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7-1-32 Oizumigakuen-cho, Nerima, Tokyo 178-0061, JAPAN

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EDUCATIONS;

Degree: Dr. of Science, Hokkaido University (2004)

Thesis: 「Sum Frequency Generation Study on Molecular Structures at Solid/Liquid Interfaces」

1999 Apr.- 2004 Mar., Division of Chemistry, Graduate School of Science, Hokkaido University. Advisor: Prof. Kohei Uosaki, URL: <https://www.hokudai.ac.jp/>

1995 Apr.-1999 Mar., Division of Chemistry, Faculty of Science, Hokkaido University.

WORK EXPERIENCES;

2026 May – Present.: Professor, Department of Chemistry, University of Tsukuba

2024 Apr.- 2024 Apr.: Part-time Lecturer, Shibaura Institute of Technology

2023 Jul.- 2023 Aug.: Part-time Lecturer, Hokkaido University

2022 Aug - 2023 Jul.: Visiting Professor at the Department of Physics, National Chung Hsing University

2016 Apr.- 2026 Apr. : Senior Research Scientist, Molecular Spectroscopy Lab, RIKEN

2014 Oct.-Present : Part-time Lecturer, Saitama University

2014 Oct.-2016 Mar. : Research Scientist, Molecular Spectroscopy Lab, RIKEN

2012 Oct.-2016 Mar. : PREST Researcher, JST

2012 Apr.-2014 Sep. : Research Scientist (fixed-term), Molecular Spectroscopy Lab, RIKEN

2011 Feb.-2012 Mar. : ASI Research Scientist, Molecular Spectroscopy Lab, RIKEN

2010 Apr.- 2011 Jan. : Postdoctoral Researcher, Molecular Spectroscopy Lab, RIKEN

2007 Apr.-2010 Mar. : Special Postdoctoral Researcher, Molecular Spectroscopy Lab, RIKEN

2004 Aug.-2007 Jan.: Postdoctoral Associate in Borguet research lab, Temple University

2004 Feb.-2004 Jul. : Postdoctoral Associate in Borguet research lab, Univ. of Pittsburgh

2002 Apr. -2004 Mar.: Japan Society of Promotion of Science (JSPS) fellowship
2001 Nov.-2001 Dec.: Researcher Abroad at Facultes Universitaires Notre-Dame de la Paix, Namur, Belgium (For collaboration with Dr. Andre Peremans)
2001 April- 2001 Sep.: Teaching Assistant, Department of Science, Hokkaido Univ.

RESEARCH INTERESTS;

1. Interface-selective nonlinear spectroscopy
2. Structure and dynamics of water at interfaces
3. Interface sciences (Bio-interfaces, Tribology, etc.)
4. Electrochemistry

LIST OF AWARDS

1. MORINO Foundation for Molecular Science (Aug. 2013)
2. RIKEN Significant Achievement Award (Mar. 2013)
3. The Spectroscopical Society of Japan Award for Young Scientists (Nov. 2012)
4. Young Scientist Awards of the Japan Society for Molecular Science (Sep. 2012)
5. RIKEN Research Incentive Award (Mar. 2012)
6. PCCP poster prize at the International Conference on Electrified Interfaces (Jun. 2007)

List of funding projects

1. JST ASTEP (Oct.01 2025 - Mar.31 2028) 28,750,000JPY “Development of phase-sensitive IR-IR SFG spectroscopy for buried semiconductor wafer/solution interfaces”.
2. JSPS KAKENHI, Grant-in-Aid for Scientific Research (B) (Apr.01 2026 - Mar.31 2030 14,100,000JPY “New Directions in Electric Double-Layer Research through Advanced Interfacial Nonlinear Spectroscopy”.
3. JSPS KAKENHI, Grant-in-Aid for Scientific Research (B) (Apr.01 2021 - Mar.31 2024) 13,500,000JPY “Ultrafast dynamics of molecules at electrode interfaces studied by interface-selective time-resolved nonlinear spectroscopy”.
4. JST ALCA-SPRING (Apr. 01 2016 - Mar.31 2021) 9,700,000JPY “Elucidating structure of electrode interfaces by nonlinear spectroscopy”.
5. JST PREST (Oct.01 2012 - Mar.31 2016) 40,000,000JPY “Development of

nonlinear micro-spectroscopy for buried material interfaces”.

Academic activity

[Societies]

The Chemical Society of Japan, Japan Society for Molecular Science, The Japan Society of Vacuum and Surface Science, The Society of Polymer Science, Japan, The Spectroscopical Society of Japan

[Activities]

The editorial board of the Journal of Japan Society for Molecular Science “Molecular Science”. (2015-present)

[Peer reviews]

Physical Review Letters, Angew. Chem. Int. Ed., Chem. Sci., J. Phys. Chem. Lett., J. Phys. Chem. C, Langmuir, J. Chem. Phys., Phys. Chem. Chem. Phys., Macromolecules, ChemElectroChem, Front. Chem., Appl. Phys. Express, Chem. Lett., Chem. Select, etc.

LIST OF PUBLICATIONS

[Original papers]

1. "Water Dynamics in the Electric Double Layer at the Lipid Interfaces: Water in the Diffuse Layer is Dynamically Different from Bulk Water"
E. Kinoshita, W. Sung, **S. Nihonyanagi**, H. Okuyama, and T. Tahara*
J. Am. Chem. Soc. (2026) 148 (30): 31774–31782.
2. "Structural Transformation of Hydrated Excess Protons at the Water Surface"
M. Ahmed, T. Ishiyama, **S. Nihonyanagi**, K. Inoue, A. Morita, and Tahei Tahara*
J. Am. Chem. Soc. 2026, 148, 29009–29018
3. "Distinct adsorption behavior and structures of cell- penetrating peptides at a model lipid membrane interface: a heterodyne-detected vibrational sum frequency generation spectroscopy study"
S. Roy, M. Ahmed, A. Adhikari, E. Kinoshita, **S. Nihonyanagi*** and T. Tahara*
Chem. Sci. (2026) 17,14375.
4. "A novel carborane-based electron transport material for high-performance perovskite/silicon tandem solar cells"
L. Zimmermann, J. Petrulevicius, D. Menzel, W. M. B. de Araujo, K. Morita, S. Maniyarasu, M. Simmonds, Y. Salimi, D. K. Kim, F. Mathies, F. Scheler, S. Berwig, W. Sung, **S. Nihonyanagi**, A. M. Soufiani, A. Harter, V. Jankauskas, J. Kurpiers, T. Malinauskas, Tahei Tahara, M. Creatore, S. Wood, R. Schlatmann, B. Stannowski, L. Korte, E. Köhnen, V. Getautis and S. Albrecht*
Energy Environ. Sci., 19 (2026), 4734.
5. "Inhomogeneity and Vibrational Coupling of Free OH Stretch at the Air/Water Interface"
W. Sung, **S. Nihonyanagi**, and T. Tahara*
J. Am. Chem. Soc., 148 (2026) 18074–18079.
6. "Development of a Setup for Interferometric Two-dimensional Heterodyne-detected Vibrational Sum-frequency Generation (2D HD-VSFG) Measurements to Study Liquid Interfaces with Sub-100 fs Time Resolution"
W. Sung, **S. Nihonyanagi**, and T. Tahara*
J. Chem. Phys., 163 (2025) 164204 (1-12).
7. "Elucidation of the pH-Dependent Electric Double Layer Structure at the Positively Charged Amorphous Alumina/Water Interface Using Heterodyne-Detected Vibrational Sum-Frequency Generation"
F. Wei, **S. Nihonyanagi**,* and T. Tahara*
J. Am. Chem. Soc. 147 (2025) 22402–22411.
8. "Frequency-Dependent Vibrational Relaxation Time of OH Stretch at the Air/Isotopically Diluted Water Interface"
E. Kinoshita, W. Sung, **S. Nihonyanagi**, H. Okuyama, T. Tahara
J. Phys. Chem. Lett., 16 (2025) 1088–1094. DOI: 10.1021/acs.jpcllett.4c03223
9. "Time-resolved heterodyne-detected electronic sum frequency generation (TR-HD-ESFG) spectroscopy: A new approach to explore interfacial dynamics"

S. Roy, M. Ahmed, **S. Nihonyanagi**, and T. Tahara
J. Chem. Phys. 161 (2024) 174202. DOI: 10.1063/5.0235176

10. “Unified Picture of Vibrational Relaxation of OH Stretch at the Air/Water Interface Obtained by Time-Resolved, Heterodyne-Detected Vibrational Sum Frequency Generation Spectroscopy”
W. Sung, K. Inoue, **S. Nihonyanagi**, and T. Tahara
Nat. Commun. 15/1-11, (2024) 1258. DOI: 10.1038/s41467-024-45388-8,
11. “Ultrafast Vibrational Control of Organohalide Perovskite Optoelectronic Devices Using Vibrationally Promoted Electronic Resonance”
N. P. Gallop, D. R. Maslennikov, N. Mondal, K. P. Goetz, Z. Dai, A. M. Schankler, W. Sung, **S. Nihonyanagi**, T. Tahara, M. Bodnarchuk, M. Kovalenko, Y. Vaynzof, A. M. Rappe, A. A. Bakulin*
Nat. Mater., 23 (2024) 88–94. DOI:10.1038/s41563-023-01723-w,
12. “Origin of Solvent Stabilization at Super-concentrated Electrolyte/Electrode Interfaces Revealed by Heterodyne-detected Vibrational Sum Frequency Generation Spectroscopy”
A. Sayama, **S. Nihonyanagi***, Y. Ohshima and T. Tahara*
J. Phys. Chem. C, 127 (2023) 10524-10531. DOI: 10.1021/acs.jpcc.3c01744,
13. “Adsorption of SARS-CoV-2 Spike (N501Y) RBD to Human Angiotensin-Converting Enzyme 2 at a Lipid/Water Interface”
R. Harison, **S. Nihonyanagi**, A. Myalitsin, S. Roy, M. Ahmed, T. Tahara, I. Rzeznicka*
J. Phys. Chem. B, 127 (2023) 4406-4414. DOI: 10.1021/acs.jpcc.3c00832,
14. “Elucidation of pH-Dependent Electric Double Layer Structure at the Silica/Water Interface Using Heterodyne-Detected Vibrational Sum Frequency Generation Spectroscopy”
F. Wei, S. Urashima, **S. Nihonyanagi**, T. Tahara*
J. Am. Chem. Soc. 145 (2023) 8833-8846. DOI: 10.1021/jacs.2c11344,
15. “Ultrafast vibrational dynamics of the free OD at the air/water interface: Negligible isotopic dilution effect but large isotope substitution effect”
M. Ahmed, **S. Nihonyanagi**, and T. Tahara*
J. Chem. Phys. 156 (2022) 224701/1-9. DOI: 10.1063/5.0085320 (**Front Cover**)
16. “DNA-Induced Reorganization of Water at Model Membrane Interfaces Investigated by Heterodyne-Detected Vibrational Sum Frequency Generation Spectroscopy”
P. C. Singh, M. Ahmed, **S. Nihonyanagi***, S. Yamaguchi, and T. Tahara*
J. Phys. Chem. B 126 (2022) 840–846. DOI: 10.1021/acs.jpcc.1c08581,
17. “The photochemical reaction of phenol becomes ultrafast at the air-water interface”
R. Kusaka, **S. Nihonyanagi**, and T. Tahara*
Nat. Chem. 13 (2021) 306-311. DOI: 10.1038/s41557-020-00619-5 (**Front Cover**)
IF: 23.3, Cited: **108 times**.

18. "Resolving the Controversy over Dipole versus Quadrupole Mechanism of Bend Vibration of Water in Vibrational Sum Frequency Generation Spectra"
M. Ahmed, **S. Nihonyanagi**, A. Kundu, S. Yamaguchi, and T. Tahara*
J. Phys. Chem. Lett. 11 (2020) 9123-9130. DOI: 10.1021/acs.jpcclett.0c02644
19. "Reorientation-induced relaxation of free OH at the air/water interface revealed by ultrafast heterodyne-detected nonlinear spectroscopy"
K. Inoue, M. Ahmed, **S. Nihonyanagi**, and T. Tahara*
Nat. Commun. 11 (2020) 5344 (1-7). DOI: 10.1038/s41467-020-19143-8,
20. "Structure of Water and Polymer at the Buried Polymer/Water Interface Unveiled by Heterodyne-Detected Vibrational Sum Frequency Generation"
A. Myalitsin, S. Ghosh, S. Urashima, **S. Nihonyanagi**, S. Yamaguchi, T. Aoki, and T. Tahara*
Phys. Chem. Chem. Phys. 22 (2020) 16527-16531. DOI: 10.1039/d0cp02618b,
21. "Comment on "Phase-Sensitive Sum Frequency Vibrational Spectroscopic Study of Air/Water Interfaces: H₂O, D₂O, and Diluted Isotopic Mixtures" [J. Chem. Phys. 150, 144701 (2019)]"
M. Ahmed, Y. Nojima, **S. Nihonyanagi**, S. Yamaguchi, and T. Tahara*
J. Chem. Phys. 152 (2020) 237101 (1-3). DOI: 10.1063/1.5126062,
22. "Preferred Orientations of Organic Cations at Lead-Halide Perovskite Interfaces Revealed by Vibrational Sum-Frequency Spectroscopy"
W. Sung, C. Müller, S. Hietzschold, R. Lovrinčić, N. P. Gallop, A. A. Bakulin*, **S. Nihonyanagi**, and T. Tahara*
Mater. Horiz. 7 (2020) 1348-1357. DOI: 10.1039/c9mh01394f,
23. "Hidden Isolated OH at the Charged Hydrophobic Interface Revealed by Two-Dimensional Heterodyne-Detected VSFG Spectroscopy,"
M. Ahmed, K. Inoue, **S. Nihonyanagi**, and T. Tahara*
Angew. Chem. Int. Ed. 59 (2020) 9498-9505. DOI: 10.1002/anie.202002368,
24. "In-Situ Observation of Potential-Dependent Structure of Electrolyte/ Electrode Interface by Heterodyne-Detected Vibrational Sum Frequency Generation"
A. Sayama, **S. Nihonyanagi***, Y. Ohshima, and T. Tahara*
Phys. Chem. Chem. Phys. 22 (2020) 2580-2589. DOI: 10.1039/c9cp06253j,
25. "In-Situ Referencing Method for Heterodyne-Detected Vibrational Sum Frequency Generation Measurements at Metal Electrode Interfaces"
S. Nihonyanagi*, A. Sayama, Y. Ohshima, and T. Tahara*
Chem. Lett. 48 (2019) 1387-1390. DOI: 10.1246/cl.190606,
26. "Quadrupolar Mechanism for Vibrational Sum Frequency Generation at Air/Liquid Interfaces: Theory and Experiment"
K. Matsuzaki, **S. Nihonyanagi**, S. Yamaguchi, T. Nagata, and T. Tahara*
J. Chem. Phys. 151 (2019) 064701 (1-15). DOI: 10.1063/1.5088192,
27. "Effect of Frequency-Dependent Fresnel Factor on the Vibrational Sum Frequency Generation Spectra for Liquid/Solid Interfaces"
L. Wang, **S. Nihonyanagi***, K. Inoue, K. Nishikawa, A. Morita*, S. Ye, and T. Tahara
J. Phys. Chem. C 123 (2019) 15665-15673. DOI: 10.1021/acs.jpcc.9b04043,

28. "Effect of Hydrogen-bond on Ultrafast Spectral Diffusion Dynamics of Water at Charged Monolayer Interfaces"
K. Inoue, M. Ahmed, **S. Nihonyanagi**, and T. Tahara*
J. Chem. Phys. 150 (2019) 054705 (1-7). DOI: 10.1063/1.5081077,
29. "The Topmost Water Structure at a Charged Silica/Aqueous Interface Revealed by Heterodyne-Detected Vibrational Sum Frequency Generation Spectroscopy"
S. Urashima, A. Myalitsin, **S. Nihonyanagi**, and T. Tahara*
J. Phys. Chem. Lett. 9 (2018) 4109-4114. DOI: 10.1021/acs.jpclett.8b01650,
30. "Molecular Mechanism of Charge Inversion Revealed by Polar Orientation of Interfacial Water Molecules: A Heterodyne-Detected Vibrational Sum Frequency Generation Study"
M. Sartin, W. Sung, **S. Nihonyanagi**, and T. Tahara*
J. Chem. Phys. 149 (2018) 024703 (1-8). DOI: 10.1063/1.5024310,
31. "Structure at the Air/Water Interface in the Presence of Phenol: A Study by Heterodyne- Detected Vibrational Sum Frequency Generation and Molecular Dynamics Simulation"
R. Kusaka, T. Ishiyama, **S. Nihonyanagi**, A. Morita, and T. Tahara*
Phys. Chem. Chem. Phys. 20 (2018) 3002-3009. DOI: 10.1039/c7cp05150f,
32. "Cooperative Hydrogen-Bond Dynamics at a Zwitterionic Lipid/Water Interface Revealed by 2D HD-VSFG Spectroscopy"
K. Inoue, P. C. Singh, **S. Nihonyanagi**, S. Yamaguchi, and T. Tahara*
J. Phys. Chem. Lett. 8 (2017) 5160-5165. DOI: 10.1021/acs.jpclett.7b02057,
33. "Change of the Isoelectric Point of Hemoglobin at the Air/Water Interface Probed by the Orientational Flip-Flop of Water Molecules"
S. Devineau, K. Inoue, R. Kusaka, S. Urashima, **S. Nihonyanagi**, D. Baigl, A. Tsuneshige, and T. Tahara*
Phys. Chem. Chem. Phys. 19 (2017) 10292-10300. DOI: 10.1039/c6cp08854f,
34. "Water Orientation at Ceramide/Water Interfaces Studied by Heterodyne-Detected Vibrational Sum Frequency Generation Spectroscopy and Molecular Dynamics Simulation"
A. Adhikari, S. Re, W. Nishima, M. Ahmed, **S. Nihonyanagi**, J. B. Klauda, Y. Sugita*, and T. Tahara*
J. Phys. Chem. C 120 (2016) 23692-23697. DOI: 10.1021/acs.jpcc.6b08980,
35. "Femtosecond Hydrogen-Bond Dynamics of Bulk-like and Bound Water at Positively and Negatively Charged Lipid Interfaces Revealed by 2D HD-VSFG Spectroscopy"
P. C. Singh, K. Inoue, **S. Nihonyanagi**, S. Yamaguchi, and T. Tahara*
Angew. Chem. Int. Ed. 55 (2016) 10621-10625. DOI: 10.1002/anie.201603676,
36. "Bend Vibration of Surface Water Investigated by Heterodyne-Detected Sum Frequency Generation and Theoretical Study: Dominant Role of Quadrupole"
A. Kundu, T. Ishiyama, M. Ahmed, K. Inoue, S. Tanaka, **S. Nihonyanagi**, H. Sawai, S. Yamaguchi, A. Morita, and T. Tahara*
J. Phys. Chem. Lett. 7 (2016) 2597-2601. DOI: 10.1021/acs.jpclett.6b00657,
37. "Partially Hydrated Electrons at the Air/Water Interface Observed by UV-Excited Time-Resolved Heterodyne-Detected Vibrational Sum Frequency Generation

Spectroscopy”

K. Matsuzaki, R. Kusaka, **S. Nihonyanagi**, S. Yamaguchi, T. Nagata, and T. Tahara*
J. Am. Chem. Soc. 138 (2016) 7551-7557. DOI: 10.1021/jacs.6b02171,

38. “Efficient Spectral Diffusion at the Air/Water Interface Revealed by Femtosecond Time-Resolved Heterodyne-Detected Vibrational Sum Frequency Generation Spectroscopy”

K. Inoue, T. Ishiyama, **S. Nihonyanagi**, S. Yamaguchi, A. Morita, and T. Tahara*
J. Phys. Chem. Lett. 7 (2016) 1811-1815. DOI: 10.1021/acs.jpclett.6b00701,

39. “Water Structure at the Buried Silica/Aqueous Interface Studied by Heterodyne-Detected Vibrational Sum-Frequency Generation”

A. Myalitsin, S. Urashima, **S. Nihonyanagi**, S. Yamaguchi, and T. Tahara*
J. Phys. Chem. C 120 (2016) 9357-9363. DOI: 10.1021/acs.jpcc.6b03275,
IF: 3.9, Cited **113 times**.

40. “Accurate Determination of Complex $\chi^{(2)}$ Spectrum of the Air/Water Interface”

S. Nihonyanagi, R. Kusaka, K. Inoue, A. Adhikari, S. Yamaguchi, and T. Tahara*
J. Chem. Phys. 143 (2015) 124707 (1-4). DOI: 10.1063/1.4931485,
IF: 3.5, Cited **155 times**.

41. “2D Heterodyne-Detected Sum Frequency Generation Study on the Ultrafast Vibrational Dynamics of H₂O and HOD Water at Charged Interfaces”

K. Inoue, **S. Nihonyanagi**, P.C. Singh, S. Yamaguchi, and T. Tahara*
J. Chem. Phys. 142 (2015) 212431 (1-12). DOI: 10.1063/1.4918644,

42. “Interfacial Water in the Vicinity of a Positively Charged Interface Studied by Steady-State and Time-Resolved Heterodyne-Detected Vibrational Sum Frequency Generation”

P. C. Singh, **S. Nihonyanagi**, S. Yamaguchi, and T. Tahara*
J. Chem. Phys. 141 (2014) 18C527 (1-7). DOI: 10.1063/1.4897265,

43. “Counterion Effect on Interfacial Water at Charged Interfaces and Its Relevance to the Hofmeister Series”

S. Nihonyanagi, S. Yamaguchi, and T. Tahara*
J. Am. Chem. Soc. 136 (2014) 6155-6158. (**Communication**) DOI: 10.1021/ja412952y, IF: 15.1, Cited **163 times**.

44. “Ultrafast Vibrational Dynamics of Hydrogen Bond Network Terminated at the Air/Water Interface: A 2D HD-VSFG Study”

P. Singh[†], **S. Nihonyanagi**[†], S. Yamaguchi[†], and T. Tahara* ([†]: **Equal Contributions**)
J. Chem. Phys. 138 (2013) 161101 (1-4). DOI: 10.1063/1.4826095,

45. “Vibrational Sum Frequency Generation by the Quadrupolar Mechanism at Nonpolar Benzene/Air Interface”

K. Matsuzaki, **S. Nihonyanagi**, S. Yamaguchi, T. Nagata, and T. Tahara*
J. Phys. Chem. Lett. 4 (2013) 1654-1658. DOI: 10.1021/jz400829k,

46. “Observation of the Bending Mode of Interfacial Water at Silica Surfaces by Near Infrared Vibrational Sum-frequency Generation Spectroscopy of the [Stretch+Bend] Combination Bands”

- O. Isaienko, **S. Nihonyanagi**, D. Sil, and E. Borguet*
J. Phys. Chem. Lett. 4 (2013) 531-535. DOI: 10.1021/jz3015088,
47. "Spectroscopy and Dynamics of the Multiple Free OH Species at an Aqueous/Hydrophobic Interface"
 A. Eftekhari-Bafrooei, **S. Nihonyanagi**, and E. Borguet*
J. Phys. Chem. C 116 (2012) 21734-21741. DOI: 10.1021/jp210090h,
 48. "Ultrafast Vibrational Dynamics of Water at a Charged Interface Revealed by Two-Dimensional Heterodyne-Detected Vibrational Sum Frequency Generation"
 P. C. Singh, **S. Nihonyanagi**, S. Yamaguchi, and T. Tahara*
J. Chem. Phys. 137 (2012) 094706 (1-6). DOI: 0.1063/1.4747828,
 49. "Ultrafast Vibrational Dynamics of Charged Aqueous Interfaces by Time-Resolved Heterodyne-Detected Sum Frequency Generation"
S. Nihonyanagi, P. C. Singh, S. Yamaguchi, and T. Tahara*
Bull. Chem. Soc. Jpn. 85 (2012) 758-760. (***Selected Paper***)
 DOI: 10.1246/bcsj.20120051, IF: 3, Cited 40 times.
 50. "Three Distinct Water Structures at a Zwitterionic Lipid/Water Interface Revealed by Heterodyne-Detected Vibrational Sum Frequency Generation"
 J. A. Mondal, **S. Nihonyanagi**, S. Yamaguchi, and T. Tahara*
J. Am. Chem. Soc. 134 (2012) 7842-7850. DOI: 10.1021/ja300658h
 IF: 15.1, Cited **237 times**.
 51. "Unified Molecular View of Air/Water Interface Based on Experimental and Theoretical $\chi^{(2)}$ Spectra of Isotopically Diluted Water Surface"
S. Nihonyanagi, T. Ishiyama, T. Lee, S. Yamaguchi, M. Bonn, A. Morita*, and T. Tahara*
J. Am. Chem. Soc. 133 (2011) 16875-16880. DOI: 10.1021/ja2053754,
 IF: 15.1, Cited **220 times**.
 52. "Ultrafast Vibrational Dynamics and Spectroscopy of a Siloxane Self-Assembled Monolayer"
S. Nihonyanagi, A. Eftekhari-Bafrooei, and E. Borguet*
J. Chem. Phys. 134 (2011) 84701 (1-7). DOI: 10.1063/1.3518457,
 53. "Interfacial Molecular Structures of Polyelectrolyte Brush in Contact with Dry Nitrogen, Water Vapor, Liquid Water, and Aqueous Electrolyte Solution Studied by Sum Frequency Generation Spectroscopy"
 K. Uosaki*, H. Noguchi, R. Yamamoto, and **S. Nihonyanagi**
J. Am. Chem. Soc. 132 (2010) 17271-17276. DOI: 10.1021/ja107265q,
 54. "Linking Surface Potential and Deprotonation in Nanoporous Silica: Second Harmonic Generation and Acid/Base Titration"
 R. K. Campen, A. Pymer, **S. Nihonyanagi**, and E. Borguet*
J. Phys. Chem. C 114 (2010) 18465-18473. DOI: 10.1021/jp1037574,
 55. "Structure and Orientation of Water at Charged Lipid Monolayer/Water Interfaces Probed by Heterodyne-Detected Vibrational Sum Frequency Generation Spectroscopy"
 J. A. Mondal, **S. Nihonyanagi**, S. Yamaguchi, and T. Tahara*
J. Am. Chem. Soc. 132 (2010) 10656-10657. (***Communication***)

DOI: 10.1021/ja104327t, IF: 15.1, Cited **208 times**.

56. "Water Hydrogen Bond Structure Near Highly Charged Interfaces is NOT Like Ice"
S. Nihonyanagi, S. Yamaguchi, and T. Tahara*
J. Am. Chem. Soc. 132 (2010) 6867-6869. (**Communication**)
IF: 15.1, Cited **141 times**.
57. "Direct Evidence for Orientational Flip-Flop of Water Molecules at Charged Interfaces: A Heterodyne-Detected Vibrational Sum Frequency Generation Study"
S. Nihonyanagi, S. Yamaguchi, and T. Tahara*
J. Chem. Phys. 130 (2009) 204704 (1-5). DOI: 10.1063/1.3135147,
IF: 3.5, Cited **423 times**.
58. "Self-Assembled Monolayer Compatible with Metal Surface Acoustic Wave Devices on Lithium Niobate"
S. Nihonyanagi, A. Eftekhari-Bafrooi, J. Hines, and E. Borguet*
Langmuir 24 (2008) 5161-5165. DOI: 10.1021/la702024x,
59. "Interfacial Water Structure at As-Prepared and UV-Induced Hydrophilic TiO₂ Surfaces Studied by Sum Frequency Generation Spectroscopy and Quartz Crystal Microbalance"
K. Uosaki*, T. Yano, and **S. Nihonyanagi**
J. Phys. Chem. B 108 (2004) 19086-19088. DOI: 10.1021/jp045173f,
60. "Potential Dependent Structure of the Interfacial Water on the Gold Electrode"
S. Nihonyanagi, S. Ye, K. Uosaki*, C. Humbert, L. Dreesen, A. Mani, P. A. Thiry, and A. Peremans
Surf. Sci. 576 (2004) 11-16. DOI: 10.1016/j.susc.2004.04.059,
61. "Evidence for Epitaxial Arrangement and High Conformational Order of Organic Monolayer on Si(111) by Sum Frequency Generation (SFG) Study"
S. Nihonyanagi, D. Miyamoto, S. Idojiri, T. Kondo, and K. Uosaki*
J. Am. Chem. Soc. 126 (2004) 7034-7040. DOI: 10.1021/ja049911p,
62. "Decomposition Processes of an Organic Monolayer Formed on Si(111) via a Silicon-Carbon Bond Induced by Exposure to UV Irradiation or Ozone"
K. Uosaki*, M. E. Quayum, **S. Nihonyanagi**, and T. Kondo
Langmuir 20 (2004) 1207-1212. DOI: 10.1021/la030211s,
63. "Probing a Molecular Electronic Transition by Two-Color Sum-Frequency Generation Spectroscopy"
C. Humbert, L. Dreesen, **S. Nihonyanagi**, T. Masuda, T. Kondo, A. Mani, K. Uosaki P. A. Thiry, and A. Peremans*
Appl. Surf. Sci. 212-213 (2003) 797-803.
64. "Formation of Organic Monolayer on Hydrogen Terminated Si(111) Surface via Silicon-Carbon Bond Monitored by ATR FT-IR and SFG Spectroscopy: Effect of Orientational Order on the Reaction Rate"
M. E. Quayum, T. Kondo, **S. Nihonyanagi**, D. Miyamoto, and K. Uosaki*
Chem. Lett. (2002) 208-209. DOI: 10.1246/cl.2002.208,

65. "Sum Frequency Generation (SFG) Study on the Molecular Structures at the Interfaces between Quartz Modified with Amino-terminated Self-assembled Monolayer and Electrolyte Solutions of Various pH and Ionic Strength"
S. Nihonyanagi, S. Ye, and K. Uosaki*
Electrochim. Acta 46 (2001) 3057-3061. DOI: 10.1016/S0013-4686(01)00595-3,
66. "Stability of the Si-H Bond on the Hydrogen-Terminated Si(111) Surface Studied by Sum-Frequency Generation"
S. Ye, T. Saito, **S. Nihonyanagi**, K. Uosaki*, P. B. Miranda, D. Kim, and Y. R. Shen
Surf. Sci. 476 (2001) 121-128. DOI: 10.1016/S0039-6028(01)00690-2,
67. "Conformational Order of Octadecanethiol (ODT) Monolayer at Gold/Solution Interface: Internal Reflection Sum Frequency Generation (SFG) Study"
S. Ye, **S. Nihonyanagi**, K. Fujishima, and K. Uosaki*
Stud. Surf. Sci. Catal. 132 (2001) 705-710.
68. "Sum Frequency Generation (SFG) Study of the pH Dependent Water Structure on the Fused Quartz Surface Modified by Octadecyltrichlorosilane (OTS) Monolayer"
S. Ye, **S. Nihonyanagi**, and K. Uosaki*
Phys. Chem. Chem. Phys. 3 (2001) 3463-3469. DOI: 10.1039/b101673n,
IF: 3.3, Cited **164 times**.
69. "Sum Frequency Generation (SFG) Studies on the Conformational Order of the Self-Assembled Monolayers of Alkanethiols on Silver Surface"
S. Ye, K. Shimazu, **S. Nihonyanagi**, and K. Uosaki*
Nonlinear Optics 24 (2000) 93-98.
70. "pH-Dependent Water Structure at a Quartz Surface Modified with an Amino-terminated Monolayer Studied by Sum-Frequency Generation (SFG)"
S. Ye, **S. Nihonyanagi**, and K. Uosaki*
Chem. Lett. (2000) 734-735. DOI: 10.1246/cl.2000.734,

[Review articles]

1. "Ultrafast Vibrational Dynamics at Aqueous Interfaces Studied by 2D Heterodyne-Detected Vibrational Sum Frequency Generation Spectroscopy"
K. Inoue, **S. Nihonyanagi**, and T. Tahara
In Cho M. (eds) *Coherent Multidimensional Spectroscopy* (2019), Springer Series in Optical Sciences, vol. 226, pp 215-236. Springer, Singapore, DOI: 10.1007/978-981-13-9753-0_10
2. "Vibrational Sum Frequency Generation Spectroscopy"
S. Nihonyanagi, and T. Tahara
In *Compendium of Surface and Interface Analysis* (2018), pp 801-807, Springer, Singapore, DOI: 10.1007/978-981-10-6156-1_127
3. "Ultrafast Dynamics at Water Interfaces Studied by Vibrational Sum-Frequency Generation Spectroscopy"

S. Nihonyanagi, S. Yamaguchi, and T. Tahara

Chem. Rev. 117 (2017) 10665-10693. DOI: 10.1021/acs.chemrev.6b00728,
IF: 66.5, Cited **144 times**.

4. "Structure and Dynamics of Interfacial Water Studied by Heterodyne-Detected Vibrational Sum-Frequency Generation"

S. Nihonyanagi, J. A. Mondal, S. Yamaguchi, and T. Tahara

Ann. Rev. Phys. Chem. 64 (2013) 579-603.

DOI: 10.1146/annurev-physchem-040412-110138,

IF: 12.5, Cited **242 times**.

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