

チーム名： 超高速分子計測研究チーム

(1) 原著論文(accept)を含む / Original Papers

1. Prashant C. SINGH, Satoshi NIHONYANAGI, Shoichi YAMGUCHI and Tahei TAHARA, “Interfacial water in the vicinity of a positively charged interface studied by steady-state and time-resolved heterodyne-detected vibrational sum frequency generation” , *The Journal of Chemical Physics*, 141, 18C527 (7pages) (2014)
2. Tomotsumi FUJISAWA, Satoshi TAKEUCHI, Shinji MASUDA, and Tahei TAHARA, “Signaling-state formation mechanism of a BLUF protein PapB from the Purple Bacterium *Rhodospseudomonas palustris* studied by femtosecond time-resolved absorption spectroscopy” , *J. Phys. Chem. B.*, 118, 14761–14773, (2014)
3. Linqiang HUA, Munetaka IWAMURA, Satoshi TAKEUCHI and Tahei TAHARA, “The substituent effect on the MLCT excited state dynamics of Cu(I) complexes studied by femtosecond time-resolved absorption and observation of coherent nuclear wavepacket motion” , *Phys. Chem. Chem. Phys.* 17, 2067–2077, (2014)

(2) 著書・解説など / Book Editions, Review Papers

1. 二本柳聡史, Prashant C. Singh, 山口祥一, 田原太平, “定常および時間分解ヘテロダイン検出和周波発生分光法の開発と界面水への応用” , *分光研究*, 62(6), 253 –263, (2013).
2. Satoshi TAKEUCHI and Tahei TAHARA, “Femtosecond structural study of reacting excited-state molecules through observation of nuclear wavepacket motions” , Vol 22, 111–162 (第3章) , *Advances in Multi-Photon Processes and Spectroscopy*, World Scientific (Singapore), (2014)
3. 二本柳聡史, 山口祥一, 田原太平, “ヘテロダイン検出和周波発生分光法による水界面における水素結合構造とダイナミクスの解明” , *Electrochemistry*, Vol. 82, 766–770, (2014)
4. 井上賢一, Prashant C. Singh, 二本柳聡史, 山口祥一, 田原太平, “時間分解ヘテロダイン検出振動和周波発生分光法を用いた水界面の超高速振動ダイナミクスの研究” , *表面科学*, Vol. 35, No. 12, P. 662–667, (2014)
5. Munetaka IWAMURA, Satoshi TAKEUCHI, and Tahei TAHARA, “Ultrafast excited-state dynamics of copper (I) complexes” , *Accounts of Chemical Research*, 48, 782–791 (2015)

(3) 招待講演 / Invited Talks

1. Satoshi TAKEUCHI, "Probing nuclear and structural dynamics in reacting molecules by femtosecond time-domain Raman spectroscopy", Annual Meeting of Spectroscopical Society of Japan, International Symposium on "The Forefront of Ultrafast Spectroscopy", 和光市, 5月26-28日, (2014)
2. Satoshi TAKEUCHI, and Tahei TAHARA, "Monitoring continuous structural evolutions in reacting molecules by multi-pulse ultrafast spectroscopy", International workshop on "Over the Barriers of Transition Paths: Dynamical Processes in Proteins and Complex Molecular Systems", 横浜市, 6月28日, (2014)
3. Tahei TAHARA, "Ultrafast vibrational spectroscopy at liquid interfaces by heterodyne-detected sum-frequency generation", 19th International Conference on Ultrafast Phenomena, Okinawa Convention Center, 那覇市 7月7-11日, (2014)
4. Tahei TAHARA, "Primary process of photoreceptor proteins studied by time-resolved impulsive stimulated Raman spectroscopy", XXIVth International Conference on Raman Spectroscopy (XXIV ICORS), Friedrich Schiller University Jena, Germany, August, (2014)
5. 井上 賢一, 二本柳聡史, 山口祥一, 田原太平, "2次元ヘテロダイナミクス検出 VSGF を用いた両性イオン脂質/水界面のフェムト秒振動ダイナミクス研究", 第6回 SFG 研究会, つくば市, 8月2-3日, (2014)
6. 竹内佐年, "時間分解インパルスラマン分光で探る銅錯体の光誘起構造ダイナミクス", 錯体化学会 第64回討論会, 東京, 9月18日-20日, (2014)
7. 田原太平, "新しい界面選択的非線形分光の開発と展開", 第8回分子科学討論会, 東広島市, 9月21日-24日, (2014)
8. Hikaru KURAMOCHI, Satoshi TAKEUCHI, Kento YONEZAWA, Hironari KAMIKUBO, Mikio KATAOKA, and Tahei TAHARA, "Femtosecond time-resolved impulsive stimulated Raman study of photoactive yellow protein", 16th International Conference on Retinal Proteins (ICRP-2014), 長浜市, October, (2014)
9. 二本柳聡史, "超高速界面分子ダイナミクス", 分光フェア, 東京, 11月9日, (2014)
10. 藤澤知績, 竹内佐年, 増田真二, 田原太平, "フェムト秒過渡吸収測定から見た青色光センサーBLUF タンパク質のシグナル状態生成機構", 日本分光学会 レーザー分光部会・先端的レーザー分光シンポジウム, 横浜市, 12月2日, (2014)
11. 田原太平, "見えないものを観る: 新しい分光計測による複雑分子系ダイナミクスの観測と理解", 第5回 統合物質シンポジウム, 名古屋市, 12月19日-20日 (2014)

12. 二本柳聡史, 田原太平, “新しい界面選択的非線形分光による液体界面の構造とダイナミクス”, レーザー学会第 35 回年次大会, 東京, 1 月 11 日~12 日 (2015)
13. Tahei TAHARA, “Femtosecond time-resolved impulsive stimulated Raman spectroscopy of simple and complex molecular systems”, Department of Chemistry, Indian Institute of Technology at Bombay, India, February, (2015)
14. Tahei TAHARA, “Femtosecond time-resolved impulsive stimulated Raman spectroscopy of complex molecular systems”, The 6th RSC-CSJ Symposium (held in conjunction with the 95th CSJ Annual Meeting), 船橋市, March, (2015)
15. Tahei TAHARA, “Water interfaces studied by steady-state and time-resolved heterodyne detected vibrational sum-frequency generation”, Sum Frequency Spectroscopy, Germany, March, (2015)

(4) 会議、シンポジウム、セミナー主催 / Meeting, Symposiums and Seminars

1. Seminar, Seminar Room 4F, “A preview of my research activities on Raman spectroscopy and Surface-enhanced Raman spectroscopy, and future aspects of plasmon-based physical chemistry”, Dr. Yuko Yamamoto (JSPS Postdoctoral Fellow, Dept. of Engineering, Kagawa University), 4 月 8 日, (2014)
2. Seminar, Seminar Room S507, “Probing the structure and dynamics of molecular ions in gas-phase: some recent examples”, Prof. Manfred Kappes (Professor, Physical Chemistry and Nanotechnology, KIT, Karlsruhe, Germany), 4 月 9 日, (2014)
3. Seminar, Seminar Room 4F, “High resolution molecular spectroscopies with an optical frequency comb”, Ms. Akiko Nishiyama (Ph. D student, Fukuoka University), 4 月 10 日, (2014)
4. Seminar, Seminar Room 4F, “Generation of ultrashort optical pulses via four-wave mixing in a gas”, 貴田 祐一郎 博士 (九州大学大学院工学研究院 応用化学部門 (機能) 助教), 6 月 16 日, (2014)
5. Seminar, Seminar Room S507, “IR Spectroscopy of Hydrogen Bond Dynamics: from Acid-Base Complexes to Complexing DNA Base Pairs”, Prof. Erik T. J. Nibbering (Professor, Max Born Institut für Nichtlineare Optik und ultraschnelle Spektroskopie, Germany), 7 月 4 日, (2014)
6. Seminar, Seminar Room S507, “Time-resolved photoluminescence spectroscopy of linked gold-semiconductor nanoparticles: Exciton-plasmon coupling and the necessity for pump-probe techniques”, Prof. Holger Lange

(Professor, University of Hamburg, Germany), 7月14日, (2014)

7. Seminar, Seminar Room 4F, “Phase-modulation two-dimensional fluorescence spectroscopy of bacterial light harvesting system 2”, Dr. Atsunori Sakurai (Postdoctoral Fellow, Dept of Chemical Physics, Lund University, Sweden), 9月19日, (2014)
8. Seminar, Seminar Room S507, “New insights into ultrafast exciton dynamics in doped and pristine nano-crystals”, Prof. Sanford Ruhman (Professor, The Institute of Chemistry and the Farkas Center for Light-Induced Processes, Hebrew Univ. of Jerusalem, Israel), 10月3日, (2014)
9. Seminar, Seminar Room S507, “Seeing things in a new light”, Prof. Vladislav V. Yakovlev (Professor, Department of Biomedical Engineering & Department of Physics and Astronomy, Texas A&M University, USA), 12月17日, (2014)