

## Program

### May 18 (Friday)

09:10-09:20            Opening    Hirohiko Kono (Tohoku University, Japan)

Chair: Koichi Yamashita (The University of Tokyo, Japan)

09:20-09:50    **O01**   Robert J. Gordon (University of Illinois at Chicago, USA)

*Controlling matter with light: From atoms to eyeballs*

09:50-10:20    **O02**   Heather D. Whitley, K. Birgitta Whaley (University of California,  
Berkeley, USA)

*Quantum solvation effects on electronic spectroscopy of planar aromatic molecules in helium droplets*

10:20-10:40    **O03**   Y. Yamakita (Tohoku University, Japan), R. Takahashi, N. Hori, K. Ohno,  
S. R. Procter, A. L. Goodgame, T. P. Softley, F. Merkt

*Controlling the translation of molecules in electric fields: Towards infra-thermal chemistry*

10:40-11:00            Break

Chair: Akiyoshi Hishikawa (Institute for Molecular Science, Japan)

11:00-11:25    **O04**   Kenji Ohmori (Institute for Molecular Science, Japan)

*Visualizing and controlling picometric quantum ripples in molecules*

11:25-11:55    **O05**   Gustav Gerber (University of Würzburg, Germany)

*Quantum control of femtochemistry in the gas phase, liquid phase and on surfaces*

11:55-12:25    **O06**   Kuo Kan Liang, Chih-Kai Lin and Huan-Cheng Chang, Michitoshi  
Hayashi, Sheng Hsien Lin (Institute of Atomic & Molecular Science,  
Taiwan)

*Theoretical treatments of ultrafast electron transfer from adsorbed dye molecule to semiconductor nanocrystalline surface*

12:25-13:35            Lunch

Chair: Hiroyuki Saigusa (Yokohama City University, Japan)

13:35-14:05    **O07**   Wolfgang Domcke (Technische Universität München, Germany),  
Andrzej L. Sobolewski

*Conical intersections and photostability of the building blocks of life*

14:05-14:30 **O08** Hiroshi Sekiya (Kyushu University, Japan), Kenji Sakota  
*Cooperative and vibrational-mode specific multiple-hydrogen transfer reaction in microsolvated hydrogen-bonded clusters*

14:30-14:40 Break

Chair: Shiro Koseki (Osaka Prefectural University)

14:40-15:00 **O09** Asuka Fujii (Tohoku University, Japan), Kenta Shibasaki, Naohiko Mikami, Seiji Tsuzuki

*The CH/ $\pi$  interaction: An interplay between molecular spectroscopy and ab initio calculations to explore weak intermolecular interactions*

15:00-15:25 **O10** Tetsuya Taketsugu (Hokkaido University, Japan)

*Ab initio molecular dynamics approach to chemical reactions in excited states*

15:25-15:35 Break

Chair: Masahiko Takahashi (Tohoku University)

15:35-16:05 **O11** I.V. Hertel (Max-Born Institute, Germany), C.P. Schulz, T. Laarmann, I. Shchatsinin, N. Zhavoronkov

*Control of bond breaking in clusters and large molecules by intense, temporally shaped fs laser pulses*

16:05-16:30 **O12** Tomoyuki Yatsunami (Osaka City University, Japan)

*Organic molecules under intense femtosecond laser fields: Ionization and time-resolved coherent spectroscopy*

16:30-16:40 Announcement from the Morino Science Foundation  
Eizi Hirota (Grad. Univ. for Adv. Studies, Japan)

16:40-18:10 **Poster Session**

18:40-20:30 **Banquet**

**May 19 (Saturday)**

Chair: Kaoru Yamanouchi (The University of Tokyo, Japan)

09:10-09:40 **O13** André D. Bandrauk (Université de Sherbrooke, Québec), S. Chelkowski G. Lagmago Kamta

*Nonadiabatic population dynamics in enhanced ionization - Symmetric  $H_2^+$  vs asymmetric  $HeH^{++}$*

09:40-10:05 **O14** E. J. Takahashi, T. Kanai, Y. Nabekawa, Katsumi Midorikawa (RIKEN, Japan)

*High-order harmonic generation in mixed gasess*

Chair: Fuminori Misaizu (Tohoku University, Japan)

10:05-10:25 **O15** Tomoya Okino (The University of Tokyo, Japan), Kaoru Yamanouchi  
*Coincidence momentum imaging of hydrogen migration in methanol in intense laser fields*

10:25-10:45 **O16** Tsuyoshi Kato (The University of Tokyo, Japan), Kaoru Yamanouchi  
*Theoretical description of molecular dynamics in strong laser fields: Incorporation of a multiconfiguration theory and Bohmian mechanics*

10:45-11:05 Break

Chair: Nobuaki Nakashima (Osaka City University, Japan)

11:05-11:35 **O17** D. Mathur (Tata Institute of Fundamental Reseach, India)

*Matter in strong fields: Atoms, molecules, and living matter*

11:35-11:55 **O18** G. Prümper (Tohoku University, Japan), K. Ueda, T. Hatamoto, M. Okunishi, D. Mathur

*Electron emission and fragmentation of linear alcohol molecules in intense laser fields*

11:55-12:25 **O19** S. L. Chin (Université Laval, Québec)

*Filamentation remote sensing of chemical and biological agents*

12:25-13:45 Lunch

Chair: Kiyoshi Ueda (Tohoku University, Japan)

13:45-14:10 **O20** Toshinori Suzuki (RIKEN, Japan)

*Time-resolved photoelectron spectroscopy of excited-state dynamics*

14:10-14:35 **O21** Yosuke Kayanuma (Osaka Prefecture University, Japan), Yasutaka Takata  
*Recoil effects in photoelectron spectra of solids*

14:35-14:55 **O22** Katsuyuki Nobusada (Institute for Molecular Science, Japan)  
*Nonlinear electron dynamics induced by femtosecond laser pulses: Electric currents in ring-shaped molecules*

14:55-15:15 Break

Chair: Fabio Pichierri (Tohoku University, Japan)

15:15-15:45 **O23** E.K.U. Gross (Freie Universität Berlin, Germany)

*Analysis and optimal control of electron dynamics*

15:45-16:10 **O24** Michitoshi Hayashi (National Taiwan University, Taiwan)

*Molecular mechanisms of chiral responses in sum-frequency generation*

16:10-16:40 **O25** Yuichi Fujimura (Tohoku University, Japan)

*Quantum design of functioning of chiral molecule*

16:40 Closing Yukiyoishi Ohtsuki (Tohoku University, Japan)