

**\*Selected Publications as of March, 2010**

1. S. Nihonyanagi, S. Yamaguchi and T. Tahara, "Direct evidence for orientational flip-flop of water molecules at charged interfaces: a heterodyne-detected VSFG study," *J. Chem. Phys.*, 130, 204704-1 – 204704-5 (2009). [[full text](#)]
2. S. Takeuchi, S. Ruhman, T. Tsuneda, M. Chiba, T. Taketsugu, and T. Tahara: "Spectroscopic tracking of structural evolution in ultrafast stilbene photoisomerization", *Science*, 322, 1073-1077 (2008). [[full text](#)]
3. S. Yamaguchi and T. Tahara, "Heterodyne-Detected Electronic Sum Frequency Generation: "Up" vs. "down" alignment of interfacial molecules," *J. Chem. Phys.*, 129(10), 101102-1 – 101102-4 (2008). [[full text](#)]
4. K. Sekiguchi, S. Yamaguchi and T. Tahara, "Femtosecond time-resolved electronic sum-frequency generation (TR-ESFG) spectroscopy: A new method to investigate ultrafast dynamics at liquid interfaces", *J. Chem. Phys.*, 128(11), 114715-1 – 114715-8 (2008). [[full text](#)]
5. M. Iwamura, S. Takeuchi and T. Tahara: "Real-time observation of the photoinduced structural change of bis-2,9-dimethyl-1,10-phenanthroline copper (I) by femtosecond fluorescence spectroscopy: A realistic potential curve of the Jahn-Teller distortion", *J. Am. Chem. Soc.*, 129(16), 5248-5256 (2007). [[full text](#)]
6. S. Takeuchi and T. Tahara, "The answer to concerted versus step-wise controversy for the double proton transfer mechanism of 7-azaindole dimer in solution", *Proc. Natl. Acad. Sci. USA*, 104(13), 5285-5290 (2007). [[full text](#)]
7. T. Fujino, T. Fujima and T. Tahara, "Femtosecond fluorescence dynamics imaging using fluorescence up-conversion microscope", *J. Phys. Chem. B*, 109(32), 15327-15331 (2005). [[full text](#)]
8. T. Horio, T. Fuji, Y. Suzuki, and T. Suzuki: "Probing ultrafast internal conversion through conical intersection via time-energy map of photoelectron angular anisotropy", *J. Am. Chem. Soc.*, 131(30), 10392–10393 (2009). [[full text](#)]
9. T. Horio and T. Suzuki: "Multihit two-dimensional charged-particle imaging system with real-time image processing at 1000 frames/s", *Rev. Sci. Instrum.*, 80, 013706 (2009). [[full text](#)]
10. T. Fuji, T. Horio, and T. Suzuki: "Generation of 12-fs deep ultraviolet pulses by four-wave mixing through filamentation in neon gas", *Optics Letters*, 32, 2481 (2007). [[full text](#)]

**List of publications (Apr. 2005 – Mar. 2010)**

1. S. Y. Liu, Y. Ogi, T. Fuji, K. Nishizawa, T. Horio, T. Mizuno, H. Kohguchi, M. Nagasono, T. Togashi, K. Tono, M. Yabashi, Y. Senba, H. Ohashi, H. Kimura, T. Ishikawa, and T. Suzuki, "Time-resolved photoelectron imaging using a femtosecond UV laser and VUV free-electron laser", *Physical Review A* rapid communication, in press (2010)
2. Y. Tang, Y. Suzuki, T. Horio, and T. Suzuki, "Molecular Frame Image Restoration and Partial Wave Analysis of Photoionization Dynamics of NO by Time-Energy Mapping of Photoelectron Angular Distribution", *Phys. Rev. Lett.*, 104, 073002, (2010)
3. K. Nakashima, T. Nakamura, S. Takeuchi, M. Shibata, M. Demura, T. Tahara, and H. Kandori, "Property of anion binding site of pharaonis Halorhodopsin studied by ultrafast pump-probe spectroscopy and low-temperature FTIR spectroscopy", *J. Phys. Chem. B.*, 113, 8429-8434 (2009).
4. P. Sen, S. Yamaguchi and T. Tahara: "Ultrafast dynamics of malachite green at the air/water interface studied by femtosecond time-resolved electronic sum-frequency generation (TR-ESFG): An indicator for local viscosity," *Faraday Discussion*, 145, 411-428 (2010).
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6. K. Ishii, S. Takeuchi and T. Tahara: "Mid-IR-induced nuclear wavepacket motion of a hydrogen bonding system: Effects of mechanical and electrical anharmonic couplings," *J. Chem. Phys.*, 131, 044512/1-044512/9 (2009).
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9. S. Nihonyanagi, S. Yamaguchi and T. Tahara, "Direct evidence for orientational flip-flop of water molecules at charged interfaces: a heterodyne-detected VSFG study," *J. Chem. Phys.*, 130, 204704-1 – 204704-5 (2009).
10. T. Sakamaki, T. Fujino, H. Hosoi, T. Tahara, and T. Korenaga: "Picosecond time-resolved fluorescence study of poly vinyl methyl ether aqueous solution", *Chem. Phys. Lett.*, 468, 171-175 (2009).
11. D. Mandal, H. Hosoi, U. Chatterjee, and T. Tahara: "Direct observation of time-dependent photoluminescence spectral shift in CdS nanoparticles synthesized in polymer solutions", *J. Chem. Phys.*, 130, 034902-1 - 034902-8 (2009).
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15. S. Takeuchi, S. Ruhman, T. Tsuneda, M. Chiba, T. Taketsugu, and T. Tahara: "Spectroscopic tracking of structural evolution in ultrafast stilbene photoisomerization", *Science*, 322, 1073-1077(2008).
16. S. Yamaguchi and T. Tahara: "Coherent acoustic photons in a thin gold film probed by femtosecond surface plasmon resonance", *J. Raman Spectrosc.*, 39, 1703-1706 (2008).
17. T. Nakamura, S. Takeuchi, M. Shibata, M. Demura, H. Kandori, and T. Tahara, "Ultrafast pump-probe study of primary photoreaction dynamics in *pharaonis* halorhodopsin: Halide-ion dependence and isomerization dynamics", *J. Phys. Chem. B*, 112(40), 12795-12800 (2008).
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19. T. Sakamaki, T. Fujino, H. Hosoi, T. Tahara, and T. Korenaga: "Solvation structure on polyacrylamide fine particle surface studied by picoseconds time-resolved fluorescence spectroscopy", *Chem Lett.*, 37, 980-981 (2008).
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## Books, Proceedings

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