

37th Symposium on
Chemical Kinetics and Dynamics

Book of Abstracts

第 37 回化学反応討論会
講演要旨集

June 1 (Wed)-3 (Fri), 2022
Sakura Hall, Tohoku University
Hybrid (On-site / Online)

Hosted by

Local Organizing Committee of SCKD37

Co-hosted by

Institute of Multidisciplinary Research for Advanced Materials,
Tohoku Univ. (IMRAM)
Intelligent Cosmos Academic Foundation

Cooperated by

The Chemical Society of Japan
The Spectroscopical Society of Japan
Japan Society for Molecular Science
The Physical Society of Japan
The Atomic Collision Society of Japan

Symposium

- Venue

Sakura Hall, Katahira Campus, Tohoku University
E01 Building, 2-1-1 Katahira
Aoba-ku, Sendai 980-8577, Japan
Telephone : 022-217-5386

- Oral session

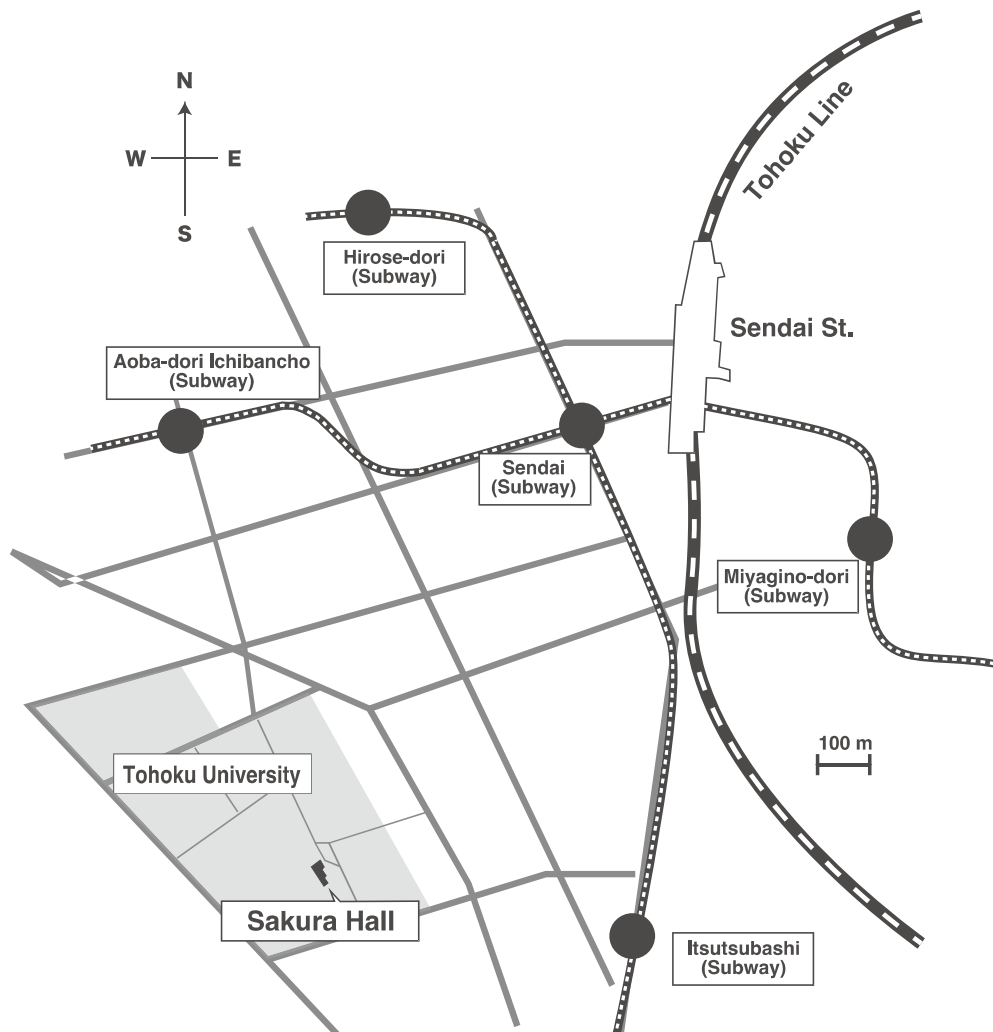
Hybrid: On-site (Sakura Hall 2F) / Online (ZOOM)

- Poster session

Online (SpatialChat)

- Exhibitions

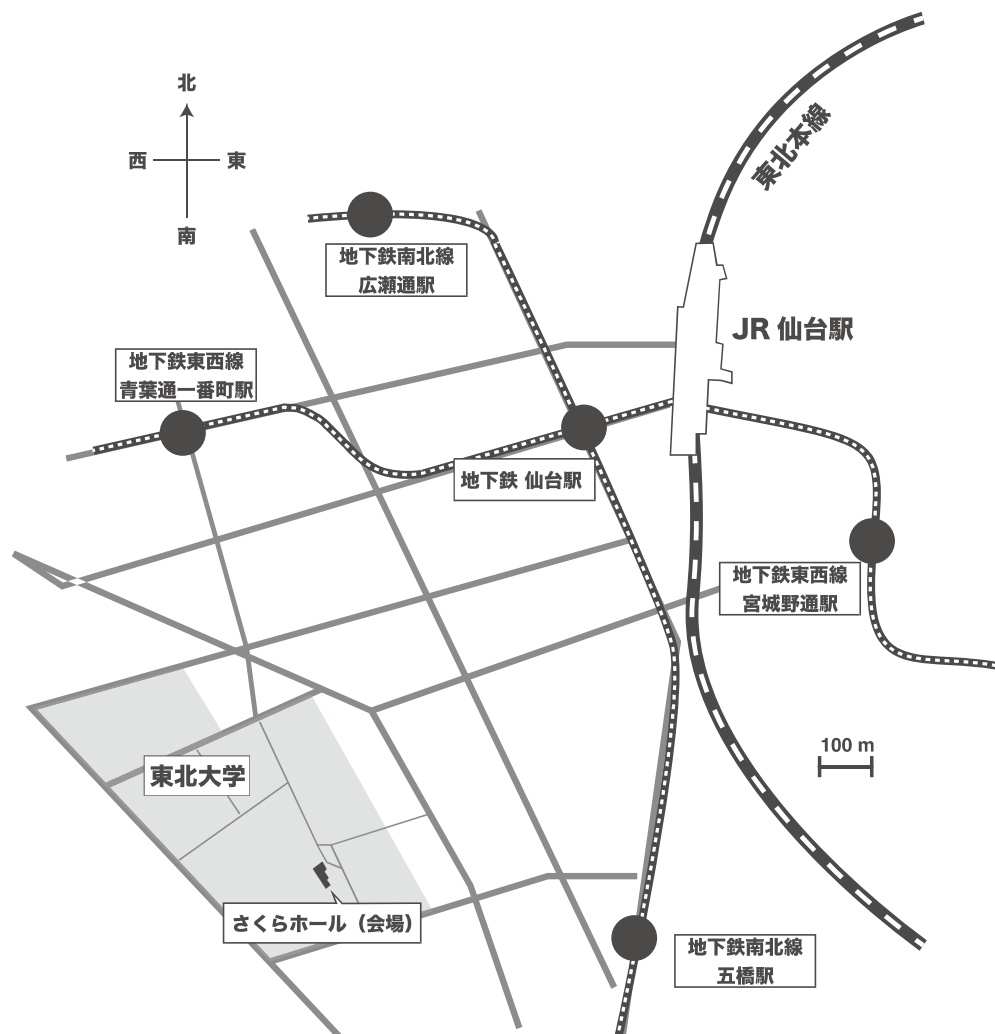
Hybrid: On-site (Sakura Hall 1F) / Online (SpatialChat)



シンポジウム

・会場
東北大学 片平キャンパス さくらホール
〒980-8577
宮城県仙台市青葉区片平2-1-1 E01
電話：022-217-5386

- 口頭発表
ハイブリッド：現地(さくらホール2階)/オンライン(ZOOM)
- ポスター発表
オンライン(SpatialChat)
- 企業展示
ハイブリッド：現地(さくらホール1階)/オンライン(SpatialChat)



Day & Timetable “SCKD37”

Day 1, June 1 (Wed) 9:30 - 17:00 (JST)	Day 2, June 2 (Thu) 9:00 - 17:20 (JST)	Day 3, June 3 (Fri) 9:00 - 15:30 (JST)
	9:00 - 9:50 (JST) Chair: MINEMOTO, Shinichirou	9:00 - 9:50 (JST) Chair: YAMAZAKI, Kaoru
9:30 - 9:45 (JST) Opening remarks	2A1 MIZUNO, Tomoya	3A1 MIZUNO, Yuta
9:45 - 10:50 (JST) Chair: OHSHIMA, Yasuhiro	2A2 HISHIKAWA, Akiyoshi	3A2 TSUTSUMI, Takuro
1A1 ITO, Yuri	9:50 - 10:55 (JST) Chair: HISHIKAWA, Akiyoshi	9:50 - 10:55 (JST) Chair: TAKETSUGU, Tetsuya
S1 LEE, Yuan-Pern	S3 JONES, Darryl	S5 MAEDA, Satoshi
10:50 - 11:40 (JST) Chair: HORIO, Takuya	2A3 INOUE, Tomoya	3A3 MURAKAMI, Tatsuhiko
1A2 YAMAZAKI, Kaoru	10:55 - 11:15 (JST) Break	10:55 - 11:15 (JST) Break
1A3 TAMURA, Yoshiaki	11:15 - 12:20 (JST) Chair: ITAKURA, Ryuji	11:15 - 12:05 (JST) Chair: OKINO, Tomoya
11:40 - 11:50 (JST) Sponsor talk session1 Spectra-Physics K.K.	S4 LOH, Zhi-Heng	3A4 NISHI, Takanori
	2A4 YAMAMOTO, Yo-ichi	3A5 NIKAIDO, Makoto
11:50 - 13:20 (JST) Lunch time	12:20 - 14:00 (JST) Lunch time	12:05 - 13:35 (JST) Lunch time
13:20 - 14:50 (JST) Chair: KINO, Yasushi	14:00 - 15:30 (JST) Poster session 2 2P01 - 2P22	13:35 - 15:05 (JST) Chair: MISAIZU, Fuminori
S2 SATO, Tetsuya K.		S6 FUJII, Asuka
1A4 HITACHI, Akira		3A6 MATSUMOTO, Yoshiteru
1A5 STEMBO, Garrek		3A7 ISHIKAWA, Haruki
14:50 - 15:00 (JST) Sponsor talk session2 Phototechnica K.K.		15:05 - 15:15 (JST) Group photo shoot
		15:15 - 15:30 (JST) Closing remarks
15:00 - 15:30 (JST) Break	15:30 - 15:50 (JST) Break	
15:30 - 17:00 (JST) Poster session 1 1P01 - 1P22	15:50 - 17:20 (JST) Poster session 3 3P01 - 3P21	

37th Symposium on Chemical Kinetics and Dynamics

Invited lectures: (40min, including discussion)

- S1** “Reaction kinetics and mechanism involving Criegee intermediates”
LEE, Yuan-Pern (National Yang Ming Chiao Tung University, Taiwan)
June 1, 10:10 – 10:50 (JST)
- S2** “Single atom chemistry of superheavy element at JAEA”
SATO, Tetsuya K. (Japan Atomic Energy Agency, Japan)
June 1, 13:20 – 14:00 (JST)
- S3** “Probing electronic structure and collision dynamics using electron and photon spectroscopies”
JONES, Darryl (Flinders University, Australia)
June 2, 9:50 – 10:30 (JST)
- S4** “Ultrafast dynamics of ionized liquid water and aqueous solutions”
LOH, Zhi-Heng (Nanyang Technological University, Singapore)
June 2, 11:15 – 11:55 (JST)
- S5** “Toward ab initio reaction prediction: On-the-fly kinetic simulation through automated reaction path exploration combining kinetics analysis”
MAEDA, Satoshi (Hokkaido University, Japan)
June 3, 9:50 – 10:30 (JST)
- S6** “Infrared spectroscopy of hemibonded radical cluster cations”
FUJII, Asuka (Tohoku University, Japan)
June 3, 13:35 – 14:15 (JST)

Oral presentations: (15 min talk with 10 min discussion)

1A1 – 1A5	June 1
2A1 – 2A4	June 2
3A1 – 3A7	June 3

Poster presentations:

1P01 – 1P22	June 1, 15:30 – 17:00 (JST)
2P01 – 2P22	June 2, 14:00 – 15:30 (JST)
3P01 – 3P21	June 2, 15:50 – 17:20 (JST)

Sponsor presentations: (10 min talk without discussion)

June 1, 11:40 – 11:50 (JST)	Spectra-Physics K.K.
June 1, 14:50 – 15:00 (JST)	Phototechnica K.K.

Day 1 (June 1)

9:30 – 9:45 (JST) Opening remarks

9:45 – 10:50 (JST) Chair: OHSHIMA, Yasuhiro

9:45 1A1

Ion imaging of infrared photodissociation of $\text{H}_3\text{O}^+\text{-Ar}$ and $\text{H}^+(\text{H}_2\text{O})_2\text{-Ar}$
ITO, Yuri; KOMINATO, Mizuhiro; NAKASHIMA, Yuji; KANNO, Manabu;
MISAIZU, Fuminori
(Tohoku University)

10:10 S1

Reaction kinetics and mechanism involving Criegee intermediates
LEE, Yuan-Pern
(National Yang Ming Chiao Tung University, Taiwan)

10:50 – 11:40 (JST) Chair: HORIO, Takuya

10:50 1A2

Carbon *KLL* normal Auger induced femtosecond nonadiabatic reaction
dynamics in tropone dication ($\text{C}_7\text{H}_6\text{O}^{2+}$)
YAMAZAKI, Kaoru^{1,2}; MIDORIKAWA, Katsumi¹
(¹RAP, RIKEN; ²PRESTO, JST)

11:15 1A3

Theoretical study of photoemission time delay in framework of multiple
scattering theory
TAMURA, Yoshiaki¹; YAMAZAKI, Kaoru²; UEDA, Kiyoshi³; HATADA,
Keisuke¹
(¹Department of Physics, University of Toyama; ²RIKEN Center for Advanced
Photonics, RIKEN; ³Graduate School of Science, Tohoku University)

11:40 – 11:50 (JST) Sponsor talk session 1

11:40 Spectra-Physics K.K.

11:50 – 13:20 (JST) Lunch time

13:20 – 14:50 (JST) Chair: KINO, Yasushi

13:20 **S2**

Single atom chemistry of superheavy element at JAEA

SATO, Tetsuya K.

(Japan Atomic Energy Agency, Japan)

14:00 **1A4**

Reaction kinetics in scintillation quenching and Birks' law for dark matter searches

HITACHI, Akira

(Waseda University)

14:25 **1A5**

Observation of vibrational polaritons in ordered and isotropic 8CB liquid crystal

STEMO, Garrek; YAMADA, Hayata; KATSUKI, Hiroyuki; YANAGI, Hisao

(Nara Institute of Science and Technology)

14:50 – 15:00 (JST) **Sponsor talk session 2**

14:50 Phtotechnica K.K.

15:00 – 15:30 (JST) **Break**

15:30 – 17:00 (JST) **Poster session 1**

Day 2 (June 2)

9:00 – 9:50 (JST) Chair: MINEMOTO, Shinichirou

9:00 2A1

Universality of photoelectron momentum distribution near a backward rescattering caustic by strong infrared fields

MIZUNO, Tomoya¹; YANG, Tianqi¹; KURIHARA, Takayuki¹; KANAI, Teruto¹; TOLSTIKHIN, Oleg²; MORISHITA, Toru³; ITATANI, Jiro¹

(¹Univ. of Tokyo; ²Moscow Institute of Phys. and Tech.; ³UEC)

9:25 2A2

Helicity-dependent dissociative tunneling ionization of CF₄ in multicycle circularly polarized intense laser fields

FUJISE, Hikaru¹; UEMURA, Megumi¹; HASEGAWA, Hiroka¹; IKEYA, Daimu¹; MATSUDA, Akitaka¹; MORISHITA, Toru²; MADSEN, Lars Bojer³; JENSEN, Frank³; TOLSTIKHIN, Oleg I.⁴; HISHIKAWA, Akiyoshi¹

(¹Nagoya U; ²UEC; ³Aarhus U; ⁴MIPT)

9:50 – 10:55 (JST) Chair: HISHIKAWA, Akiyoshi

9:50 S3

Probing electronic structure and collision dynamics using electron and photon spectroscopies

JONES, Darryl

(Flinders University, Australia)

10:30 2A3

Study on the chemical reactivity of boron-doped aluminum nanoclusters supported on organic surfaces

INOUE, Tomoya; NAKAJIMA, Atsushi

(Keio University, Faculty of Science and Technology)

10:55 – 11:15 (JST) Break

11:15 – 12:20 (JST) Chair: ITAKURA, Ryuji

11:15 **S4**

Ultrafast dynamics of ionized liquid water and aqueous solutions

LOH, Zhi-Heng

(Nanyang Technological University, Singapore)

11:55 **2A4**

Electron inelastic scattering in liquids and spectral retrieval method for UV photoemission spectroscopy

YAMAMOTO, Yo-ichi; YANO, Hiroto; SUZUKI, Toshinori

(Kyoto University)

12:20 – 14:00 (JST) **Lunch time**

14:00 – 15:30 (JST) **Poster session 2**

15:30 – 15:50 (JST) **Break**

15:50 – 17:20 (JST) **Poster session 3**

Day 3 (June 3)

9:00 – 9:50 (JST) Chair: YAMAZAKI, Kaoru

9:00 3A1

An algorithm for computing phase space structures in chemical reaction dynamics using Voronoi tessellation

MIZUNO, Yuta; TAKIGAWA, Mikoto; MIYASHITA, Saki; NAGAHATA, Yutaka; TERAMOTO, Hiroshi; KOMATSUZAKI, Tamiki
(Hokkaido University)

9:25 3A2

Reaction Space Projector (ReSPer) Analysis: Application to Photoreaction of Stilbene

TSUTSUMI, Takuro; ONO, Yuriko; TAKETSUGU, Tetsuya
(Hokkaido University)

9:50 – 10:55 (JST) Chair: TAKETSUGU, Tetsuya

9:50 S5

Toward ab initio reaction prediction: On-the-fly kinetic simulation through automated reaction path exploration combining kinetics analysis

MAEDA, Satoshi
(Hokkaido University, Japan)

10:30 3A3

On-the-fly nonadiabatic ONIOM molecular dynamics for the intersystem crossing reaction of the dioxetanone intermediate via the acridinium ester

MURAKAMI, Tatsuhiko^{1,2}; NANBU, Shinkoh¹
(¹Sophia University; ²Saitama University)

10:55 – 11:15 (JST) **Break**

11:15 – 12:05 (JST) Chair: OKINO, Tomoya

11:15 **3A4**

Population transfer in a laser-driven three-level system by a noisy quantum computer

NISHI, Takanori; LÖTSTEDT, Erik; YAMANOUCHI, Kaoru

(The University of Tokyo)

11:40 **3A5**

Population control of torsional vibration in biphenyl derivatives using wave-packet interference

NIKAIDO, Makoto¹; MIZUSE, Kenta^{1,2}; OHSHIMA, Yasuhiro

(¹Tokyo Institute of Technology; ²Kitasato University)

12:05 – 13:35 (JST) **Lunch time**

13:35 – 15:05 (JST) Chair: MISAIZU, Fuminori

13:35 **S6**

Infrared spectroscopy of hemibonded radical cluster cations

FUJII, Asuka

(Tohoku University, Japan)

14:05 **3A6**

Microscopic chiral-recognition in propylene oxide dimer induced by hydrogen bond of an achiral pyrrole molecule

MATSUMOTO, Yoshiteru; SAKURAI, Kento

(Shizuoka University)

14:40 **3A7**

IR-induced isomerization and its backward reaction of cold phenol-methanol cluster cations

OZEKI, Masayoshi; SATO, Hikaru; ORITO, Masataka; MIZUSE, Kenta;

ISHIKAWA, Haruki

(Kitasato University)

15:05 – 15:15 (JST) **Group photo shoot**

15:15 – 15:30 (JST) **Closing remarks**

Poster Presentation

* Candidates for the Best Poster Prize

Session 1: June 1, 15:30 – 17:00

1P01*

Six-dimensional model calculations and wave-packet observation of intermolecular vibration in benzene-CH₄ van der Waals complex

SASAKI, Toru; NAKAMURA, Masaaki; OHSHIMA, Yasuhiro

(Tokyo Institute of Technology)

1P02*

Consideration of Li diffusion in LiCoO₂ cathode material by DFT calculation

TORII, Masato; KAWAKAMI, Takashi; YAMANAKA, Shusuke; OKUMURA, Mitsutaka

(Osaka University)

1P03

Photoelectron imaging spectroscopy of Sc-doped silver cluster anions

MINAMIKAWA, Kento; NISHIZATO, Tasuku; HASHIMOTO, Haruki; MATSUMOTO, Kazuaki; ARAKAWA, Masashi; HORIO, Takuya; TERASAKI, Akira

(Kyushu University)

1P04*

Development of Coulomb Explosion Imaging Apparatus Equipped with Molecule-Deflection Quantum-State Selector

SAIDA, Ryota; UENO, Kazuki; NAKAMURA, Masaaki; OHSHIMA, Yasuhiro

(Tokyo Institute of Technology)

1P05*

External electric field effects on the photophysics of thioflavin-T in a PMMA film

ISLAM, Ahatashamul; KIKUCHI, Yudai; IIMORI, Toshifumi

(Muroran Tech.)

1P06*

Development of a new pharmacological index based on the momentum space distribution of the frontier molecular orbitals

LONG, Sihan; NAGAO, Soichiro; ONITSUKA, Yuuki; TAKAHASHI, Masahiko

(Tohoku University)

1P07

Measurement of recycling muon from muon catalyzed fusion reaction in solid hydrogen

OKUTSU, Kenichi¹; MIYASHITA, Konan¹; NAKASHIMA, Ryota¹; KONISHI, Ren¹; SASAKI, Kyosuke¹; YASUDA, Kazuhiro¹; YAMASHITA, Takuma¹; KINO, Yasushi¹; OKADA, Shinji²; SATO, Motoyasu²; OKA, Toshitaka³; KAWAMURA, Naritoshi⁴; KANDA, Sohtarō⁴; SHIMOMURA, Koichiro⁴; STRASSER, Patrick⁴; TAKESHITA, Soshi⁴; TAMPO, Motonobu⁴; DOIUCHI, Shogo⁴; NAGATANI, Yukinori⁴; NATORI, Hiroaki⁴; NISHIMURA, Shoichiro⁴; PANT, Amba Datt⁴; MIYAKE, Yasuhiro⁴; ISHIDA, Katsuhiko⁵

(¹Tohoku University; ²Chubu University; ³JAEA; ⁴KEK; ⁵RIKEN)

1P08*

A theoretical study on electron self-exchange reactions of transition metal complexes

MUTSUJI, Akihiro¹; SAITA, Kenichiro²; MAEDA, Satoshi^{2,3,4,5}

(¹Grad. School of Chem. Sci. and Eng., Hokkaido Univ.; ²Department of Chemistry, Faculty of Science, Hokkaido Univ.; ³ICReDD, Hokkaido Univ.; ⁴JST-ERATO; ⁵NIMS)

1P09*

A Theoretical Study of Organic Reaction Dynamics in a Low Dimensional Space Reduced by Principal Component Analysis

TANAKA, Ryoichi¹; MIZUNO, Yuta^{2,4}; TSUTSUMI, Takuro³; TSITSVERO, Mikhail⁴; TODA, Mikito²; TAKETSUGU, Tetsuya^{3,4}; KOMATSUZAKI, Tamiki^{2,4}

(¹Grad. School Chem. Sci. Eng., Hokkaido Univ.; ²Res. Inst. Electr. Sci., Hokkaido Univ.; ³Grad. School Sci., Hokkaido Univ.; ⁴WPI-ICReDD, Hokkaido Univ.)

1P10*

Systematic search for decomposition pathways of formic acid on the TiO₂ (101) surface

NABATA, Hitoshi¹; MAEDA, Satoshi^{2,3,4,5}

(¹Graduate School of Chem. Sci. and Eng., Hokkaido Univ.; ²Faculty of Science, Hokkaido Univ.; ³WPI-ICReDD, Hokkaido Univ.; ⁴NIMS; ⁵JST-ERATO)

1P11

Challenge to form a molecular ensemble with macroscopic threefold symmetry

MINEMOTO, Shinichirou; HARA, Naoki; SAKAI, Hirofumi

(Grad. Sch. Sci., The University of Tokyo)

1P12*

The potential energy surface fitting by GRRM searching for the $\text{H}^- + \text{C}_2\text{H}_2 \rightarrow \text{H}_2 + \text{C}_2\text{H}^-$ reaction

IIDA, Ryusei; HASHIMOTO, Yu; SAITO, Kohei; TAKAYANAGI, Toshiyuki;
MURAKAMI, Tatsuhiko
(Saitama University)

1P13*

Role of the 3s and 3p Rydberg states in the ultraviolet CH_3 photodissociation of dimethylamine

WANGCHINGCHAI, Peerapat; YAMASAKI, Katsuyoshi; KOHGUCHI, Hiroshi
(Hiroshima University)

1P14*

Development of a theoretical method for predicting the atomic momentum distribution of polyatomic molecules

KANAYA, Satoru¹; TACHIBANA, Yuichi¹; ONITSUKA, Yuuki¹; WATANABE, Noboru¹; KONO, Hirohiko²; TAKAHASHI, Masahiko¹
(¹IMRAM/Tohoku Univ.; ²Sch. Sci./Tohoku Univ.)

1P15

Revealing the ultrafast dynamics in tetracene molecules with sub-10fs UV pulse laser

TERAMOTO, Takahiro¹; LIU, Jun²; DU, Juan²; KOBAYASHI, Takayoshi³
(¹Osaka University; ²Shanghai Institute of Optics and Fine Mechanics; ³The University of Electro-Communications)

1P16*

Ring-polymer molecular dynamics simulations of the interstellar $\text{H}_3^+ + \text{CO} \rightarrow \text{H}_2 + \text{HCO}^+ / \text{HOC}^+$ reaction

HASHIMOTO, Yu; SAITO, Kohei; TAKAYANAGI, Toshiyuki
(Saitama University)

1P17*

Asymmetric dissociative ionization of NO_2 in phase-locked two-color intense laser fields

ONO, Yuki¹; HASEGAWA, Hiroka¹; MATSUDA, Akitaka¹; HISHIKAWA, Akiyoshi^{1,2}
(¹Grad. Sc. Sci, Nagoya U; ²RCMS, Nagoya U)

1P18

Hypervalent iodine compound in the gas phase: observation and assignment of vibronic structures of $(C_5H_5N)_2I^+$

MURAMATSU, Satoru; MATSUYAMA, Akihito; INOKUCHI, Yoshiya
(Hiroshima University)

1P19

Characteristics of DNA damage induced by a femtosecond laser filament in water
AKAMATSU, Ken¹; ENDO, Tomoyuki²; AKAGI, Hiroshi²; KONO, Hirohiko³;
ITAKURA, Ryuji²

(¹Institute for Quantum Life Science, QST; ²Kansai Photon Science Institute, QST;
³Tohoku Univ.)

1P20*

Substituent effects on the photochemical reaction for halogenated naphthalene with carbon tetrachloride

MATSUKASA, Ayana; WATANABE, Akihiro
(KOBE City College of Technology)

1P21

Wavelength dependence of electronic relaxation and dissociation dynamics in formaldehyde

ENDO, Tomoyuki^{1,2}; NEVILLE, Simon³; WANIE, Vincent²; BEAULIEU, Samuel²;
QU, Chen⁴; DESCHAMPS, Jude²; LASSONDE, Philippe²; SCHMIDT, Bruno⁵;
FUJISE, Hikaru⁶; FUSHITANI, Mizuho⁶; HISHIKAWA, Akiyoshi^{6,7}; HOUSTON,
Paul^{8,9}; BOWMAN, Joel¹⁰; SCHUURMAN Michael^{3,11}; LÉGARÉ, François²;
IBRAHIM, Heide²

(¹KPSI-QST; ²EMT-INRS; ³University Ottawa; ⁴University of Maryland; ⁵few-cycle Inc.; ⁶Nagoya University; ⁷RCMS Nagoya University; ⁸Cornel University; ⁹Georgia Institute of Technology; ¹⁰Emory University; ¹¹NRC of Canada)

1P22*

Coupled electronic and protonic motion in H₂O in intense laser fields by extended multi-configuration time-dependent Hartree-Fock method

WANG, Lidong; KIMURA, Ryuto; KATO, Tsuyoshi; YAMANOUCHI, Kaoru
(School of Science, The University of Tokyo)

Session 2: June 2, 14:00 – 15:30

2P01

Reaction rate constants of Isopropyl peroxy radical ($C_3H_7O_2$) and 1-Hydroxypropane-2-ylperoxy radical ($C_3H_7O_3$) with NO_2 under atmospheric conditions

KOHNO, Nanase¹; OU, Langying¹; LI, Jiaru¹; SAKAMOTO, Yosuke^{1,2}; KAJII, Yoshizumi^{1,2}

(¹Kyoto University; ²National Institute for Environmental Studies)

2P02*

Infrared multiple-angle incidence resolution spectrometry for measurement of the absorption cross section of dangling-OH bonds in water ice

HASEGAWA, Takeshi; NAGASAWA, Takumi; NUMADATE, Naoki; HAMA, Tetsuya

(The University of Tokyo)

2P03*

Complex scaling calculation of photodissociation cross section of positronium negative ion

KAMIYA, Naoki; YAMASHITA, Takuma; OKUTSU, Kenichi; KINO, Yasushi

(Tohoku University)

2P04

Toward the investigation of wave packet dynamics in He nanodroplets by velocity map imaging

KUMA, Susumu¹; TERAMOTO, Takahiro²; AZUMA, Toshiyuki¹

(¹RIKEN; ²Osaka University)

2P05*

Effects of solvent molecules on the S- π hemibond: infrared spectroscopy of [Bz-(H₂S)-X_n]⁺, X=H₂O (n=1, 2), CH₃OH (n=1)

KATO, Takeru; FUJII, Asuka

(Tohoku University)

2P06*

Theoretical study of the dissociative photodetachment dynamics of the $O_2^- \cdot H_2O$

HASHIMOTO, Yu; SAITO, Kohei; TAKAYANAGI, Toshiyuki

(Saitama University)

2P07*

Absorption cross section, fluorescence, and photodissociation of liquid carboxylic acids at 213 and 266 nm

SAITO, Shota¹; NUMADATE, Naoki¹; HAMA, Tetsuya^{1,2}

(¹Komaba Institute for Science, The University of Tokyo; ²Department of Basic Science, The University of Tokyo)

2P08

Non-adiabatic three-body calculation of X-ray spectrum from muonic hydrogen molecular ions

YAMASHITA, Takuma; YASUDA, Kazuhiro; OKUTSU, Kenichi; KINO, Yasushi
(Tohoku University)

2P09*

Solvent effect on Photochemical Reactions for Aromatic Compounds with Carbon Tetrachloride

NAKATANI, Takeomi; WATANABE, Akihiro
(KOBE City College of Technology)

2P10

Photo-bleaching of firefly luciferin

KUMAGAI, Ryo¹; ONO, Ryohei^{1,2}; AKIYAMA, Hidefumi²; ITABASHI, Hideyuki¹;
HIYAMA, Miyabi¹

(¹Gunma University; ²ISSP, Tokyo University)

2P11*

Surface hopping molecular dynamics of XH₂ (X=Si, Ge, Sn, Pb) considering spin-orbit coupling effect

WADA, Satoi; TSUTSUMI, Takuro; SAITA, Kenichiro; TAKETSUGU, Tetsuya
(Hokkaido University)

2P12*

Structural characterization of vapor-deposited amorphous water by decoupled-OD stretching mode

NAGASAWA, Takumi; HASEGAWA, Takeshi; NUMADATE, Naoki; HAMA, Tetsuya

(Komaba Institute for Science, The University of Tokyo)

2P13*

Direct measurement for the reaction rate constants of large alkenes with OH
FUSHIMI, Ryota; SUGITA, Ryo; GUNGAAJAV, Lkhagvasuren; OGUCHI, Tatsuo
(Toyohashi University of Technology)

2P14

High-resolution laser spectroscopy of S₁-S₀ transition of acetaldehyde
NAKAJIMA, Kosuke¹; KASAHARA, Shunji¹; SHIMIZU, Akira¹; TANIGUCHI, Rin¹; BABA, Masaaki²
(¹Kobe University; ²Kyoto University)

2P15*

Photodissociation dynamics of dimethyl sulfoxide at 213 nm studied by velocity map imaging
HATTORI, Junya; HOSHINO, Shoma; ISHII, Kento; TSUKIYAMA, Koichi
(Tokyo University of Science)

2P16*

Electronic states and reactivities of palladium nanoclusters on organic substrates
SHINOMIYA, Koh; INOUE, Tomoya; NAKAJIMA, Atsushi
(Keio University, Faculty of Science and Technology)

2P17*

Orbital analysis by photodissociation dynamics of dimethylzinc
OKUDA, Yuuka; HAZE, Misato; NAGAMORI, Keigo; YAMASAKI, Katsuyoshi;
KOHGUCHI, Hiroshi
(Hiroshima University)

2P18

Development of multifragment 3D momentum imaging methods for investigating ultrafast molecular dynamics of polyatomic molecules
OKINO, Tomoya; MIDORIKAWA, Katsumi
(RIKEN)

2P19*

Temporal-mode selectivity in three-wave mixing optical parametric frequency conversion
NOMURA, Kenya; SAKO, Tokuei
(Nihon University)

2P20

Application of atomic momentum spectroscopy to a heteronuclear diatomic molecule

TACHIBANA, Yuichi; ONITSUKA, Yuuki; TAKAHASHI, Masahiko

(Tohoku University)

2P21*

Asymmetric dissociative tunneling ionization of CF₄ in phase-locked ω -2 ω intense laser fields

HASEGAWA, Hiroka¹; WALMSLEY, Tiffany²; MATSUDA, Akitaka¹; MORISHITA, Toru³; MADSEN, Lars B.⁴; JENSEN, Frank⁵; TOLSTIKHIN, Oleg I.⁶; HISHIKAWA, Akiyoshi^{1,7}

(¹Graduate School of Science, Nagoya University; ²School of Chemistry, University of Edinburgh; ³The University of Electro-Communications; ⁴Department of Physics and Astronomy, Aarhus University; ⁵Department of Chemistry, Aarhus University; ⁶Moscow Institute of Physics and Technology; ⁷Research Center for Materials Science, Nagoya University)

2P22*

A simulation study for energy separation of recycling muons after muon catalyzed fusion

NAKASHIMA, Ryota¹; OKUTSU, Kenichi¹; YAMASHITA, Takuma¹; KINO, Yasushi¹; MIYASHITA, Konan¹; YASUDA, Kazuhiro¹; KONISHI, Ren¹; SASAKI, Kyosuke¹; OKADA, Shinji²; SATO, Motoyasu²; OKA, Toshitaka³; KAWAMURA, Naritoshi⁴; KANDA, Sohtarō⁴; SHIMOMURA, Koichiro⁴; STRASSER, Patrick⁴; TAKESHITA, Soshi⁴; TAMPO, Motonobu⁴; DOIUCHI, Shogo⁴; NAGATANI, Yukinori⁴; NATORI, Hiroaki⁴; NISHIMURA, Shoichiro⁴; PANT, Amba Datt⁴; MIYAKE, Yasuhiro⁴; ISHIDA, Katsuhiko⁵

(¹Tohoku University; ²Chubu University; ³JAEA; ⁴KEK; ⁵RIKEN)

Session 3: June 2, 15:50 – 17:20

3P01*

High-resolution laser spectroscopy of $S_1 \leftarrow S_0$ transition of *trans*-stilbene

SHIMIZU Akira¹; NAKAJIMA Kosuke¹; KASAHARA Shunji¹; BABA Masaaki²;
NAKAYAMA Naofumi³

(¹Univ. Kobe; ²Komaba Institute for Science, The Univ. of Tokyo; ³CONFLEX co.)

3P02*

Structural specificity of energy transfer of photoexcited methyl nitrite in the S_1 state

YAMAGUCHI, Tatsuya; INOUE, Kento; UNEMI, Yugo; YAMASAKI, Katsuyoshi;
KOHGUCHI, Hiroshi

(Hiroshima University)

3P03*

Total cross section for low- and ultralow-energy electron collision with N_2O

AKASAKA, Minori; NISHIYAMA, Taisei; KAMOSHITA, Masahiko;
MURAKAMI, Kenta; KITAJIMA, Masashi

(Tokyo Institute of Technology)

3P04

A binary (e, 2e) study on Ne at incident electron energies up to 4 keV for elucidating the asymptotic behavior of the plane-wave theory to its high energy limits

NAKAJIMA, Isao¹; YAMAZAKI, Masakazu²; POPOV, Yuri³; TAKAHASHI, Masahiko¹

(¹Tohoku Univ.; ²Tokyo Tech.; ³Moscow State Univ.)

3P05*

Complete rotational assignment of the (0,0) band of $CS(A^1\Pi-X^1\Sigma^+)$ strongly perturbed by the $a^3\Sigma^+$ state

KUROKO, Yuri; KANESAKI, Mayuu; KOHGUCHI, Hiroshi; YAMASAKI, Katsuyoshi

(Hiroshima Univ.)

3P06*

Internal conversion of pyrimidine bases from $\pi\pi^*$ state studied using time-resolved extreme UV photoemission spectroscopy

MIURA, Yuta; KARASHIMA, Shutaro; ORIMO, Natsumi; YAMAMOTO, Yo-ichi;
SUZUKI, Toshinori

(Kyoto University)

3P07

Effect of cyclodextrin addition on galvanic replacement reactions in gold recovery

YOSHIDA, Hiroaki; BABA, Kiminori

(Hiroshima University)

3P08*

Reflection High-Energy Electron Diffraction study of crystalline ice formed in cryogenic environments

SATO, Reo; TANIGUCHI, So; NUMADATE, Naoki; HAMA, Tetsuya

(Komaba Institute for Science, The Univ. of Tokyo)

3P09*

Measurements of Arrhenius Parameters for Thermal Isomerization with Lifetimes on the Order of Hours by Temperature Programmed Technique

SEKO, Yuji; AOKI, Yudai; WADA, Akihide

(Kobe University)

3P10*

Theoretical study on excited state dynamics of cyanine dye 1122C

MINEGISHI, Yusuke; SAITA, Kenichiro; TSUTSUMI, Takuro; TAKETSUGU, Tetsuya

(Hokkaido University)

3P11

Photofragment imaging of oriented 1-chloro-2-iodo-1,1,2-trifluoroethane (CClF₂CHF_I) correlated with laser polarization

KAWAMATA, Hiroshi¹; CHE, Dock-Chil¹; NAKAMURA, Masaaki²; KASAI, Toshio³; LIN, King-Chuen³

(¹Osaka University; ²Tokyo Institute of Technology; ³National Taiwan University)

3P12*

Photochemical products of 2,2'-dimethylbiphenyl with UV laser

NAKAGAWA, Shouto; WATANABE, Akihiro

(KOBE City college of Technology)

3P13

Symmetry breaking in electron-impact dissociative ionization of CO₂ and N₂

WATANABE, Noboru; TAKAHASHI, Masahiko

(IMRAM, Tohoku University)

3P14*

Morphology and performance of monolithic perovskite solar cells studied by FESEM and electrochemical analyses

UCHIDA, Miyuki; NIHASHI, Tomoyo; MITSUKE, Koichiro
(Josai University)

3P15*

Implementing dynamical bifurcation into kinetic simulation: A case study of an intramolecular Diels–Alder reaction

ITO, Takuma¹; MAEDA, Satoshi^{2,3,4}; HARABUCHI, Yu^{2,3,4}

(¹Grad. School of Chem. Sci. and Eng., Hokkaido Univ.; ²Faculty of Science, Hokkaido Univ.; ³WPI-ICReDD; ⁴JST-ERATO)

3P16

Dynamics of a rotational wave packet of H₂O induced by an intense femtosecond laser field

KIKUCHI, Isamu¹; FUKAHORI, Shinichi^{1,2}; HASEGAWA, Hirokazu^{1,2}

(¹Graduate School of Arts and Sciences, The Univ. of Tokyo; ²Komaba Institute for Science, The Univ. of Tokyo)

3P17*

Sub-nanosecond time-resolved fluorescence spectroscopy for relaxation kinetics of photoexcited dye molecules

IE, Kanon; WATANABE, Rina; MITSUKE, Koichiro
(Josai University)

3P18*

Exploring superatomic orbitals of size-selected silver cluster anions by photoelectron imaging

NISHIZATO, Tasuku; MINAMIKAWA, Kento; HASHIMOTO, Haruki;
MATSUMOTO, Kazuaki; ARAKAWA, Masashi; HORIO, Takuya; TERASAKI,
Akira

(Kyushu University)

3P19*

Electron-ion Coincidence Imaging of O₂ in Circularly Polarized Intense Laser Fields with Additional Dissociation Pulses

IKEYA, Daimu¹; MATSUDA, Akitaka¹; FUSHITANI, Mizuho¹; HISHIKAWA,
Akiyoshi^{1,2}

(¹Dep. of Chem., Nagoya Univ.; ²RCMS, Nagoya Univ.)

3P20*

Flexible solar cells based on a nanocrystalline TiO₂ layer deposited on an ITO-PEN film

VU, thuy Linh; SHIBAYAMA, Takumi; MITSUKE, Koichiro
(Josai University)

3P21

Theoretical investigation of the enhancement of positron affinity by the vibration and dimerization of non-polar carbon disulfide

FURUSHIMA, Miku¹; YOSHIDA, Daisuke^{1,2}; KITA, Yukiumi¹; SHIMAZAKI, Tomomi¹; TACHIKAWA, Masanori¹

(¹Graduate School of Nanobioscience, Yokohama City University; ²RIKEN Nishina Center for Accelerator-Based Science)