Shigeharu (Saitama University)

B11 : Combustors I December 5 (Mon) 11:10–12:30

chair: Mitsuaki TANABE (Nihon University)

B111 Effect of Additional Fluid Injection on the Thermoacoustic Oscillating Flame

SATO, Hiroyuki; * Nakajima, Masaya; HAYASHI, A. Koichi (Aoyama Gakuin University)

B112 Analysis of Shock Wave Generation in Diaphragm-less Shock Tube

TAKAO Toshimasa; * TEZAKI Atsumu (The University of Tokyo)

- B113** Numerical Simulation of Post Combustion in Converter Using Lattice Boltzmann Method
KOGA, Teruhisa;^{1*} YAMAMOTO, Kazuhiro;¹ YAMASHITA, Hiroshi;¹ KISHIMOTO, Yasuo² (¹Nagoya University, ²JFE Steel Corporation Steel Research Laboratory)
- B114** Flammable Limit of Small Swiss-Roll Combustors
AIZUMI, Satoshi;^{1*} KIM, Nam Il;² KATOU, Souichirou;³ HASEGAWA, Susumu;¹ YOKOMORI, Takeshi;¹ MARUYAMA, Shigenao;¹ FUJIMORI, Toshiro;³ MARUTA, Kaoru¹ (¹Tohoku University, ²KAIST, ³Ishikawajima-Harima Heavy Industry. Co. Ltd.)
- B12 : Combustors II** December 5 (Mon) 13:40–15:00
chair: Mitsuhiro UEJIMA (Tokyo Metropolitan College of Technology)
- B121** Experimental study for the formation of NOx in methane-oxygen diffusion combustion
OHATA Yugo;^{1*} ITOH Akinori;¹ KOBAYASHI Noriyuki;¹ HASATANI Masanobu² (¹Nagoya University, ²Aichi Institute of Technology)
- B122** Characteristics of Flame Stabilization and Exhaust Gas of Rich-Lean Burner Controlled Boundary Region between Rich and Lean Flames
YASUDA, Hirofumi;¹ MIYASHITA, Takahiro;^{1*} ASATO, Katsuo;¹ KURACHI, Seigo;² HAGI, Satoshi;² UMEDA, Yoshito² (¹Gifu University, ²Toho Gas. Co., LTD)
- B123** Study on Expansion of Turn Down Ratio of Rich-Lean Flame Burner
KURACHI, Seigo;^{1*} TATEMATSU, Hisae;¹ HAGI, Satoshi;¹ UMEDA, Yoshito;¹ YASUDA, Hirofumi;² MOCHIZUKI, Shuichi;² ASATO, Katsuo² (¹Toho Gas Co., ²Gifu University)
- B124** Mixture properties of fuel gas in swirl field
FUKUYO, Tomohiro;^{*} KOMIYAMA, Masaharu; TAKEISHI, Kenichiro; TANAKA, Chisako (The University of Osaka)
- B13 : Internal Combustion Engines I** December 5 (Mon) 16:00–17:20
chair: Yuichi SHIMASAKI (Honda R&D Co., Ltd.)
- B131** Effects of Residual Gas on Ignition Timing of Homogenous Charge Compression Ignition Engines
NAKANO, Michio;^{*} MANDOKORO, Yoshiyuki; OKAWARA, Ayako; YAMAMOTO, Masami (Toyota Central R&D Labs., Inc.)
- B132** PCCI Operation With Early Injection of Conventional Diesel Fuel
HAKOZAKI, Takazou;^{*} KANDA, Tomohiro; UCHIMOTO, Tatsuya; HATANNO, Junichi; KITAYAMA, Naoto (Honda R&D Co., Ltd.)
- B133** Ion Current in Homogeneous Charge Compression Ignition Engine
YOSHIYAMA, Sadami;¹ TOMITA, Eiji;¹ YAMASHITA, Katsunori;^{1*} TANAKA, Tatsuya;² TABATA, Michihiko² (¹Okayama University, ²Mazda Motor Corporation)
- B134** Experimental Research for Control at Ignition Timing of DME-HCCI Combustion
NIIJIMA, Shun;^{*} HAMADA, Keisuke; YOSHIDA, Kazunori; SHOJI, Hideo (Nihon University)
- C11 : Diagnostics & Modeling I** December 5 (Mon) 11:10–12:30
chair: Masaharu KOMIYAMA (Osaka University)
- C111** Numerical Analyses and Laser Measurement on Gas Injection Flow for Air Flow in Cylindrical Tube
TAKAMI, Chihomi;^{*} UMEDA, Yoshito (Toho Gas Co., Ltd)
- C112** Advanced Measurement Method for a Supersonic Combustion using Particle Tracking Velocimetry and Numerical Simulation Based on Transdisciplinary Approach
NAKAMURA, Hisashi;^{*} SATO, Naoki; KOBAYASHI, Hideaki; MASUYA, Goro (Tohoku University)
- C113** Simulation of diesel combustion by KIVA-3 using spray model based on L2F measurement
UEKI, Hironobu;^{*} ISHIDA Masahiro; SAKAGUCHI, Daisaku; HASHIZUME, Takeshi (Nagasaki University)
- C114** Development of Sensor for Turbulent Combustion Controls with Diode-Laser Absorption Spectroscopy
SHIMURA, Masayasu;^{*} TANAHASHI, Mamoru; MIYAUCHI, Toshio (Tokyo Institute of Technology)

C12 : Diagnostics & Modeling II December 5 (Mon) 13:40–15:00

chair: Mamoru TANAHASHI (Tokyo Institute of Technology)

C121 Temperature Imaging in Quenching Boundary Layers with Multi-line NO-LIF Thermometry
FUYUTO, Takayuki;^{1*} FUJIKAWA, Taketoshi;¹ AKIHAMA, Kazuhiro;¹ KRONEMAYER, Helmut;²
LEWERICH, Burkhard;² SCHULZ, Christof³ (¹Toyota Central R&D Labs., Inc., ²University of Heidelberg,
³University of Duisburg-Essen)

C122 2-D Temperature measurement of unburned gas mixture by two color excitation LIF technique
FUKUI, Kenji;^{*} FUJIKAWA, Taketoshi; AKIHAMA, Kazuhiro; HATTORI, Yoshiaki (Toyota Central R&D
Labs.Inc.)

C123 Measurements of Local Composition and Temperature using LIPS inside a Partially Premixed Burner
ZIMMER, Laurent;^{*} TACHIBANA, Shigeru (Japan Aerospace Exploration Agency)

C124 Numerical Analysis for Flow and Mixing Process of High Speed Unsteady Jets Using PDF-CFD Model
KAWANABE, Hiroshi;^{*} NAITO, Yusuke; ISHIYAMA, Takuji; SHIOJI, Masahiro (Kyoto University)

C13 : Diagnostics & Modeling III December 5 (Mon) 16:00–17:20

chair: Hiroshi KAWANABE (Kyoto University)

C131 Structure and Behavior of the Diffusion Flames Interacted with Vortices Using Laser Image Measurement (3)
UTSUMI, Yoshiaki;^{*} KOMIYAMA, Masaharu; TAKEISHI, Kenichiro; KAWAMOTO, Shuhei (Osaka
University)

C132 Laser Measurement of Fuel Distributions in Laminar Diffusion Flames
AMAGAI, Kenji;^{*} FURUHATA, Tomohiko; ARAI, Masataka (Gunma University)

C133 Rapid Particle Size Analysis of Fuel Injector Systems
KIPPAX, P.;¹ FATKIN, J.;¹ NISHIMURA, Takashi^{2*} (¹Malvern Instruments Ltd, ²SYSMEX
CORPORATION)

C134 Measurement of Internal Boiling in a Burning Emulsion Droplet using Acoustic Emission Method
YAMASAKI, Hiroshi;^{*} OBATA, Yoshihiko; NOMURA, Hiroshi; UJIIE, Yasushige (Nihon University)

D11 : Pollutant I December 5 (Mon) 11:10–12:30

chair: Masao TAKEUCHI (National Institute of Advanced Industrial Science and Technology)

D111 Experimental study on fullerene and PAH formation process in toluene combustion at low pressure condition
TAKADA, Hiroshi;^{*} SHIBAHARA, Masahiko; KATSUKI, Masashi; KUNIOSHI, Nilson; SHIMIZU, Tsubasa
(Osaka University)

D112 Characteristic of Particulate Matter Formation during Combustion of Simulated Waste Oil
MURAMATSU, Kenshi;^{*} TAKUWA, Tsuyoshi; NARUSE, Ichiro (Toyohashi University of Technology)

D113 Effect of aggregated particle morphology on the thermophoretic behavior of soot particles
SUZUKI, Sayaka;^{*} DOBASHI, Ritsu (The University of Tokyo)

D114 A Study on Soot Formation in a Diffusion Flame Fueled by Decomposed Diesel Fuel
YOSHIHARA, Yuichi;^{*} NOGE, Hirofumi; KIDOGUCHI, Yoshiyuki; MIWA, Kei (The University of
Tokushima)

D12 : Pollutant II December 5 (Mon) 13:40–15:00

chair: Ichiro NARUSE (Toyohashi University of Technology)

D121 Instrumentation of Nano PM is formed by diffusion flame of lubricating oil and light oil
SAKO, Toshihiro;^{*} AMAGAI, Kenji; FURUHATA, Tomohiko; ARAI, Masataka (Gunma University)

D122 PAH Formation Behavior in a C₂H₂-N₂/O₂-N₂ Counterflow Nonpremixed Flames
KITAJIMA, Akio;^{1*} HATANAKA, Takeshi;¹ TORIKAI, Hiroyuki;² TAKEUCHI, Masao;¹ MIYADERA,
Tatsuo¹ (¹AIST, ²NEDO Fellow)

- D123** Modeling Soot Formation and Growth with Heterogeneous Kinetics and Method of Moments
Chen-Pang Chou;^{1*} Pauline Ho;² Alejandro Cano;¹ Ellen Meeks¹ (¹Reaction Design, ²Sandia National Laboratories)
- D124** Growing Process of Solid Nanoparticle in Diesel Exhaust
YAMADA, Hiroyuki;^{1*} OHTOMO, Mitsuaki;² TEZAKI, Atsumu;² KOSHI, Mitsuo² (¹National Traffic Safety and Environment Laboratory, ²The University of Tokyo)
- D13 : Pollutant III** December 5 (Mon) 16:00–17:20
chair: Yoshiyuki KIDOGUCHI (University of Tokushima)
- D131** Soot particle measurement by Time-Resolved Laser Induced Incandescence
MATSUBARA, Tomoya;^{1*} KOMADA, Yasuyuki;¹ KUROSE, Ryoichi;² AKAMATSU, Fumiteru¹ (¹Osaka University, ²Central Research Institute of Electric Power of Industry)
- D132** Lattice Boltzmann Simulation on Soot Accumulation and Combustion
SATAKE, Shingo;^{*} YAMAMOTO, Kazuhiro; YAMASHITA, Hiroshi (Nagoya University)
- D133** In-cylinder Soot Formation Mechanism
KUBO, Shuichi;^{*} INAGAKI, Hideto; FUKUMOTO, Atsuo; TAKATORI, Yoshiki; KONDOH, Teruaki; MITUOKA, Takuya; SUZUKI, Noritomo; INOUE, Masae (Toyota Central R&D Labs., Inc.)
- D134** Analysis of In-cylinder Soot Formation by Laser-induced Incandescence
TAKATORI, Yoshiki;^{*} KONDO, Teruaki; INOUE, Masae; KUBO, Shuichi (Toyota Central R&D Labs., Inc.)
- E11 : Reaction Kinetics I** December 5 (Mon) 11:10–12:30
chair: Kenichi TONOKURA (University of Tokyo)
- E111** Kinetics of the High-Temperature Reactions of CH Radicals with Hydrocarbons
SETA, Takamasa;^{*} NAKAJIMA, Masakazu; MIYOSHI, Akira (The University of Tokyo)
- E112** Reaction of Na₂CO₃ Aqueous Droplet with SO₂ Using Electrodynamic Balance
HARANO, Azuchi;^{*} AKAHOSHI, Akira; AOKI, Yutaka (Gunma University)
- E113** In-situ measurement of NO_x-O_x-HO_x-HC reaction system in simulated stratosphere, using FT-IR
HASHIMOTO, Masakazu;¹ HIRAKI, Hiromichi;^{1*} NAKAYA, Sinji;² TSUE, Mitsuhiro;¹ KOUNO, Michikata¹
(¹The University of Tokyo, ²Osaka Prefecture University)
- E114** Chemical Reaction Mechanism of Radical Injection De-NO_x System
KUMANO, Yuta;¹ KAMBARA, Shinji;^{1*} MORITOMI, Hiroshi;¹ YUKIMURA, Ken² (¹The University of Gifu, ²Doshisha University)
- E12 : Reaction Kinetics II** December 5 (Mon) 13:40–15:00
chair: Shinji KAMBARA (Gifu University)
- E121** Combustion Chemistry of dimethyl ether
MURAKAMI, Yoshinori;¹ ABDUREYIM, Abduaini;² FUJII, Nobuyuki^{2*} (¹Nagaoka University of Technology, ²Niigata Sangyo University)
- E122** Effects on Low-temperature Oxidation of Alkane with Mixing Toluene
SAKAI, Yasuyuki;^{1*} OGURA, Teppei;¹ KOSHI, Mitsuo;¹ KANEKO, Takashi² (¹The University of Tokyo, ²Petroleum Energy Center)
- E123** Shock tube studies of high-temperature reactions of H₂-NO₂
TAKIGAWA, Daisuke;^{*} KOIKE, Tohru (National Defence Academy)
- E124** High temperature reaction of chlorinated compounds by using a shock-tube
WAKAMATSU, Hitoshi;^{*} HIDAHA, Yoshiaki (Ehime University)
- E13 : Reaction Kinetics III** December 5 (Mon) 16:00–17:20
chair: Akira MIYOSHI (University of Tokyo)
- E131** The Study of Dimethyl Ether Low Temperature Oxidation using NIR and UV Absorption Spectroscopy

SUZAKI, Kotaro;^{1*} CHINZEI, Takahisa;¹ TSUCHIYA, Kentaro;² KOSHI, Mitsuo;¹ TEZAKI, Atsumu¹ (¹The University of Tokyo, ²National Institute of Advanced Industrial Science and Technology)

E132 High Temperature Reaction of Ethylene Oxide

YASUNAGA, Kenji;^{1*} KOIKE, Tohru;¹ HIDAHA, Yoshiaki² (¹National Defense Academy, ²Ehime University)

E133 Determination of OH yield in the reactions of 1- and 2-methyl vinyloxy radicals with molecular oxygen

SATO, Yoshihisa;^{1*} OGUCHI, Tatsuo;¹ MATSUI, Hiroyuki;² TEZAKI, Atsumu¹ (¹The University of Tokyo, ²Toyohashi University of Technology)

E134 Kinetic Studies of the Reaction of C₂H₃ + O₂

CHISHIMA, Hiroshi;^{*} TONOKURA, Kenichi; KOSHI, Mitsuo (The University of Tokyo)

P1 : Poster Session I December 5 (Mon) 15:00–15:50

chair: Fumiteru AKAMATSU (Osaka University)

P101 Numerical Simulation of Flame under Time-varying Magnetic Field

YAMADA, Eisuke;^{1*} TOMINAGA, Takuji;¹ OSHIMA, Nobuyuki² (¹The University of Tokyo, ²Hokkaido University)

P102 Fundamental Research on Plasma-assisted Combustion by RF Electromagnetic Wave

OSAKA, Yugo;^{*} KOBAYASHI, Noriyuki; M. A. RAZZAK; OHNO, Noriyasu; TAKAMURA, Shuichi (Nagoya University)

P103 Experimental study of combustion improvement on methane-air mixtures by utilization of infrared ray effect

NEMOTO, Hiroaki;^{1*} OKAJIMA, Satoshi;¹ TAKAHASHI, Seitaro;² ZUSHI, Osamu;³ KOYAMA, Masaru;⁴ ITO, Masahiro⁴ (¹Hosei University, ²Sanso Co. Ltd., ³Itochu Urban Community Ltd., ⁴Fire Up Ltd.)

P104 Research of the Method for NO_x Formation Reduction in Oxygen-Enriched Air/Methane Diffusion Combustion

ZHAO, Daiqing;^{1*} YANG, Haolin;¹ LU, Guanjun;¹ YAMASHITA, Hiroshi² (¹Chinese Academy of Sciences, ²Nagoya University)

P105 Measurements of the low-temperature ignition delay times of the fuels containing the xylene isomers and the theoretical considerations using the molecular orbital calculations

MURAKAMI, Yoshinori;^{1*} NOSAKA, Yoshio;¹ HASHIMOTO, Kotaro² (¹Nagaoka University of Technology, ²Honda R & D Co., Ltd.)

P106 Combustion Characteristics of Laminar Boundary Layer Diffusion Flame Propagated over the Methane-Hydrate

YAMAGISHI, Yukihiro;^{1*} TAKAHASHI, Masahiro;² IWASAKI, Toru;² NAGAMORI, Shigeru;² UEDA, Toshihisa¹ (¹Keio University, ²Mitsui Engineering & Shipbuilding CO., LTD.)

P107 Experimental research into Behaviors of Hydrogen diffusion flame

YOSHIMOTO, Takamitsu;¹ ITOH, Daisuke;^{1*} KITAMURA, Hideki;¹ TOSHIMI, Takagi² (¹Kobe City College of Technology, ²Osaka Sangyo University)

P108 Influence of applied voltage on flame synthesis of carbon nanotubes

SAKAKURA, Ryoji;^{1*} YOKOMORI, Takeshi;² NAKAZAWA, Shunpei;¹ MIZOMOTO, Masahiko¹ (¹Keio University, ²Tohoku University)

P109 Experimental Study on Combustion Characteristics of Co-axial Diffusion Flame of DME Fuel

HOSOYA, Yutaka;^{*} KANAMORI, Masayuki; OKAJIMA, Satoshi (Hosei University)

P110 Spinning Flame near Extinction limit on Methane-Air Premixed Coaxial Burner

KURATA, Osamu^{*} (National Institute of Advanced Industrial Science and Technology)

P111 Study on Suppression of Benzene Formation in Diffusion Flames through Partial Premixed Approach

ISHII, Daisuke;^{1*} NAKAMURA, Yuji;² YAMAMOTO, Kazuhiro;¹ YAMASHITA, Hiroshi¹ (¹Nagoya University, ²Hokkaido University)

P112 Fundamental Investigation of Combustion Characteristics on DME Fuel-Air Mixtures Using Microgravity Technique

NOMURA, Hiroyuki; * NAKAMURA, Akio; OKAJIMA, Satoshi (Hosei University)

- P113** Effects of Pressure on Premixed Hydrogen Flame
KITAGAWA, Toshiaki; SMALLBONE, Andrew John; * TSUNEYOSHI, Kousaku (Kyushu University)
- P114** Effect of turbulence at the tube entrance on the stability and structure of coaxial jet diffusion flames
KOTANI Yoshinobu; * YOSHIDA Akira (Tokyo Denki University)
- P115** Characteristics of Leading Edge of Partially Premixed Flame Considering the Flame Stretch
HASHIMOTO, Kohta; * SAIKI, Atsushi; HIROTA, Mitsutomo; MASUYA, Goro (Tohoku University)
- P116** A Study on Flame Front Surface and Burning Velocity in Turbulent Premixed Combustion
OZEKI, Masahiro; * YAMAMOTO, Kazuhiro; YAMASHITA, Hiroshi (Nagoya University)
- P117** A Study of Combustion Properties of High-pressure Hydrogen Gas Jet
MOGI, Toshio; * NISHIDA, Hiroyuki; SHIINA, Hiroumi; Horiguchi, Sadashige (AIST)
- P118** Analysis of Combustion Instability in the Lean Premixed Combustor
NAGAO, Takahisa;^{1*} IDE, Tomohiro;¹ SHINJO, Junji;² OGAWA, Satoru;² SATO, Hiroyuki;¹ HAYASHI, A. Koichi¹ (¹Aoyama Gakuin University, ²Japan Aerospace Exploration Agency)
- P119** Aero Dynamic Structure of a Micro Gas Turbine Combustor with a Baffle Plate
YAHAGI, Yuji; * SHIBUYA, Hideyuki; SUZUKI, Kenjiro (Shibaura Institute of Technology)
- P120** Decrease of NO_x emission in oil fired high temperature air combustion
YOSHIDA Kazuo; * SATO Masashi; MITO Takashi (Petroleum Energy Center)
- P121** Hydrogen Premixed Flames Propagating in Tunnel Simulated Space
NAKAHARA Masaya; * KIDO Hiroyuki; UEDA Syunji; KUMAGAI Moriaki; KUROISHI Ryo (Kyushu University)
- P122** Thermal Explosion of an RDF Layer with Local Heating
TSURUDA, Takashi* (National Research Institute of Fire and Disaster)
- P123** Effect of sampling conditions on the measurement of NO and NO₂ concentrations
SUZUKI, Kentaro; * MATSUNAGA, Naoki; HORI, Morio (Takushoku University)
- P124** Effects of air stream on the flame spread over metal dust layer
YASHIMA, Masaaki* (National Institute of Industrial Safety)
- P125** Opposed-Flow Flame Spread over PMMA under High Pressure
KUWABARA, Toshinobu;^{1*} NAKANO, Yasuaki;¹ KONISHI, Tadashi;¹ ITO, Akihiko² (¹Oita National College of Technology, ²Hirosaki University)
- P126** Influence of Aluminum addition on Boron combustion
HASHIGUCHI, Masakazu; * YUASA, Saburo;² SAITO, Takumi² (¹Tokyo Metropolitan University, ²Tokyo Metropolitan Institute of Technology)

DAY 2nd - December 6 (Tue)

A21 : Laminar Flames IV December 6 (Tue) 9:00–10:20
chair: Makihito NISHIOKA (University of Tsukuba)

- A211** Flame interaction at Counterflow-partially premixed flames
WADA, Tomoya; * MIZOMOTO, Masahiko (Keio University)
- A212** Extinction Mechanism of Premixed Ethane-Air Flames
UCHIDA, Masakatsu;^{1*} NISHIOKA, Makihito;² TAKENO, Tadao¹ (¹Meijo University, ²University of Tsukuba)
- A213** Extinction of Counterflow Diffusion O₂/CO₂/CH₄ Flame at Elevated Pressures
ABE, Kazuki;^{1*} HASEGAWA, Susumu;¹ MARUYAMA, Shigenao;¹ MARUTA, Kaoru;¹ SATO, Jun'ichi² (¹Tohoku University, ²Ishikawajima-Hatima Heavy Industries Co., Ltd.)
- A214** Dynamics of Premixed Flames Propagating in Non-Uniform Velocity Fields: Influence of Intrinsic Instability

KADOWAKI, Satoshi;^{1*} KANOU, Shuta;¹ KIM, Seung Hyun;² PITSCH, Heinz;² KOBAYASHI, Hideaki³
(¹Nagaoka University of Technology, ²Stanford University, ³Tohoku University)

A22 : Laminar Flames V December 6 (Tue) 10:30–11:50

chair: Hideaki KOBAYASHI (Tohoku University)

- A221** Premixed Flame Stabilized in Tube with Swirl Flow
OWAKI, Takashi; * UMEMURA, Akira (Nagoya University)
- A222** Effect of perpendicularly impinging vortex tube on a burning velocity of a stagnating laminar premixed flame
TAKEDA, Tomonori; * UEDA, Toshihisa (Keio University)
- A223** Relation between Minimum Ignition Energy and Initial Burning Velocity of Hydrocarbon/Air Mixtures
HIRAI, Kensuke; * MATSUZAKI, Isei; KAWANO, Hideaki; MORIUE, Osamu; MURASE, Eiichi (Kyushu University)
- A224** Properties of Flames Established in the Rapidly Mixed-Type Tubular Flame Burner (Second Report)
SHIMOKURI, Daisuke; * ISHIZUKA, Satoru (Hiroshima University)

A23 : Ignition & Inhibition I December 6 (Tue) 13:10–14:50

chair: Hirohide FURUTANI (National Institute of Advanced Industrial Science and Technology)

- A231** An Experimental Study on Premixed Combustion with Corona Discharge Using Laser Ignition
YOSHIDA, Koji; * SHOJI, Hideo (Nihon University)
- A232** Experimental Determination on Quenching Distance of DME Fuel-Air Mixtures by Flat Flame Propagation Method
AOYAMA, Yukitoshi; * WADA, Yoji; OKAJIMA, Satoshi (Hosei University)
- A233** Anchoring mechanism of pool fire in co-axial gas flow
IZUMI, Jun; * FUKUDA, Mayumi; KUDO, Yuji; ITO, Akihiko (Hirosaki University)
- A234** Numerical Simulation on Ignition by Hydrogen Leak from High Pressure Tank
HAYASHI, A. Koichi;^{1*} LIU, Yun-Feng;¹ TSUBOI, Nobuyuki;² AIZAWA, Keisuke;¹ SATO, Hiroyuki¹
(¹Aoyama Gakuin University, ²Japan Aerospace Exploration Agency)
- A235** Effect of Radical Addition on Extinction Limit
TAKITA, Kenichi; * JU, Yiguang² (¹Tohoku University, ²Princeton University)

B21 : Internal Combustion Engines II December 6 (Tue) 9:00–10:20

chair: Eiichi MURASE (Kyushu University)

- B211** Feedback control of combustion oscillations in a lean premixed model combustor
TACHIBANA, Shigeru; * ZIMMER, Laurent; KUROSAWA, Yoji; SUZUKI, Kazuo (Japan Aerospace Exploration Agency)
- B212** Ignition Properties of Flanged Electrode in Combustion Chamber with Swirl
ENDO, Keita; * OKAMOTO, Kenichi; YAMASAKI, Hiroshi; NOMURA, Hiroshi; UJIIE, Yasushige (Nihon University)
- B213** Knock Phenomena Modeling with G-Equation Model and Detailed Chemistry for Butane Fueled SI Engine
YANG, Xiaofeng; * OHASHI, Toshihiro; TAKABAYASHI, Toyu (Honda R&D Co., Ltd.)
- B214** Visualization of knocking in a spark ignition engine
KAWAHARA, Nobuyuki; TOMITA, Eiji; SAKATA, Yoshitomo* (Okayama University)

B22 : Internal Combustion Engines III December 6 (Tue) 10:30–11:50

chair: Eiji TOMITA (Okayama University)

- B221** Evaluation of HCCI Characteristics by Super Rapid Compression Machine
WATAI, Kousuke; * INOUE, Kenji; TAKECHI, Seiichirou; KUWAHARA, Takuo; TANABE, Mitsuaki (Nihon University)

- B222** Study of Piston Compression ignition Phenomenon in Stratified Mixture
SHIBATA, Kentaro; * WAKAI, Kazunori; IHARA, Tadayoshi; QIN, Xiaojian (Gifu University)
- B223** Influence of Residual Gas on Auto-ignition and Combustion Characteristics in HCCI Engine
IIJIMA, Akira;^{1*} YOSHIDA, Koji;² SHOJI, Hideo² (¹Fuji Heavy Industries Ltd., ²Nihon University)
- B224** Measurement of Intermediate Species in HCCI Engine with Direct Sampling Method
KASSAI, Masaharu; * FUKATA, Osamu; OHTOMO, Mitsuaki; TEZAKI, Atsumu (The University of Tokyo)
- B23 : Internal Combustion Engines IV** December 6 (Tue) 13:10–14:50
chair: Teruyuki ITO (Nissan Motor Co., Ltd.)
- B231** Effect of the fuel injection position and the fuel injection pressure in CNG DI Stratified Combustion
KIKUCHI, Masato;^{1*} UEDA, Takamasa;² ARAKI, Mikiya;¹ SHIGA, Seiichi;¹ NAKAMURA, Hisao;¹ OBOKATA, Tomio;¹ TSUE, Mitsuhiro;³ KONO, Michikata³ (¹Gunma University, ²Nissan Motor Co., Ltd., ³University of Tokyo)
- B232** Study on Ignition Timing Control for Diesel Engines Using In-Cylinder Pressure Sensor
HASEGAWA, Mamoru; * SHIMASAKI, Yuichi; YAMAGUCHI, Satoshi; KOBAYASHI, Makoto; SAKAMOTO, Hideki; KITAYAMA, Naoto; KANDA, Tomohiro (Honda R&D Co.,Ltd.)
- B233** Analysis of intermediate species of cool ignition in HCCI engine using FT-IR
OHTOMO, Mitsuaki; * YAMAGUCHI, Takehiro; TEZAKI, Atsumu (The University of Tokyo)
- B234** In-Situ Fuel Concentration Measurement Using an IR Spark Plug Sensor by Laser Infrared Absorption Method
KAWAHARA, Nobuyuki; TOMITA, Eiji; HAYASHI, Kenta* (Okayama University)
- B235** Local Gas Temperature Measurement in Combustion Chamber Using Two-Wired Thermocouple
TSUNEKAWA, Takafumi; * CHOI, Seung-Hwan; MORIYOSHI, Yasuo (The University of Chiba)
- C21 : Diagnostics & Modeling IV** December 6 (Tue) 9:00–10:20
chair: Kazuhiro AKIHAMA (Toyota Central R&D Labs., Inc.)
- C211** Investigation of the Dynamics of Turbulent Premixed Flames by CH Double-Pulsed PLIF
TAKA, Shohei; * TANAHASHI, Mamoru; MIYAUCHI, Toshio (Tokyo Institute of Technology)
- C212** Application of Simultaneous Acetone-OH PLIF for Turbulent Premixed Flame
MANOME, Satoshi;^{1*} NAKAMURA, Yuji;² HAYASHI, Naoki;¹ YAMAMOTO, Kazuhiro;¹ YAMASHITA, Hiroshi¹ (¹Nagoya University, ²Hokkaido University)
- C213** NO Concentration and Temperature Measurements in Flames by LIF Imaging Spectroscopy with Standard Addition Method
KAZUYA, Okuno;^{1*} SANO, Takaya;¹ SAITOH, Hiroyasu;¹ YOSHIKAWA, Norihiko;¹ HAYASHI, Sigeru² (¹Nagoya University, ²Japan Aerospace Exploration Agency)
- C214** Time Resolved Concentration Measurement of Formaldehyde in HCCI Using Fluorescence-Lifetime Correction of Laser-Induced Fluorescence
YAMAGUCHI, Takehiro; * TEZAKI, Atsumu (The University of Tokyo)
- C22 : Microgravity I** December 6 (Tue) 10:30–11:50
chair: Daisuke SEGAWA (Osaka Prefecture University)
- C221** Observation of flame oscillation phenomenon induced by external radiation in microgravity
KYOZU, Akihiro; * NAKAMURA Yuji; FUJITA, Osamu (Hokkaido University)
- C222** Experimental Study on Fuel Droplet Array Combustion in Fuel Vapor - Air Mixture
SUGANUMA, Yusuke; * NOMURA, Hiroshi; UJIIE, Yasushige (Nihon University)
- C223** Flame spread behaviors of fuel droplet array with pre-evaporation
KIKUCHI, Masao;^{1*} YAMAMOTO, Shin;¹ YODA, Shinichi;¹ MIKAMI, Masato² (¹Japan Aerospace Exploration Agency, ²Yamaguchi University)
- C224** Numerical Analysis about Flame Spread between Fuel Droplets in Premixed Gas

YAMAMOTO, Shin;^{1*} KIKUCHI, Masao;¹ YODA, Shinichi;¹ NOMURA, Hiroshi;² SUGANUMA, Yusuke²
(¹Japan Aerospace Exploration Agency, ²Nihon University)

C23 : Microgravity II December 6 (Tue) 13:10–14:50

chair: Keiya NISHIDA (Hiroshima University)

- C231** Microgravity Experiments of Flame Spread on Fuel Droplet Array Using a Pendulum Suspender Movable in an Array-Direction
SETANI, Akinori;^{1*} NOMURA, Hiroshi;¹ UJIE, Yasusige;¹ HARA, Hitoshi² (¹Nihon University, ²Noritz Co., Ltd.)
- C232** Development of Uniform-Spray-Stream Burner for Microgravity Experiments and Combustion Experiments of Partially-Pre-vaporized Spray Stream
FUKUDA, Tomoyuki;^{*} NOMURA, Hiroshi; UJIE, Yasushige (Nihon University)
- C233** The Effect of DC Electric Fields on Combustion of Two Droplets under Microgravity
KUME, Isao;^{*} IMAMURA, Osamu; YAMASHITA, Kiyotaka; KAKINOKI, Muneatsu; TSUE, Mitsuhiro; KONO, Michikata (University of Tokyo)
- C234** Estimation of Heat Transfer Enhancement of Thermo-Acoustic Streaming Using Microgravity
YAMAUCHI, Yoshiki;^{*} KOIKE, Ryuji; YAMAMOTO, Kosuke; KUWAHARA, Takuo; TANABE, Mitsuaki (Nihon University)
- C235** Flame-Spread Behavior of Fuel-Droplet Arrays with Uneven Inter-Droplet Distance in Microgravity
OYAGI, Hiroshi;^{*} SHIGENO, Hisashi; MIKAMI, Masato; KOJIMA, Naoya (Yamaguchi University)

D21 : Propellants Combustion I December 6 (Tue) 9:00–10:20

chair: Harunori NAGATA (Hokkaido University)

- D211** Combustion Acceleration of Boron Particles in the Secondary Combustor of Ducted Rockets
MIYAYAMA, Taro;^{*} OSHIMA, Hideto; SYOJI, Toshiyuki; TANABE, Mitsuaki; KUWAHARA, Takuo (Nihon University)
- D212** The Effects of Potassium Nitrate in Burning Rate Characteristics of Black Powder
TAKEUCHI, Tsukasa;^{*} FUJIOKA, Yu; FUJISHIMA, Saori; TANABE, Mitsuaki; KUWAHARA, Takuo; YOSHIDA, Kouji (Nihon University)
- D213** 90% Hydrogen Peroxide/Polyethylene Solid Fuel Hybrid Rocket (II)
TSUJIKADO, Nobuo;^{1*} KOSHIMAE, Masatoshi;² ISHIKAWA, Rikiya;² KITAHARA, Kazuki;² ISHIHARA, Atsushi³ (¹Tokai Univ., ²Kawasaki Heavy Industries, ³Saitama Institute of Technology)
- D214** Effect of Thermocouple Leads on Temperature Measurement for the Burning Surface of a Solid Propellant
ISHIHARA, Atsushi;^{*} NOGUCHI, Yuuki (Saitama Institute of Technology)

D22 : Propellants Combustion II December 6 (Tue) 10:30–11:50

chair: Atsushi ISHIHARA (Saitama Institute of Technology)

- D221** Feasibility of HAN/DME as Propellant for Upper Stage Rockets
YOKOTE, Jun;^{*} MATUMOTO, Akira; KAMITAKE, Jun; ODA, Takaaki; TACHIBANA, Takeshi (Kyushu Institute of Technology)
- D222** A Numerical Simulation of Shear Coaxial LOX/GH₂ Jet Flame at Supercritical Pressure
MATSUYAMA, Shingo;^{*} SHINJO Junji; MIZOBUCHI, Yasuhiro; OGAWA, Satoru (Japan Aerospace Exploration Agency)
- D223** Development of film cooling combustor
KUNIEDA, Masatoshi;^{*} UMEMURA, Akira (Nagoya University)
- D224** Scale effect on combustion characteristics of CAMUI type hybrid rocket
ITOH, Mitsunori;^{1*} SASAKI, Jun-ya;² MAEDA, Takenori;¹ NAGATA, Harunori;¹ TOTANI, Tsuyoshi;¹ KUDO, Isao;¹ UEMATSU, Tsutomu³ (¹Hokkaido University, ²Hokkaido Institute of Technology, ³UEMATSU Electric Co.)

D23 : Solid Combustion & Incinerations I December 6 (Tue) 13:10–14:50

chair: Tadashige KAWAKAMI (Hosei University)

D231 Reaction Behavior of Pulverized Coal with Flash Pyrolizer and FTIR

TOMODA, Toshiyuki;^{1*} ISHIKAWA, Kazuo;¹ MIONO, Masato;¹ AKAMATSU, Fumiteru² (¹The Kansai Electric Power Co., Inc., ²Osaka University)

D232 Pyrolysis and gasification of herbaceous biomass

OKUMURA, Yukihiko;^{1*} OKADA, Takuya;² OKAZAKI, Ken² (¹Maizuru National College of Technology, ²Tokyo Institute of Technology)

D233 Optimization of pulverized wood combustion boiler for starting engine

AOKI, Akiko; * KAMBARA, Shinji; MORITOMI, Hiroshi (The University of Gifu)

D234 Optical Observations of Abrupt Heating Characteristics of a Micro Plastic-Resin Particle

YAMAKITA, Ryuji; * NISHINO, Kosuke; ISHINO, Yojiro; OHIWA, Norio (Nagoya Institute of Technology)

D235 Numerical Study of Polypropylene Counter Flow Diffusion Flame for High-Temperature Oxidizer Enriched with H₂O and CO₂

YOSHINAGA, Kentaro; * KOBAYASHI, Hideaki (Tohoku University)

E21 : Fire Research I December 6 (Tue) 9:00–10:20

chair: Osamu FUJITA (Hokkaido University)

E211 Examination on the heat movement and its influence when pouring water into heat storage object

LIAO, Chihong; * SASO, Yuko; OGAWA, Yoshio; TSURUDA, Takashi (National Research Institute of Fire and Disaster)

E212 Suppression of Heat Feedback in Pool Flames with Oxygen-Reduced Flow

SASO, Yuko; * GOTODA, Hiroshi (National Research Institute of Fire and Disaster)

E213 Scaling analyses on flame spread over liquids

KODAIRA, Yoshiyuki; * TAKAHASHI, Kozue; KUDO, Yuji; ITO, Akihiko (Hirosaki University)

E214 Extinguishments of a Diffusion Flame Formed over a Combustible Solid by Laser Ablation

TORIKAI, Hiroyuki;^{1*} KITAJIMA, Akio;² TAKEUCHI, Masao² (¹NEDO Fellow, AIST, ²AIST)

E22 : Fire Research II December 6 (Tue) 10:30–11:50

chair: Yuko SASO (National Research Institute of Fire and Disaster)

E221 Numerical Simulation of Gas Explosion for Large Scale

HASHIMOTO, Akinori; * MATSUO, Akiko (Keio University)

E222 Numerical Study of the Swirling Effect on the Structure of Diffusion Flames and Fire Whirls

CHUAH, Keng Hoo; * KUSHIDA, Genichiro (Aichi Institute of Technology)

E223 Numerical Simulation on Flame Spread in Partially Premixed Atmosphere

OGATA, Yoshinori; * YAMAMOTO, Kazuhiro; YAMASHITA, Hiroshi (Nagoya University)

E224 Numerical Analysis of Gas Explosion in Building where Pressure Radiation was Considered

KATAKURA, Yuichi; * MATSUO, Akiko (Keio University)

E23 : Fire Research III December 6 (Tue) 13:10–14:50

chair: Ritsu DOBASHI (University of Tokyo)

E231 Suppression of Wood Combustion in an Enclosure by Injection of Nitrogen-Enriched Air

SAKAMOTO, Naohisa;^{1*} LIAO, Chihong;² SASO, Yuko;² OGAWA, Yoshio;² TSURUDA, Takashi;²

MURAI, Naoyuki;¹ MOURI, Nobuyuki;¹ INOUE, Toshinori³ (¹Morita Corporation, ²National Research Institute of Fire and Disaster, ³Kobelcokaken Corporation)

E232 Abrupt Rise of Temperature during the Combustion of Wood in an Enclosure

OGAWA, Yoshio;^{1*} LIAO, Chihong;¹ SASO, Yuko;¹ TSURUDA, Takashi;¹ MURAI, Naoyuki;² MORI, Nobuyuki;² SAKAMOTO, Naohisa;² INOUE, Toshinori³ (¹National Research Institute of Fire and Disaster, ²MORITA Corporation, ³Kobelcokaken Corporation)

E233 A Study on Fire Behaviour of RDF

SUZUKI, Takeshi; * TSURUDA, Takashi; OGAWA Yoshio; LIAO Chihong (National Research Institute of Fire and Disaster)

E234 Numerical Simulation of Flame Spread over Insulated Wire for Fire Safety in Space

KUDO, Takuya;^{1*} SATOH, Hiroyuki;¹ NAKAMURA, Yuji;¹ FUJITA, Osamu;¹ KIKUCHI, Masao² (¹Hokkaido University, ²Japan Aerospace Exploration Agency)

E235 Occurrence Tendency of Forest Fire in Southeast Asia

HAYASAKA, Hiroshi;^{1*} TAKAHASHI, Hidenori;² USUP, Aswin³ (¹Hokkaido University, ²Institute of Hokkaido Hydrology and Climate, ³University of Palangka Raya)

P2 : Poster Session II December 6 (Tue) 14:50–15:40

chair: Seiichi SHIGA (Gunma University)

P201 High Temperature Reaction of Dimethyl Ether-N₂O

TANIGUCHI, Takashi; * HIDAHA, Yoshiaki (Ehime University)

P202 Measurement and Calculation of Detonation Limits in Hydrogen-Air Mixtures and Carbon hydride-Air Mixtures

TAKANISHI, Kenta; * TOMIDUKA, Takayuki; SUSA, Akio; KOSHI, Mitsuo (The University of Tokyo)

P203 Influence of Intake Air Oxygen Concentration on Combustion Characteristics for Small Gasoline Engine

SHINKAI Tatsuya; TAJIMA Maiko; * KAWAKAMI Tadashige (Hosei University)

P204 Determination of Ignition delay time of Toluene and Xylene by Shock tube

INAMURA, Takayoshi; * SAKAI Yasuyuki; OGURA, Teppei; KOSHI, Mitsuo (The University of Tokyo)

P205 An Experimental Study of Soot Generation Mechanism in Combustion Processes

SHUKLA, Bikau; * SUSA, Akio; KOSHI, Mitsuo (The University of Tokyo)

P206 A Study of Pressure Dependence of Butyl Radical and O₂ Reaction

OGURA, Teppei; * MIYOSHI, Akira; KOSHI, Mitsuo (The University of Tokyo)

P207 Numerical Study on Ignition Characteristics of Methane-air Mixture Using Detailed Chemical Kinetics

MATSUYAMA, Ryusuke; * YAMAMOTO, Kazuhiro; YAMASHITA, Hiroshi (Nagoya University)

P208 Combustion Gas Monitoring using Mass Spectrometer

SUZUKI, Katsuhiro; * MAEKAWA, Maya; RUICHI, Naoki; NOHMI, Takashi (Nohmi Bosai LTD.)

P209 High Temperature Reaction of Allyl Chloride

YANO, Kaori; * WAKAMATSU, Hitoshi; HIDAHA, Yoshiaki (Ehime University)

P210 A Fundamental Study on the Absorption of NO and NO₂ by Water Scrubbers

MATSUNAGA, Naoki; * HORI, Morio (Takushoku University)

P211 Numerical Simulation of Combustion Oscillations and Control in a Lean Premixed Combustor

SHINJO, Junji; * MATSUYAMA, Shingo; MIZOBUCHI, Yasuhiro; OGAWA, Satoru (Japan Aerospace Exploration Agency)

- P212** Laser Breakdown Ignition with target of partially reformed low quality fuel in pre combustion chamber
Furutani, Hirohide;^{1*} Yoshishige Takayama;² SAITO, Takeshi;¹ TAKAHASHI, Sanyo¹ (¹AIST, ²University of Tsukuba)
- P213** Ignition Behavior of Suspended Sodium Droplet in Dry-Air Flow
SATO, Kenji;^{*} TAKEKUMA, Akiko (Toho University)
- P214** Numerical Simulation on Fire Extinguishment by Water Mist
ENOMOTO, Takashi;^{*} UMEMURA, Akira (Nagoya University)
- P215** Numerical Simulation of Furnace with Two-Stage Entrainment Burner
IKEGAYA, Tomoaki;^{*} YAMASHITA, Hiroshi; YAMAMOTO, Kazuhiro (Nagoya University)
- P216** Unsteady Flame Behavior in Packed Bed
S. G. Kim;^{1*} T. Yokomori;¹ S. Kumar;¹ A. Mukhopadhyay;² N. I. Kim;³ S. Maruyama;¹ K. Maruta¹ (¹Tohoku University, ²Jadavpur University, ³Chung-Ang University)
- P217** Numerical Simulation on Atomization and Mixing in a Liquid Rocket Engine Combustion Chamber
SHIMIZU, Kazuya^{*} (Japan Aerospace Exploration Agency)
- P218** Characteristics of small-scale methanol steam reformer
MATSUMOTO, Kenichiro;¹ NAKAUJIMA, Takahiro;^{1*} JUN, Daesu;¹ NARUSE, Yukio;² INAMI, Shigeru;² UEDA, Toshihisa¹ (¹Keio University, ²Daido Metal Co.,LTD.)
- P219** Small Gasification Incinerator with a New Combustion Method
KANENO, Shozo;¹ KANENO, Shinichiro;^{1*} MORIUE, Osamu;² MURASE, Eiichi² (¹E. P. P. Technique Lab. Co., Ltd., ²Kyushu University)
- P220** Recovery and Destruction of HFC from Waste Heat Insulating Forms
TAKEUCHI, Masao;^{*} KAMO Toru; KODERA, Yoichi; SUZUKI, Yoshizo; HATANAKA, Takeshi; HAMATU, Kunihito (AIST)
- P221** Combustibility Evaluation of Heavy Fuel Oil by Modified Fuel Ignitability Analyzer
TAJIMA, Hiroshi; ASAURA, Shinya;^{*} TAKASAKI, Koji; STRØM, Alexander (Kyushu Univesity)
- P222** Experiments on Spontaneous Ignition of Hydrocarbon Fuel Droplets Initiated by Low-Temperature Oxidation Reactions
MORIUE, Osamu; INOKUCHI, Hisashi;^{*} SHIMADA, Kei; MURASE, Eiichi (Kyushu University)
- P223** Effects of Cavity Configuration on Mixing and Combustion of Liquid Fuels in a SCRAM Jet Engine Combustor
KOMARU, Tatsuya;^{1*} KAZAMI, Hideki;¹ IWATA, Yuji;² USUKI, Kenji;¹ OSAKA, Jun;¹ TAKAHASHI, Shuhei;² WAKAI, Kazunori;² TSUE, Mitsuhiro;¹ KONO, Michikata¹ (¹University of Tokyo, ²Gifu University)
- P224** A Study on Flame Spread of Two-dimensional Droplet Cluster considering Local Flame-spread Limit
SHIGENO, Hisashi;^{*} OYAGI, Hiroshi; MIKAMI, Masato; KOJIMA, Naoya (Yamaguchi University)

DAY 3rd - December 7 (Wed)

A31 : Turbulent Combustion I December 7 (Wed) 9:00–10:20
chair: Yojiro ISHINO (Nagoya Institute of Technology)

A311 The Change of Turbulent Flow through the Turbulent Premixed Flame
NISHIKI, Shinnouke;^{1*} HASEGAWA, Tatsuya;² HIMENO, Ryutarō³ (¹Nagaoka University of Technology, ²Nagoya University, ³RIKEN)

A312 Numerical simulation of turbulent premixed combustion by a hybrid model
OURYOUJI, Kazuhiro;^{1*} NISHIKI, Shinnosuke;² TSUBOI, Kazuya;¹ HASEGAWA, Tatsuya¹ (¹Nagoya

University, ²Nagaoka University of Technology)

A313 Enhancement of Combustion in a Closed Vessel with a Vortex Ring (3rd Report)

KANZAKI, Shogo; * Gouda, Shigeo; ZHANG, Yuyin; ISHIZUKA, Satoru (Hiroshima University)

A314 Investigation of Flame Propagation in a Vortex Ring by Simultaneous Measurements of a PIV System and a High Speed Video Camera

GOUDA, Shigeo; * KANZAKI, Shogo; ZHANG, Yuyin; ISHIZUKA, Satoru (Hiroshima University)

A32 : Turbulent Combustion II December 7 (Wed) 10:30–11:50

chair: Toshiaki KITAGAWA (Kyushu University)

A321 Mixing and Combustion Characteristics of a Fuel Jet Injected into a Ducted Air Flow

KONISHI, Yusuke; * KITSUKAWA, Takuma; NAKAJIMA, Akihiro; KAWAGUCHI, Osamu (Keio University)

A322 An Experimental Study of Flame Characteristics of Jet Diffusion Flames in Cylindrical Furnaces

NISHIO, Shigenori; ¹* INOHAE, Junya; ²NODA, Susumu¹ (¹Toyohashi University of Technology, ²Nipponseiko)

A323 Flame-Front Movement in Turbulent Premixed Flames

FURUKAWA, Junichi* (Tokyo Metropolitan College of Technology)

A324 Development of SGS Combustion Model based on Hierarchical Structures of Turbulent Premixed Flames

SHIWAKU, Nobuhiro; * TANAHASHI, Mamoru; MIYAUCHI, Toshio (Tokyo Institute of Technology)

A33 : Turbulent Combustion III December 7 (Wed) 13:00–14:20

chair: Kazuhiro YAMAMOTO (Nagoya University)

A331 Flame-Front Movement and Gas Flow Velocity in Turbulent Flame

NOGUCHI, Yoshiki; ¹* FURUKAWA, Junichi² (¹Ryukoku University, ²Tokyo Metropolitan College of Technology)

A332 Variation in Turbulent Burning Velocity of Premixed Flame by Pressure

KITAGAWA, Toshiaki; TSUNEYOSHI, Kousaku; * SMALLBONE, Andrew John (Kyushu University)

A333 A Study of Turbulent Premixed Flames Diluted with CO₂ at High-Pressure and High-Temperature

HAGIWARA, Hirokazu; ¹* KANEKO, Hideaki; ²OGAMI, Yasuhiro; ²KOBAYASHI, Hideaki² (¹Mitsubishi Heavy Industries, ²Tohoku University)

A334 Flame Structure of Turbulent Flame Produced by Highly Preheated Mixture

AHN, Chulju; ¹* KITAJIMA, Akio; ²AKAMATSU, Fumiteru; ¹KATSUKI, Masashi¹ (¹Osaka University, ²National Institute of Advanced Industrial and Science Technology)

A34 : Turbulent Combustion IV December 7 (Wed) 14:30–15:30

chair: Tatsuya HASEGAWA (Nagoya University)

A341 Modeling for Turbulent Jet Non-premixed Flames using a Combined PDF/Moment Method Based on Detailed Reaction Mechanism

YAMAMURO, Kunihiko; ¹* NAKASHIMA, Keiji; ²NODA, Susumu² (¹Mitsubishi Heavy Industries, LTD., ²Toyohashi University of Technology)

A342 Modeling of Hydrogen/Nitrogen Turbulent Diffusion Flame Using a Moment Method Handling Finite-Rate Chemistry

FUJISAKA, Masato; * OKU, Atushi; NODA, Susumu (Toyohashi University of Technology)

A343 Local Reaction Zone Thickness of Non-Premixed Flames of Propane with Highly Preheated Low-Oxygen Concentration Air

HASHIMOTO, Hideki;^{1*} FURUKAWA, Junichi;² MOCHIDA, Susumu;³ HASEGAWA, Toshiaki³ (¹Chiba Institute of Science, ²Tokyo Metropolitan College of Technology, ³Nippon Furnace)

B31 : Ignition & Inhibition II December 7 (Wed) 9:00–10:20

chair: Koji YOSHIDA (Nihon University)

B311 Study of Heat Release Rate Improvement using Laser-Induced Ignition

SAITO, Takeshi;^{1*} KIMURA, Yoshihide;² FURUTANI, Hirohide;¹ TAKAHASHI, Sanyo¹ (¹AIST, ²University of Kogakuin)

B312 The Analysis of Laser induced breakdown of Laser ignition

MIYATA, Daisuke;^{1*} HORI, Terushige;² AKAMATSU, Humiteru;¹ SIBAHARA, Masahiko;¹ KATSUKI, Masashi¹ (¹Osaka University, ²Osaka Police)

B313 Effects of NO and NO₂ produced by a Plasma Torch on Enhancement of Ignition and Combustion

IKEDA, Jun;^{1*} ABE, Naoyuki;¹ TAKITA, Kenichi;¹ MASUYA, Goro;¹ JU, Yiguang² (¹Tohoku University, ²Princeton University)

B314 Effect of Position of Fuel Injection on Ignition and Combustion by Plasma in a Supersonic Flow

ABE, Naoyuki; * NAKANE, Hideaki; TAKITA, Kenichi; MASUYA, Goro (Tohoku University)

B32 : Ignition & Inhibition III December 7 (Wed) 10:30–11:50

chair: Kenichi TAKITA (Tohoku University)

B321 An Effect of Ignition Energy on the Behavior of Initial Flame Kernels in Spark Ignition Process of Methane/Air Combustible Mixtures

NAKAYA, Shinji;^{1*} HATORI, Kazuo;² TSUE, Mitsuhiro;³ KONO, Michikata;³ SEGAWA, Daisuke;¹ KADOTA, Toshikazu¹ (¹Osaka Prefecture University, ²National Marine Research Institute, ³The University of Tokyo)

B322 Combustion of Lean Mixtures Initiated by an Imploding Detonation Plug

HOTTA, Kazuro;^{1*} FUJIMOTO, Akihiro;¹ MORIUE, Osamu;¹ TATEFUKU, Teruo;² SUZUKI, Minoru;² MURASE, Eiichi¹ (¹Kyushu University, ²JFE Engineering)

B323 A Study on the Ignition of Hydrogen-Air Premixed Gas by Oxygen Radical Addition

TAKAYAMA, Yoshishige; * NISHIOKA, Makihito (University of Tsukuba)

B324 Characteristics of Ignition and Extinction of Reformed Gas

IIDA, Akihito; * NISHIOKA, Makihito (University of Tsukuba)

B33 : Ignition & Inhibition IV December 7 (Wed) 13:00–14:20

chair: Nobuyuki KAWAHARA (Okayama University)

B331 Impact of Products of Pre- and Post-Cool-Flame Reaction on Ignition in Engines

KUWAHARA, Kazunari; * ANDO, Hiromitsu (Mitsubishi Motors Corporation)

B332 Ignition hydrocarbon/oxygen premixture at low pressures

SHUHEI, Shintani;^{1*} YUASA, Saburo;¹ KAWASHIMA, Hideto;² NODA, Keiichiro² (¹Tokyo Metropolitan University, ²Japan Aerospace Exploration Agency)

B333 Ultraviolet luminescence and density disturbance on shock-compression low-temperature ignition

YUMOTO, Miki; * FURUTANI, Masahiro; OHTA, Yasuhiko (Nagoya Institute of Technology)

B334 Numerical Analysis of Premixed Compression Ignition in Hydrogen-Air

FURUICHI, Shinji; * AKIMOTO, Naoyuki; SUGIMURA, Tadayoshi (Meijo University)

B34 : Catalytic Combustion December 7 (Wed) 14:30–15:30

chair: Hiroshi ENOMOTO (Kanazawa University)

B341 A Research of DME Catalytic Combustion for Micro Energy System (2nd Report)

FUJITA, Osamu; * HATTORI, Naoki (Hokkaido University)

B342 Numerical Study on Catalytic Combustion of Hydrogen-air Mixture in a Channel Using Detailed Chemical Kinetics

KOGE, Shunichi; ^{1*} YAMASHITA, Hiroshi; ¹ MATSUNAGA, Shuichi; ² YAMAMOTO, Kazuhiro¹ (¹Nagoya University, ²Japan Steel Works, Ltd.)

B343 Catalytic Combustion Characteristics of Hydrogen; Air Mixture

MATSUNAGA, Shuichi; ^{1*} OKOSHI, Aki; ¹ KOUGE, Shunichi; ² YAMASHITA, Hiroshi² (¹Japan Steel Works, Ltd., ²Nagoya University)

C31 : Spray Combustion I December 7 (Wed) 9:00–10:20

chair: Masao KIKUCHI (Japan Aerospace Exploration Agency)

C311 Evaporation Experiments of a Suspended Fuel Droplet by Radiative Heating

TAKIKAWA, Hitoshi; * NOMURA, Hiroshi; YAMASAKI, Hiroshi; UJIIE, Yasushige (Nihon University)

C312 Effects of Water Vapor in Ambient Air Flow on Soot Concentration Distribution in a Droplet Flame

SHIRAIISHI, Yuji; * KADOTA, Toshikazu; NAKAYA, Shinji; SEGAWA, Daisuke (Osaka Prefecture University)

C313 Mechanism of Droplets Evaporation in Homogeneous Isotropic Turbulence

SATO, Makoto; * TANAHASHI, Mamoru; MIYAUCHI, Toshio (Tokyo Institute of Technology)

C314 Ignition and Combustion of a Fuel-Droplet array in a Hot and Humid Gas flow

SEKIGUCHI, Tatsuya; * MOGI, Hiroyuki; KAWAGUCHI, Osamu (Keio University)

C32 : Spray Combustion II December 7 (Wed) 10:30–11:50

chair: Masato MIKAMI (Yamaguchi University)

C321 Modelling of Large Eddy Simulation of Spray Combustion

BABA, Yuya; * AKAMATSU Fumiteru (Osaka University)

C322 Effect of strain rate on the behavior of spray flames

HWANG, Seung Min; ^{1*} KUROSE, Ryoichi; ¹ WATANABE, Hiroaki; ¹ AKAMATSU Fumiteru² (¹Central Research Institute of Electric Power Industry, ²Osaka University)

C323 Development of Micro Gas Turbine Combustor with a Recirculation Zone Induced by an Upward Swirl

YOTORIYAMA, Kousaku; ^{1*} AMANO, Shunsuke; ² FURUHATA, Tomohiko; ¹ ARAI, Masataka¹ (¹Gunma University, ²Ebara Research Co., Ltd.)

C324 Combustion Characteristics of Spray Compound Mixture

OKAMURA, Toru; ^{1*} NISHIDA, Keiya; ¹ KIMURA, Naohiko; ² YOSHIDA, Hajime³ (¹University of Hiroshima, ²Nissan Motor Corporation, ³Japan Coast Guard Academy)

C33 : Spray Combustion III December 7 (Wed) 13:00–14:20

chair: Hiroshi NOMURA (Nihon University)

C331 The Effect of Waterdrop Diameter of W/O Emulsion on the Spray Flame Combustion

TAKEDA, Shuko; * FUCHIHATA, Manabu; IDA, Tamio (Kinki University)

C332 Effect of W/O emulsified fuel combustion behavior on spray combustion

FUKUI, Masahiro; * KOIE, Kazutoshi; IHARA, Tadayoshi; WAKAI, Kazunori (Gifu University)

- C333** The Development of a Tubular Flame Burner for Kerosene and Heavy Oil (3rd Report)
SHIRAGA, Yosuke;^{1*} UEKAWA, Yoshihiro;¹ SHIMOKURI, Daisuke;¹ ISHIZUKA, Satoru;¹ AKIYAMA, Syunichi;² SUZUKAWA, Yutaka² (¹Hiroshima University, ²JFE Steel Corporation)
- C334** Effects of Ambient Pressure on Evaporation Behavior of O/W Emulsion Fuel Droplet on a Hot Surface
TANAKA, Hajime;^{1*} KADOTA, Toshikazu;¹ SEGAWA, Daisuke;¹ YAMASAKI, Hiroshi;² 2 (²Nihon University)
- C34 : Spray Combustion IV** December 7 (Wed) 14:30–15:30
chair: Yasuo MORIYOSHI (Chiba University)
- C341** Visualization of a Diesel Spray Impinging on a Heated Wall using Exciplex Method
NAGOSHI, Kazuaki;^{1*} TERASHIMA, Kentaro;¹ SEGAWA, Daisuke;¹ NAKAYA, Shinji;¹ KADOTA, Toshikazu;¹ TSUE, Mitsuhiro;² KONO, Michikata;² KANDA, Tomohiro;³ UCHIMOTO, Tatsuya³ (¹Osaka Prefecture University, ²University of Tokyo, ³Honda R&D Co.,Ltd.)
- C342** Measurement of Spray Characteristics by High Data-rate Time-series Interferometric Laser Imaging System
KOMADA, Kohsuke;^{1*} AKAMATSU, Fumiteru;¹ OOMAGARI, Kazutoshi;¹ TANAKA, Yasue;² KATSUKI, Masashi¹ (¹Osaka University, ²KANOMAX Japan Inc.)
- C343** Simultaneous Measurement of Liquid and Vapor Phases of Liquid Fuel Spray by Excimer Fluorescence Method
AKAMATSU, Fumiteru;^{*} TOKUNAGA, Kazuhisa; KATSUKI, Masashi (Osaka University)
- D31 : Solid Combustion & Incinerations II** December 7 (Wed) 9:00–10:20
chair: Kenji AMAGAI (Gunma University)
- D311** Flame Behavior in Waste Fuel Combustion under High Temperature and Pressure Atmosphere
FUJII, Naoto;^{*} AOTA, Takatomo; OKAJIMA, Akiko; OKAJIMA, Satoshi (Hosei University)
- D312** Effects of The Intensity of The Local-contact Microwave on The Solid Fuel Flame Shape
ENOMOTO, Hiroshi;^{1*} YAMASHITA, Masaya;¹ HIEDA, Noboru;¹ HARA, Hitoshi² (¹Kanazawa University, ²Noritz)
- D313** Development of Clean Combustion Technology for Industrial Waste Materials with High Temperature Air
SHIMO, Nobuo;^{*} KOIDE, Kiemon; ABE, Nobuo (Idemitsu Kosan Co., Ltd.)
- D314** Pyrolysis Behavior of solid waste by Pyrolysis gas reforming
UEDA Koji;^{1*} HIROSE Tomoaki;¹ HIMENO Syuji;¹ FUJITA Syoichi;¹ FUKUMATSU Teruki;² ENDO Masato;² YANASE Tetsuya² (¹Nagaoka University of Technology, ²NGK insulators, LTD)
- D32 : Detonations I** December 7 (Wed) 10:30–11:50
chair: Tetsuro OBARA (Saitama University)
- D321** Effect of Cell Size on Promotion of Detonation Wave Propagation by Reflecting Board
WAKITA, Masashi;^{*} NUMAKURA, Ryusuke; ITO, Yusuke; SUGATA, Shigetoshi; NAGATA, Harunori; TOTANI, Tsuyoshi; KUDO, Isao (Hokkaido University)
- D322** Three-dimensional Numerical Simulation on Three-dimensional C-J Detonation Waves Propagating in a Circular Tube
TSUBOI, Nobuyuki;^{1*} HAYASHI, A. Koichi² (¹Japan Aerospace Exploration Agency, ²Aoyama Gakuin University)
- D323** Effects of Gap Configuration on Behavior of Detonation Propagating in a Gap
YAMAMOTO, Yosuke;^{*} HOSSAIN, Md. Abdul Malek Monwar; ISHII, Kazuhiro; TSUBOI, Takao (Yokohama National University)
- D324** Study of the One-step, Two-step and Full-mechanism Detonation Model

LIU, Yunfeng;^{1*} SATO, Hiroyuki;¹ TSUBOI, Nobuyuki;² HAYASHI, A. Koichi¹ (¹Aoyama Gakuin University, ²Japan Aerospace Exploration Agency)

D33 : Detonations II December 7 (Wed) 13:00–14:00

chair: Kazuhiro ISHII (Yokohama National University)

D331 Analysis on Double Wave Fronts of Propagating Detonation Wave

MISAWA, Junta;^{*} ADACHI, Hiroyuki; KITANO, Shota; SATO, Hiroyuki; HAYASHI, A. Koichi (Aoyama Gakuin University)

D332 Behavior of Detonation Wave Propagation in Multi Rectangular Orifice

SENTANUHADY, Jayan; TSUKADA, Yutaka;^{*} YOSHIHASHI, Teruo; OBARA, Tetsuro; OHYAGI, Shigeharu (Saitama University)

D333 Particle diameter dependence of aluminum/oxygen two-phase detonation

KOBAYASHI, keisuke;^{1*} LIU, Ryanfan;¹ HAYASHI, A. Koichi,¹ BENKIEWICZ, Krzysztof;² TSUBOI, Nobuyuki³ (¹Aoyama Gakuin University, ²Combustion Center of Excellence, ³JAXA)

D34 : Detonations III December 7 (Wed) 14:30–15:30

chair: Kazuaki INABA (Tokyo University of Science)

D341 Experiment of the performance of Single-Tube Pulse Detonation Turbine Engine

OFUKA, Takeshi;^{1*} OCHI, Akira;¹ YOSHINAGA, Kouichi;¹ YATSUFUSA, Tomoaki;¹ ENDO, Takuma;¹ TAKI, Shirou;¹ AOKI, Shuichi;² UMEDA, Yoshito² (¹Hiroshima University, ²Toho Gas Co., Ltd.)

D342 Numerical Analysis on Structures of H₂-O₂ Detonation Waves Propagating in Converging - Diverging Nozzles

JOTAKI, Hiroyuki;^{1*} TSUBOI, Nobuyuki;² HAYASHI, A. Koichi¹ (¹Aoyama Gakuin University, ²JAXA)

D343 Influence of Oversupply of Mixture for Propagation of Detonation Wave on PDE using Reflecting Board

NUMAKURA, Ryusuke;^{*} WAKITA, Masashi; ITOH, Yusuke; SUGATA, Shigetoshi; NAGATA, Harunori; TOTANI, Tsuyoshi; KUDO, Isao (Hokkaido University)

E31 : Combustion Synthesis December 7 (Wed) 9:00–10:20

chair: Nilson KUNIOSHI (Osaka University)

E311 Effects of Particle and Specimen Sizes on the Self-Ignition of Materials Synthesis

MAKINO, Atsushi^{*} (Japan Aerospace Exploration Agency)

E312 Synthesis of High-quality Diamond Film for Electronic Device Applications

OKUMURA, Yukihiko; KANAYAMA, Kouichi;^{*} TABARU, Masaya; Teraki, Yosuke (Maizuru National College of Technology)

E313 Flame Synthesis of Carbon Nanomaterials by Radiative Controlled Combustion

OKUYAMA, Masaaki;^{1*} TOMIMURA, Toshio;² ECHIGO, Ryozo³ (¹Yamagata University, ²Kyushu University, ³Tokyo Institute of Technology)

E314 Carbon Nanotube Synthesis in Ethylene Diffusion Flame

ITO, Hiroyuki;^{*} NAKADE, Yusuke; UCHIYAMA, Tomoyasu; FUJITA, Osamu (Hokkaido University)

E32 : New Concepts December 7 (Wed) 10:30–11:50

chair: Noriyuki KOBAYASHI (Nagoya University)

E321 Thermal energy production by hydrothermal oxidation

FUKAYAMA, Masato;^{*} HIROSAKA, Kazuma; TSUCHIDA, Kazuhiro; ISHIDA, Yasuyuki; KITAGAWA, Kuniyuki; HASEGAWA, Tatsuya (Nagoya University)

E322 Experimental Investigation of combustion improvement by utilization of Electro-Magnetic Radiant Energy

OKAJIMA Satoshi;^{1*} TAKAHASHI Seitaro;² ZUSHI Osamu;³ KOYAMA masaru;⁴ ITO masahiro⁴ (¹Hosei University, ²Sanso Co. Ltd., ³Itochu Urban Community Ltd., ⁴Fire Up Ltd.)

E323 Influence of the Intermittent Injection on Low NO_x Combustion using the Cyclone-Jet Combustor

UEJIMA, Mitsuhiko;^{1*} ONUMA, Yoshiaki² (¹Tokyo Metropolitan College of Technology, ²Toyohashi University of Technology)

E324 NO_x Emission Characteristics of a Tubular Flame Burner

UEKAWA, Yoshihiro;^{1*} SHIRAGA, Yosuke;¹ SHIMOKURI, Daisuke;¹ ISHIZUKA, Satoru;¹ OKADA, Kuniaki;² ISHIOKA, Munehiro;² SUZUKAWA, Yutaka² (¹Hiroshima University, ²JFE Steel Corporation)

E33 : Alternative Fuels I December 7 (Wed) 13:00–14:20

chair: Atsumu TEZAKI (University of Tokyo)

E331 Study on Structures of Hydrocarbon Reformed Gas-Air Flames

YAMADA, Tomoko;^{*} NISHIOKA, Makihito (University of Tsukuba)

E332 Effects of Inert Gases on Laminar Combustion Properties of Outwardly Propagating DME Flames

TANOUE, Kimitoshi;^{*} MORI, Shuho; SHIMADA, Fumio (Oita University)

E333 Large Scale Pool Fire of Dimethyl Ether

MOGI, Toshio;¹ OKADA, Ken;¹ MATSUMURA, Tomoharu;¹ HORIGUCHI, Sadashige;^{1*} NAKAYAMA, Yoshio;¹ YOSHIDA Masatake;¹ YANAGAWA, Tatsuhiko;² IKEDA, Kenji;² NANBA, Mitsuo² (¹AIST, ²High Pressure Safety Institute of Japan)

E334 Fuel Ignition Quality Control by Cumene Hydroperoxide and Its Decomposition

HASHIMOTO, Kohtarō^{*} (Honda R & D Co., Ltd.)

E34 : Alternative Fuels II December 7 (Wed) 14:30–15:30

chair: Yukihiro OKUMURA (Maizuru National College of Technology)

E341 The Study on De-hydrogen Sulfide Process in a Waste Gasification System

SAKABE, Motoya;^{1*} KOBAYASHI, Nobusuke;¹ KOBAYASHI, Jun;¹ PIAO, Guilin;² HATANNO, Shigenobu;¹ ITAYA, Yoshinori;¹ MORI, Shigekatsu¹ (¹Nagoya University, ²N.U.I.P.C.)

E342 PM Emission Characteristics of Biodiesel

KAWANO, Daisuke;^{*} ISHII, Hajime; GOTO, Yuichi; NODA, Akira (National Traffic Safety and Environment Laboratory)

E343 Study on Combustion Characteristics of Biomassgas using Detailed Reaction Calculation

IIDA, Akihito; NISHIOKA, Makihito^{*} (University of Tsukuba)