Nan Jiang

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EMPLOYMENT

08. 2021 – present Department of Chemistry, University of Illinois Chicago, Chicago, IL
Associate Professor

02. 2024 – present Department of Physics, University of Illinois Chicago, Chicago, IL
Associate Professor

08. 2015 – 08. 2021 Department of Chemistry, University of Illinois Chicago, Chicago, IL
Assistant Professor

08. 2010 – 08. 2015 Department of Chemistry, Northwestern University, Evanston, IL
Postdoctoral Fellow (Advisor: Professor Richard Van Duyne)

EDUCATION

09. 2004 – 07. 2010 Institute of Physics, Chinese Academy of Sciences, Beijing, China
Ph.D. in Condensed Matter Physics (Advisor: Professor Hongjun Gao)

03. 2008 – 09. 2009 Max Planck Institute for Solid State Research, Stuttgart, Germany
Joint Ph.D. Student (Advisor: Professor Klaus Kern)

09. 2000 – 07. 2004 University of Science and Technology of China, Hefei, China
B.S. in Materials Physics

SELECTED HONORS AND AWARDS

American Vacuum Society Fellow, 2023

Visiting Professor, Chimie Department at Université Paris Cité, 2023

American Chemical Society Richard P. Van Duyne Award in Experimental Physical. Chemistry, 2022

The Journal of Chemical Physics Editor's Choice Award, 2021

American Vacuum Society Prairie Chapter Early Career Researcher Award, 2020

National Science Foundation CAREER Award, 2020

Director's Award, Institute of Physics, Chinese Academy of Sciences, 2007

PUBLICATIONS (Total Citations: 3431, h-index: 33)

1. L. Li, S. Mahapatra, J.F. Schultz, X. Zhang, **N. Jiang**, "Single-Molecule Spectroscopic Probing of N-heterocyclic Carbenes on a Two-Dimensional Metal", *Chem*, 2024, .https://doi.org/10.1016/j.chempr.2024.08.013.
[UIC Today report: https://today.uic.edu/studying-new-2d-materials-one-molecule-at-a-time/]
2. S. Mahapatra, C. Siribaddana, L. Li, S. Rajak, X. Zhang, **N. Jiang**, "Charge Recognition in $Ru(bpy)_3^{2+}$ on a Metal Surface via Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy", *The Journal of Physical Chemistry C*, 2024, 128, 13900–13908, https://doi.org/10.1021/acs.jpcc.4c02758.

3. K. Wang, S. Choyal, J. F Schultz, J. McKenzie, L. Li, X. Liu, **N. Jiang**, "Borophene: Synthesis, Chemistry, and Electronic Properties", *ChemPlusChem*, 2024, e202400333, https://doi.org/10.1002/cplu.202400333.
4. D. Liu, L. Li, **N. Jiang**, "Nanoscale Chemical Probing of Metal-Supported Ultrathin Ferrous Oxide via Tip-Enhanced Raman Spectroscopy and Scanning Tunneling Microscopy", *Chemical & Biomedical Imaging*, 2024, 2, 345–351, https://doi.org/10.1021/cbmi.4c00015. [Cover]
5. K. Wang, D. Liu, M.K. Manna, G. Yang, L. Li, X. Zhang, A.J.L. Ayitou, **N. Jiang**, "Substrate effects in the self-assembling of N,N-diphenylquinodimethyl thioamide on transition metals", *The Journal of Physical Chemistry C*, 2023, 127, 16339-16345, https://doi.org/10.1021/acs.jpcc.3c01663. [Cover]
6. L. Li, J.F. Schultz, S. Mahapatra, X. Liu, X. Zhang, M. Hersam, **N. Jiang**, "Atomic-Scale Insights into the Interlayer Characteristics and Oxygen Reactivity of Bilayer Borophene", *Angewandte Chemie International Edition,* 2023, 62, e2023065, https://doi.org/10.1002/anie.202306590.
7. B. Hou, T. Zhang, H. Yang, X. Han, L. Liu, L. Li, C. Grazioli, X. Wu, **N. Jiang**, Y. Wang, "Advances in probing single biomolecules: From DNA bases to glycans", *Interdisciplinary Materials*, 2023, 2, 511-528, https://doi.org/10.1002/idm2.12106.
8. S. Mahapatra, D. Liu, C. Siribaddana, K. Wang, L. Li, **N. Jiang**, "Localized Surface Plasmon Controlled Chemistry at and beyond the Nanoscale ", *Chemical Physics Reviews,* 2023, 4, 021301 (1-16), https://doi.org/10.1063/5.0143947. [Featured Article] [Cover]
9. D. Liu, L. Li, B.S.A. Gedara, M. Trenary, **N. Jiang**, "The selective blocking of potentially catalytically-active sites on surface-supported iron oxide catalysts", *Materials Chemistry Frontiers*, 2023, 7, 476-482, https://doi.org/10.1039/D2QM01025A. [Frontiers Emerging Investigators Series]
10. S. Mahapatra and **N. Jiang**, "Precise Tracking of Tip-Induced Structural Variation at the Single-Chemical-Bond Limit", *Light: Science & Applications*, 2023, 12, 21 https://doi.org/10.1038/s41377-022-01055-5.
11. M. Pálmai, J. Beckwith, N. Emerson, T. Zhao, E. Kim, S. Yin, P. Parajuli, K. Tomczak, K. Wang, B. Sapkota, M. Tien, **N. Jiang**, R. Klie, H. Yang, P. Snee, "Parabolic Potential Surfaces Localize Charge Carriers in Non-blinking Long-lifetime "Giant" Colloidal Quantum Dots", *Nano Letters,* 22, 9470-9476, 2022, https://doi.org/10.1021/acs.nanolett.2c03563.
12. P. El-Khoury, **N. Jiang**, Z. Schultz, "Nanophotonics for Chemical Imaging and Spectroscopy", *The Journal of Physical Chemistry C*, 126, 17471-17473, 2022, https://doi.org/10.1021/acs.jpcc.2c06603 [Cover]
13. J.F. Schultz and **N. Jiang**, "Characterizations of two-dimensional materials with cryogenic ultrahigh vacuum near-field optical microscopy in the visible range", *JVST A: Journal of Vacuum Science and Technology*, 40, 040801 (1-17), 2022, https://doi.org/10.1116/6.0001853. [Featured Article]
14. S. Mahapatra, J.F. Schultz, L. Li, X. Zhang, **N. Jiang**, "Chemical Characterization of a Three-Dimensional Double-Decker Molecule on Surface via Scanning Tunneling Microscopy Based Tip-Enhanced Raman Spectroscopy", *The Journal of Physical Chemistry C*, 126, 8734-8741, 2022, https://doi.org/10.1021/acs.jpcc.2c01434. [Cover]
15. L. Li, J.F. Schultz, S. Mahapatra, Z. Lu, X. Zhang, **N. Jiang**, "Chemically identifying single adatoms with single-bond sensitivity during oxidation reactions of borophene", *Nature Communications*, 13, 1796 (1-9), 2022, https://doi.org/10.1038/s41467-022-29445-8.
16. J.F. Schultz, L. Li, S. Mahapatra, **N. Jiang**, "Chemically imaging nanostructures formed by the covalent assembly of molecular building blocks on a surface with ultrahigh vacuum tip-enhanced Raman spectroscopy", *Journal of Physics: Condensed Matter*, 34, 204008 (1-10), 2022, https://doi.org/10.1088/1361-648X/ac57d8. [Emerging_Leaders 2021 Special Issue]
17. S. Mahapatra, J.F. Schultz, L. Li, X. Zhang, **N. Jiang**, "Controlling Localized Plasmons via an Atomistic Approach: Attainment of Site-Selective Activation inside a Single Molecule", *Journal of*

the American Chemical Society, 144, 5, 2051-2055, 2022, https://doi.org/10.1021/jacs.1c11547. [Cover] [C&EN News Article]

18. H.-T. Zhang, T.J. Park, A.N.M.N. Islam, D.S.J. Tran, S. Manna, Q. Wang, S. Mondal, H. Yu, S. Banik, S. Cheng, H. Zhou, S. Gamage, S. Mahapatra, Y. Zhu, Y. Abate, **N. Jiang**, S.K.R.S. Sankaranarayanan, A. Sengupta, C. Teuscher, and S. Ramanathan, "Reconfigurable perovskite nickelate electronics for artificial intelligence", *Science*, 375, 6580, 533-539, 2022, https://doi.org/10.1126/science.abj7943.
19. J.F. Schultz and **N. Jiang**, "Noble Metal Substrate Identity Effects on the Self-Assembly, Dynamics, and Dehydrocyclization Reaction of Octaethylporphyrin Molecules", accepted by *The Journal of Physical Chemistry C*, 125, 43, 23680-23687, 2021, https://doi.org/10.1021/acs.jpcc.1c05814.
20. M. Li, D. Liu, X. Chen, Z. Yin, H. Shen, A. Aiello, K. McKenzie, **N. Jiang**, X. Li, M. Wagner, D. Durkin, H. Chen, D. Shuai, "Radical-Driven Decomposition of Graphitic Carbon Nitride Nanosheets: Light Exposure Matters", *Environmental Science & Technology*, 55, 18, 12414–12423, 2021, https://doi.org/10.1021/acs.est.1c03804.
21. L. Li, J.F. Schultz, S. Mahapatra, C. Shaw, X. Liu, X. Zhang, M. Hersam, **N. Jiang**, "Probing interfacial interactions in an organic/borophene heterostructure with angstrom resolution", *Journal of the American Chemical Society*, 143, 38, 15624-15634, 2021, https://doi.org/10.1021/jacs.1c04380. [Cover]
22. L. Li and **N. Jiang**, "Proximity and single-molecule energetics", *Science*, 373, 392-393, 2021, https://doi.org/10.1126/science.abj5860.
23. L. Li, S. Mahapatra, D. Liu, Z. Lu, **N. Jiang,** "On-Surface reaction with single molecule resolution: Progress, Challenges, and Opportunities", *ACS Nano*, 15, 3578-3585, 2021, https://doi.org/10.1021/acsnano.0c08148.
24. S. Mahapatra, L. Li, J.F. Schultz, **N. Jiang**, "Methods to Fabricate and Recycle Plasmonic Probes for Ultrahigh Vacuum Scanning Tunneling Microscopy Based Tip-Enhanced Raman Spectroscopy", *Journal of Raman Spectroscopy*, 52, 573-580, 2021, https://doi.org/10.1002/jrs.5951.
25. J.F. Schultz, B. Yang, **N. Jiang**, "On-surface formation of metal-organic coordination networks with C···Ag···C and C=O···Ag interactions assisted by precursor self-assembly", *The Journal of Chemical Physics*, 154, 044703 (1-20), 2021, https://doi.org/10.1063/5.0038559. [Featured Article] [2020 JCP Emerging Investigators Special Collection]
26. J.F. Schultz, S. Li, S. Jiang, **N. Jiang**, "Scanning Probe-Based Optical Imaging and Spectroscopy", *Journal of Physics: Condensed Matter*, 32, 463001 (1-24), 2020, https://doi.org/10.1088/1361-648X/aba8c7. [Cover]
27. J. F. Schultz, S. Mahapatra, L. Li, **N. Jiang**, "The Expanding Frontiers of Tip-Enhanced Raman Spectroscopy", *Applied Spectroscopy*, 74, 1313-1340, 2020, https://doi.org/10.1177/0003702820932229.
28. S. Mahapatra, L. Li, J.F. Schultz, **N. Jiang**, "Tip-Enhanced Raman Spectroscopy: Chemical Analysis from Nanoscale to Angstrom Scale", *The Journal of Chemical Physics*, 153, 010902, 2020, https://doi.org/10.1063/5.0009766. [Editor' Choice Award] [Featured Article] [Cover]
29. J.F. Schultz, B. Yang, **N. Jiang**, "Direct Observation of the Geometric Isomer Selectivity of a Reaction Controlled via Adsorbed Bromine", *Nanoscale*, 12, 2726-2731, 2020, https://doi.org/10.1039/C9NR09857G.
30. J.F. Schultz, L. Li, S. Mahapatra, C. Shaw, X. Zhang, **N. Jiang**, "Defining Multiple Configurations of Rubrene on a Ag(100) Surface with 5 Angstrom Spatial Resolution via Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy", *The Journal of Physical Chemistry C*, 124, 2420-2426, 2020, https://doi.org/10.1021/acs.jpcc.9b09162. [Cover]
31. S. Mahapatra, J.F. Schultz, Y. Ning, J.-L. Zhang, **N. Jiang**, "Probing Surface Mediated

Configurations of Nonplanar Regioisomeric Adsorbates using Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy", *Nanoscale*, 11, 19877-19833, 2019, https://doi.org/10.1039/C9NR06830A.

32. J. Zhou, J. Zhang, H. Yang, Z. Wang, J. Shi, W. Zhou, **N. Jiang**, G. Xian, Q. Qi, Y. Weng, C. Shen, Z. Cheng, S. He, "Plasmon-induced hot electron transfer in Au–ZnO heterogeneous nanorods for enhanced SERS", *Nanoscale,* 11, 11782-11788, 2019, https://doi.org/10.1039/C9NR02969A.
33. S. Mahapatra, Y. Ning, J.F. Schultz, L. Li, J.-L. Zhang, **N. Jiang**, "Angstrom Scale Chemical Analysis of Metal Supported *Trans*- and *Cis*-Regioisomers by Ultrahigh Vacuum Tip-Enhanced Raman Mapping", *Nano Letters,* 19, 3267-3272, 2019, https://doi.org/10.1021/acs.nanolett.9b00826.
34. Z. Hemmat, P. Yasaei, J.F. Schultz, L. Hong, L. Majidi, A. Behranginia, L. Verger, **N. Jiang**, M.W. Barsoum, R.F. Klie, A. Salehi-Khojin, "Tuning Thermal Transport through Atomically Thin Ti_3C_2Tz MXene by Current-Annealing in Vacuum", *Advanced Functional Materials*, 1805693, 1-8, 2019, https://doi.org/10.1002/adfm.201805693.
35. P.J. Whiteman, J.F. Schultz, Z.D. Porach, H. Chen, **N. Jiang**, "Dual Binding Configurations of Subphthalocyanine on Ag(100) Substrate Characterized by Scanning Tunneling Microscopy, Tip-Enhanced Raman Spectroscopy and Density Functional Theory", *The Journal of Physical Chemistry C*, 122, 5489-5495, 2018, https://doi.org/10.1021/acs.jpcc.7b12068.
36. N. Chiang, **N. Jiang (co-first author)**, L.R. Madison, E.A. Pozzi, M.R. Wasielewski, M.A. Ratner, M.C. Hersam, T. Seideman, G.C. Schatz, R.P. Van Duyne, "Probing Intermolecular Vibrational Symmetry Breaking in Self-Assembled Monolayers with Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy", *Journal of the American Chemical Society*, 139, 18664-18669, 2017, https://doi.org/10.1021/jacs.7b10645.
37. E.A. Pozzi, G. Goubert, N. Chiang, **N. Jiang**, C.T. Chapman, M. McAnally, A. Henty, T. Seideman, G. C. Schatz, M. C. Hersam, R. P. Van Duyne, "Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy", *Chemical Reviews*, 117, 4961-4982, 2017, https://doi.org/10.1021/acs.chemrev.6b00343. [Cover]
38. N. Chiang, X. Chen, G. Goubert, D.V. Chulhai, X. Chen, E.A. Pozzi, **N. Jiang**, M.C. Hersam, T. Seideman, L. Jensen, R.P. Van Duyne, "Conformational Contrast of Surface-Mediated Molecular Switches Yields Angstrom-Scale Spatial Resolution in Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy", *Nano Letters*, 16, 7774-7778, 2016, https://doi.org/10.1021/acs.nanolett.6b03958. [C&EN News Article]
39. **N. Jiang**, D. Kurouski, E. A. Pozzi, N. Chiang, M.C. Hersam, R.P. Van Duyne, "Tip-Enhanced Raman Spectroscopy: From Concepts to Practical Applications", *Chemical Physics Letters*, 659, 16-24, 2016, https://doi.org/10.1016/j.cplett.2016.06.035. [Frontiers Article] [Cover]
40. E.A. Pozzi, N.L. Gruenke, N. Chiang, **N. Jiang**, T. Seideman, G.C. Schatz, M.C. Hersam, R.P. Van Duyne, "Operational Regimes in Picosecond and Femtosecond Pulse-Excited Ultrahigh Vacuum SERS", *The Journal of Physical Chemistry Letters*, 7, 2971-2976, 2016, https://doi.org/10.1021/acs.jpclett.6b01151.
41. **N. Jiang**, N. Chiang, L. R. Madison, E. A. Pozzi, M. R. Wasielewski, T. Seideman, M. A. Ratner, M. C. Hersam, G. C. Schatz, R. P. Van Duyne, "Nanoscale Chemical Imaging of a Dynamic Molecular Phase Boundary with Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy", *Nano Letters,* 16, 3898-3904, 2016, https://doi.org/10.1021/acs.nanolett.6b01405.
42. P.P. Pal, **N. Jiang**, M.D. Sonntag, N. Chiang, E.T. Foley, M.C. Hersam, R.P. Van Duyne, T. Seideman, "Plasmon Mediated Electron Transport in Tip-Enhanced Raman Spectroscopic Junctions", *The Journal of Physical Chemistry Letters,* 6, 4210-4218, 2015, https://doi.org/10.1021/acs.jpclett.5b01902.
43. N. Chiang, **N. Jiang**, D. Chulhai, E. Pozzi, M. Hersam, L. Jensen, T. Seideman, R.P. Van Duyne, "Molecular-Resolution Interrogation of Porphyrin Monolayer by Ultrahigh Vacuum Tip-Enhanced Raman and Fluorescence Spectroscopy", *Nano Letters*, 15, 4114-4120, 2015,

https://doi.org/10.1021/acs.nanolett.5b01225.

44. M.D. Sonntag, E.A. Pozzi, **N. Jiang**, M.C. Hersam, R.P. Van Duyne, "Recent Advances in Tip-Enhanced Raman Spectroscopy", *The Journal of Physical Chemistry Letters*, 5, 3125-3130, 2014, https://doi.org/10.1021/jz5015746.
45. E.A. Pozzi, M.D. Sonntag, **N. Jiang**, N. Chiang, T. Seideman, M.C. Hersam, R.P. Van Duyne, "Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy with Picosecond Excitation", *The Journal of Physical Chemistry Letters*, 5, 2657-2661, 2014, https://doi.org/10.1021/jz501239z.
46. J.M. Klingsporn, **N. Jiang (co-first author)**, E.A. Pozzi, M.D. Sonntag, D. Chulhai, T. Seideman, L. Jensen, M.C. Hersam, R.P. Van Duyne, "Intramolecular Insight into Adsorbate-Substrate Interactions via Low Temperature, Ultrahigh Vacuum Tip -Enhanced Raman Spectroscopy", *Journal of the American Chemical Society*,136, 3881-3887, 2014, https://doi.org/10.1021/ja411899k.
47. E. Pozzi, M. Sonntag, **N. Jiang**, J. Klingsporn, M. Hersam, R.P. Van Duyne, "Tip-Enhanced Raman Imaging: An Emergent Tool for Probing Biology at the Nanoscale", *ACS Nano*, 7, 885-888, 2013, https://doi.org/10.1021/nn400560t.
48. M.N. Faraggi, **N. Jiang (co-first author)**, N. Gonzalez-Lakunza, A. Langner, S. Stepanow, K. Kern, A. Arnau, "Bonding and charge-transfer in metal-organic coordination networks on Au(111) with strong acceptor molecules", *The Journal of Physical Chemistry C*, 116, 24558-24565, 2012, https://doi.org/10.1021/jp306780n.
49. **N. Jiang**, E.T. Foley, J.M. Klingsporn, M.D. Sonntag, N.A. Valley, J.A. Dieringer, T. Seideman, G.C. Schatz, M.C. Hersam, R.P. Van Duyne, "Observation of Multiple Vibrational Modes in Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy Combined with Molecular-Resolution Scanning Tunneling Microscopy", *Nano Letters*, 12, 5061-5067, 2012, https://doi.org/10.1021/nl2039925. [Cover]
50. Q. Liu, S.X. Du, Y.Y. Zhang, **N. Jiang**, D.X. Shi, H.-J. Gao, "Identifying multiple configurations and controlling diffusivity of complex molecules on metal surfaces", *Small*, 8, 796-806, 2012, https://doi.org/10.1002/smll.201101937.
51. L.Z. Zhang, Z.H. Cheng, Q. Huan, X.B. He, X. Lin, L. Gao, Z.T. Deng, **N. Jiang**, Q. Liu, S.X. Du, H.M. Guo, H.-J. Gao, "Site- and Configuration-Selective Anchoring of Iron-Phthalocyanine on the Step Edges of Au(111) Surface", *The Journal of Physical Chemistry C*, 115, 10791-10796, 2011, https://doi.org/10.1021/jp203046b.
52. Z.H. Cheng, S.X. Du, **N. Jiang**, Y.Y. Zhang, W. Guo, W.A. Hofer, H.-J. Gao, "High resolution scanning-tunneling-microscopy imaging of individual molecular orbitals by eliminating the effect of surface charge", *Surface Science*, 605, 415-418, 2011, https://doi.org/10.1016/j.susc.2010.11.010.
53. Z.H. Cheng, S.X. Du, W. Guo, L. Gao, Z.T. Deng, **N. Jiang**, H.M. Guo, H. Tang, H.-J. Gao, "Direct Imaging of Molecular Orbitals of Metal Phthalocyanines on Metal Surfaces with an O_2-Functionalized Tip of a Scanning Tunneling Microscope", *Nano Research*, 4, 523-530, 2011, https://doi.org/10.1007/s12274-011-0108-y.
54. Q. Liu, Y.Y. Zhang, **N. Jiang**, H.G. Zhang, L. Gao, S.X. Du, H.-J. Gao, "Identifying Multiple Configurations of Complex Molecules in Dynamical Processes: Time Resolved Tunneling Spectroscopy and Density Functional Theory Calculation", *Physical Review Letters,* 104, 166101, 2010, https://doi.org/10.1103/PhysRevLett.104.166101.
55. **N. Jiang**, Y.Y. Zhang, Q. Liu, Z.H. Cheng, Z.T. Deng, S.X. Du, H.-J. Gao, M.J. Beck, S.T. Pantelides, "Diffusivity control in molecule-on-metal systems using electric fields", *Nano Letters*, 10, 1184-1188, 2010, https://doi.org/10.1021/nl903473p.
56. **N. Jiang**, Y.L. Wang, Q. Liu, Y.Y. Zhang, Z.T. Deng, K.-H. Ernst, H.-J. Gao, "Polymorphism and chiral expression in two-dimensional subphthalocyanine crystals on Au(111) ", *Physical Chemistry Chemical Physics*, 12, 1318-1322, 2010, https://doi.org/10.1039/B918278K.

57. H.G. Zhang, J.H. Mao, Q. Liu, **N. Jiang**, H.T. Zhou, H.M. Guo, D.X. Shi, H.-J. Gao, "Manipulation and control of a single molecular rotor on Au (111) surface", *Chinese Physics B*, 19, 018105, 2010, https://doi.org/10.1088/1674-1056/19/1/018105.
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59. L. Gao, W. Ji, Y.B. Hu, Z.H. Cheng, Z.T. Deng, Q. Liu, **N. Jiang**, X. Lin, W. Guo, S.X. Du, W.A. Hofer, X.C. Xie, H.-J. Gao, "Site-Specific Kondo Effect at Ambient Temperatures in Iron-Based Molecules", *Physical Review Letters*, 99, 106402, 2007, https://doi.org/10.1103/PhysRevLett.99.106402.
60. Z.H. Cheng, L. Gao, Z.T. Deng, **N. Jiang**, Q. Liu, D.X. Shi, S.X. Du, H.M. Guo, H.-J. Gao, "Adsorption behavior of iron phthalocyanine on Au(111) surface at submonolayer coverage", *The Journal of Physical Chemistry C*, 111, 9240-9244, 2007, https://doi.org/10.1021/jp070388l.
61. Z.H. Cheng, L. Gao, Z.T. Deng, Q. Liu, **N. Jiang**, X. Lin, X.B. He, S.X. Du, H.-J. Gao, "Epitaxial growth of iron phthalocyanine at the initial stage on Au(111) surface", *The Journal of Physical Chemistry C*, 111, 2656-2660, 2007, https://doi.org/10.1021/jp0660738.
62. M.Z. Wu, Y. Xiong, **N. Jiang**, H.P. Qi, Q.W. Chen, "Improvement of coercivity in cobalt-doped anatase TiO_2 nanoparticles hydrothermally prepared", *International Journal of Modern Physics B*, 19, 2550-2555, 2005, https://doi.org/10.1142/S0217979205031304.
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65. M.Z. Wu, Y. Xiong, **N. Jiang**, M. Ning, Q.W. Chen, "Hydrothermal preparation of alpha-MnSe and $MnSe_2$ nanorods", *Journal of Crystal Growth*, 262, 567-571, 2004, https://doi.org/10.1016/j.jcrysgro.2003.10.065.

INVITED TALKS

upcoming

1. "Localized Surface Plasmon Controlled Chemistry at and beyond the Nanoscale ", Wilhelm und Else Heraeus Seminar, Physikzentrum Bad Honnef, **Germany**, November 2025.
2. "Probing Chemistry at the Angstrom-Scale via Scanning Tunneling Microscopy Combined Tip-Enhanced Raman Spectroscopy", Department of Chemistry and Biochemistry, University of South Carolina, SC, April 2025.
3. "Probing Chemistry at the Angstrom-Scale via Tip-Enhanced Raman Spectroscopy", Department of Chemistry, University of Chicago, IL, January 2025. [Closs Lecture]
4. "Angstrom-scale Characterization of Atomically Thin Two-Dimensional Materials via Tip-Enhanced Raman Spectroscopy", 15th International Symposium on Atomic Level Characterizations for New Materials and Devices ALC '24, Matsue, **Japan**, November 2024.
5. "Atomic-scale insights into the interlayer characteristics and oxygen reactivity of 2D materials", Federation of Analytical Chemistry and Spectroscopy Societies SciX Conference, Raleigh, NC, October 2024.
6. "Probing Chemistry at the Angstrom-Scale via Scanning Tunneling Microscopy Combined Tip-Enhanced Raman Spectroscopy", Department of Chemistry and Biochemistry, The Ohio State University, OH, October 2024.

2024

7. "Probing the Angstrom-Scale Chemistry and Physics of Surfaces via Tip-Enhanced Raman Spectroscopy", Max Planck Institute for Multidisciplinary Sciences, Göttingen, **Germany**, September 2024.
8. "Angstrom-Scale Spectroscopic Visualization of Interfacial Interactions in an Organic/Two-Dimensional Materials Vertical Heterostructure ", International Conference on Internal Interfaces, ICII-2024, Marburg, **Germany**, September 2024.
9. "Probing the Angstrom-Scale Chemistry and Physics of Surfaces via Tip-Enhanced Raman Spectroscopy", Max Planck Institute for Solid State Research, Stuttgart, **Germany**, August 2024.
10. "Probing Chemistry at the Angstrom -Scale via Tip-Enhanced Raman Spectroscopy", The 28th International Conference on Raman Spectroscopy (ICORS), Rome, **Italy**, August 2024. [keynote]
11. Probing the Angstrom-Scale Chemistry and Physics of Surfaces via Tip-Enhanced Raman Spectroscopy", Institute of Physics, Zagreb, **Croatia**, July 2024.
12. "Probing the Angstrom-Scale Chemistry and Physics of Surfaces via Tip-Enhanced Raman Spectroscopy", Department of Applied Physics, University of Campinas, Campinas, **Brazil**, May 2024.
13. "Probing the Angstrom-Scale Chemistry and Physics of Surfaces via Tip-Enhanced Raman Spectroscopy", Brazilian Physical Society Autumn Meeting 2024, Florianopolis, **Brazil**, May 2024.
14. "Probing the Angstrom-Scale Chemistry and Physics of Surfaces via Tip-Enhanced Raman Spectroscopy", Department of Physics, University of Nevada, Reno, NV, May 2024.
15. "Probing Chemistry at the Angstrom-Scale via Scanning Tunneling Microscopy Combined Tip-Enhanced Raman Spectroscopy", Institute of Applied Physics, TU Wien, Vienna, **Austria**, March 2024.
16. "Probing Physical and Chemical Properties at the Angstrom-Scale via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Leibniz-Institut für Analytische Wissenschaften – ISAS, Berlin, **Germany**, March 2024.
17. "Probing Chemistry at the Angstrom-Scale via Scanning Tunneling Microscopy Combined Tip-Enhanced Raman Spectroscopy", Department of Chemistry, Emory University, GA, March 2024.
18. "Probing the Angstrom-Scale Chemistry and Physics of Surfaces via Tip-Enhanced Raman Spectroscopy", Argonne National Laboratory, IL, February 2024.
19. "Atomic-Scale Insights into the Interlayer Characteristics and Oxygen Reactivity of Borophene", Pittcon Conference & Expo, San Diego, CA, February 2024.
20. "Probing Angstrom-Scale Chemistry via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Department of Chemistry, Brown University, RI, February 2024.

2023

21. "Probing Angstrom-Scale Chemistry via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Department of Chemistry, University of Houston, TX, November 2023.
22. "Probing Chemistry at Angstrom Scale via Localized Surface Plasmons", 69th American Vacuum Society International Symposium and Exhibition, Portland, OR, November 2023.
23. "Probing Physical and Chemical Properties at the Ångström-Scale via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Swiss Federal Laboratories for Materials Science and Technology, Dübendorf, **Switzerland**, October 2023.
24. "Probing Angstrom-Scale Chemistry via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Department of Chemistry and Applied Biosciences, ETH Zurich, Zurich**, Switzerland**, October 2023.
25. "Probing Angstrom-Scale Chemistry via Scanning Tunneling Microscopy and Tip-Enhanced Raman

Spectroscopy", 40 Years of Surface Science and Nanotechnology (40nano), Ascona, **Switzerland**, October 2023.

26. "Probing Angstrom-Scale Chemistry via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", University of Chinese Academy of Sciences, Beijing, **China**, September 2023.
27. "Probing Angstrom-Scale Chemistry via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", 20th International Microscopy Congress (IMC), Busan, **Korea**, September 2023.
28. "Probing Physical and Chemical Properties at the Ångström-Scale via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Department of Physics, University of Notre Dame, IN, September 2023.
29. "Probing Local Structural and Chemical Properties of Atomically Thin Two-Dimensional Materials via Tip-Enhanced Raman Spectroscopy", 83th Physical Electronics Conference (PEC), La Crosse, WI, August 2023. [keynote]
30. "Probing Chemistry at the Angstrom-Scale via Tip-Enhanced Raman Spectroscopy", Dynamics at Surfaces - Gordon Research Conferences, Newport, RI, July 2023.
31. "Tip-Enhanced Raman Spectroscopy: Chemical Analysis from Nanoscale to Angstrom Scale", Department of Chemistry, Université Paris Cité, Paris, **France**, June 2023.
32. "Probing Single-Bond Chemistry via Nano-Confined Localized Surface Plasmon", Department of Chemistry, University of Oxford, Oxford, **United Kingdom**, June 2023.
33. "Probing Single-Bond Chemistry via Nano-Confined Localized Surface Plasmon", Department of Materials Science and Metallurgy, University of Cambridge, Cambridge, **United Kingdom**, June 2023. [Goldsmiths' Seminar]
34. "Angstrom Scale Chemical Analysis via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", 2023 Canadian Chemistry Conference and Exhibition, Vancouver, **Canada**, June 2023.
35. "Probing Chemistry at the Angstrom Scale via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Department of Chemistry, University of Washington, WA, May 2023.
36. "Angstrom Scale Chemical Analysis via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Department of Chemistry, Northern Illinois University, IL, February 2023.
37. "Probing Chemistry at the Angstrom-Scale via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Department of Chemistry, University of Kansas, KS, February 2023.
38. "Probing Single-Bond Chemistry via Nano-Confined Localized Surface Plasmon", Department of Chemistry and Biochemistry, University of California San Diego, CA, January 2023.

2022

39. "Angstrom Scale Chemical Analysis via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Department of Chemistry, Sorbonne University, Paris, **France**, November 2022.
40. "Atomic-Scale Probing of Chemically Modified Borophene via Tip-Enhanced Raman Spectroscopy", TERS-8 Conference, Pairs, **France**, November 2022. [keynote]
41. "Controlling Localized Plasmons via an Atomistic Approach", Federation of Analytical Chemistry and Spectroscopy Societies SciX Conference, Greater Cincinnati, KY, October 2022.
42. "Chemically identifying single adatoms with single-bond sensitivity during oxidation reactions of a polymorphic atomic monolayer", Federation of Analytical Chemistry and Spectroscopy Societies SciX Conference, Greater Cincinnati, KY, October 2022.
43. "Angstrom Scale Chemical Analysis via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Department of Chemistry, Illinois Institute of Technology, IL, September 2022.
44. "Probing Angstrom-Scale Chemistry via Tip-Enhanced Raman Spectroscopy", American Chemical Society Fall 2022 National Meeting, Chicago, IL, August 2022.

45. "Probing angstrom-scale chemistry via optical scanning tunneling microscopy", 2022 International Workshop on Low Dimensional Materials and Devices, Dalian, **China,** August 2022. (Virtual)
46. "Angstrom Scale Chemical Analysis via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Department of Chemistry, University of Michigan, MI, April 2022.
47. "Angstrom Scale Chemical Analysis via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Department of Chemistry, University of Texas at Austin, TX, April 2022.
48. "Angstrom Scale Chemical Analysis via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy ", Department of Chemistry, Lehigh University, PA, February 2022.

2021

49. "Direct Observation of the Geometric Isomer Selectivity via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Pacifichem, December 2021. (Virtual)
50. "Probing Molecule-Substrate Interactions at Angstrom Scale by Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy", Pacifichem, December 2021. (Virtual)
51. "Angstrom Scale Chemical Analysis via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Department of Chemistry, University of Nebraska-Lincoln, NE, December 2021.
52. "Tip-Enhanced Raman Spectroscopy: Chemical Analysis from Nanoscale to Angstrom Scale", the Center for Emergent Molecular Optoelectronics, Mississippi State University, MS, November 2021. (Virtual)
53. "Probing Molecule-Substrate Interactions at Angstrom Scale by Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy", 67th American Vacuum Society Virtual Symposium, October 2021. (Virtual)
54. "Probing angstrom-scale interfacial characteristics in organic/2D heterostructures via tip-enhanced Raman spectroscopy", Federation of Analytical Chemistry and Spectroscopy Societies SciX Conference, Providence, RI, September 2021.
55. "Probing chemistry of surface-supported nanostructure at the angstrom-scale", Federation of Analytical Chemistry and Spectroscopy Societies SciX Conference, Providence, RI, September 2021.
56. "Tip-Enhanced Raman Spectroscopy: Chemical Analysis from Nanoscale to Angstrom Scale", American Physical Society March Meeting 2021, March 2021. (Virtual)

2020

57. "Angstrom Scale Chemical Analysis via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", American Vacuum Society Prairie Chapter Symposium, September 2020. (Virtual)
58. "Defining Multiple Orientations of Single Molecules with Angstrom Scale Spatial Resolution via Tip-Enhanced Raman Spectroscopy", American Chemical Society Fall 2020 National Meeting, August 2020. (Virtual)
59. "Direct Observation of the Geometric Isomer Selectivity via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", American Chemical Society Fall 2020 National Meeting, August 2020. (Virtual)
60. "Angstrom Scale Chemical Analysis via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Department of Chemistry, University of Chicago, IL, April 2020. (Virtual)
61. "Probing Chemistry of Surface-Supported Nanostructures at the Angstrom-Scale via Tip-Enhanced Raman Spectroscopy", Department of Chemistry, University of Iowa, IA, February 2020.
62. "Probing Chemistry of Surface-Supported Nanostructures at the Angstrom-Scale via Tip-Enhanced Raman Spectroscopy", Department of Chemistry, University of Connecticut, CT, February 2020.
63. "Probing Intermolecular and Molecule-Substrate Interactions at Angstrom Scale via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", National Institute of Standards and Technology, MD, January 2020.

2019

64. "Angstrom Scale Chemical Analysis via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Max Planck Institute for Solid State Research, Stuttgart, **Germany**, December 2019.
65. "Angstrom Scale Chemical Analysis via Scanning Tunneling Microscopy and Advanced Raman Spectroscopy", Wilhelm und Else Heraeus Seminar, Physikzentrum Bad Honnef, **Germany**, December 2019.
66. "Angstrom Scale Chemical Analysis of Metal-supported Regioisomeric Assemblies by Ultrahigh Vacuum, Tip-enhanced Raman Spectroscopy", Federation of Analytical Chemistry and Spectroscopy Societies SciX Conference, Rising Stars in Plasmonics Session, Palm Spring, CA, October 2019.
67. "Angstrom Scale Chemical Analysis via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Department of Physics and Astronomy, University of Wyoming, Laramine, WY, October 2019.
68. "Probing Intermolecular and Molecule-Substrate Interactions at Angstrom Scale by Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy", American Chemical Society Fall 2019 National Meeting, San Diego, CA, August 2019.
69. "Probing Intermolecular and Molecule-Substrate Interactions at Angstrom Scale by Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy", 8th ChinaNano Conference 2019, Beijing, ***China***, August 2019. [keynote]
70. "Angstrom Scale Chemical Analysis via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Center for Nanoscale Materials, Argonne National Laboratory, IL, July 2019.
71. "Angstrom Scale Chemical Analysis of Metal-supported Regioisomeric Assemblies by Ultrahigh Vacuum, TERS: Conformation and Interaction", 4th International Conference on Enhanced Spectroscopies 2019, London, Ontario, ***Canada***, June 2019.
72. "Angstrom Scale Chemical Analysis via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Department of Physics, University of Illinois Chicago, IL, April 2019.
73. "Intermolecular and Molecule-Substrate Interactions in Self-Assembled Monolayers Characterized by Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", American Chemical Society Spring 2019 National Meeting, Orlando, FL, April 2019.
74. "Angstrom Scale Chemical Analysis via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Department of Physics and Astronomy, California State University, Northridge, CA, February 2019.
75. "Angstrom Scale Chemical Analysis via Scanning Tunneling Microscopy and Tip-Enhanced Raman Spectroscopy", Department of Chemistry & Biochemistry, Loyola University Chicago, IL, January 2019.

2018

76. "Nanoscale Chemical Imaging via Scanning Tunneling Microscopy and Advanced Raman Spectroscopy Techniques", School of Chemistry and Chemical Engineering, Lanzhou University, Lanzhou, **China**, November 2018.
77. "Intermolecular Interactions in Self-Assembled Nanostructures Characterized by Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy", Federation of Analytical Chemistry and Spectroscopy Societies SciX Conference, Atlanta, GA, October 2018.
78. "Nanoscale Chemical Imaging via Scanning Tunneling Microscopy and Advanced Raman Spectroscopy Techniques", Department of Mechanical Engineering, The University of Hong Kong, **Hong Kong**, September 2018.
79. "Nanoscale Chemical Imaging via Scanning Tunneling Microscopy and Advanced Raman Spectroscopy Techniques", Center For Quantum Nanoscience, Ewha Womans University, Seoul, **Korea**, September 2018.

80. "Intermolecular Interactions in Self-Assembled Nanostructures Characterized by Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy", The 26th International Conference on Raman Spectroscopy, Jeju, **Korea**, August 2018.
81. "Probing intermolecular interaction in self assembled monolayers on surfaces with ultrahigh vacuum tip-enhanced Raman spectroscopy", SPIE Nanoscience + Engineering, San Diego, CA, August 2018.
82. "Probing Intermolecular Interactions via Nanoimaging and Nanospectroscopy", 2018 International Workshop on Low Dimensional Materials and Devices, Yichang, **China**, August 2018.
83. "Nanoscale Chemical Imaging via Scanning Tunneling Microscopy and Advanced Raman Spectroscopy Techniques", Department of Chemistry, Roosevelt University, IL, February 2018.
84. "Recent progress in the study of surface chemistry on various noble metal surfaces by ultrahigh vacuum tip-enhanced Raman spectroscopy", The 48th Winter Colloquium on the Physics of Quantum Electronics, Snowbird, UT, January 2018.
85. "Nanoscale Chemical Imaging via Scanning Tunneling Microscopy and Advanced Raman Spectroscopy Techniques", Department of Physics, University of Utah, UT, January 2018.
86. "Nanoscale Chemical Imaging via Scanning Tunneling Microscopy and Advanced Raman Spectroscopy Techniques", School of Physical Science and Technology, Shanghai Tech University, Shanghai, **China**, January 2018.

2017

87. "Nanoscale Chemical Imaging via Scanning Tunneling Microscopy and Advanced Raman Spectroscopy Techniques", College of Chemistry and Molecular Engineering, Peking University, Beijing, **China**, December 2017.
88. "Nanoscale Chemical Imaging via Scanning Tunneling Microscopy and Advanced Raman Spectroscopy Techniques", Department of Physics, Beijing Institute of Technology, Beijing, **China**, December 2017.
89. "Nanoscale Chemical Imaging via Scanning Tunneling Microscopy and Advanced Raman Spectroscopy Techniques", Department of Physics, Wuhan University, Wuhan, **China**, December 2017.
90. "Nanoscale Chemical Imaging via Scanning Tunneling Microscopy and Advanced Raman Spectroscopy Techniques", School of Materials Science and Engineering, Southeast University, Nanjing, ***China***, December 2017.
91. "Nanoscale Chemical Imaging via Scanning Tunneling Microscopy and Advanced Raman Spectroscopy Techniques", RIKEN, Wako, ***Japan***, November 2017.
92. "Recent progress in the study of surface chemistry on various noble metal surfaces by ultrahigh vacuum tip-enhanced Raman spectroscopy", SPIE Nanoscience + Engineering, San Diego, CA, August 2017.
93. "An Insight into Single-Molecule Processes via Nanoimaging and Nanospectroscopy", National Center for Nanoscience and Technology, Beijing, **China**, July 2017.
94. "An Insight into Single-Molecule Processes via Nanoimaging and Nanospectroscopy", 2017 International Workshop on Nanomaterials &Nanodevices, Beijing, **China**, July 2017.
95. "Nanoscale Chemical Imaging via Scanning Tunneling Microscopy and Advanced Raman Spectroscopy Techniques", School of Energy Science and Engineering, Nanjing Tech University, Nanjing, **China**, June 2017.

2016

96. "An Insight into Single-Molecule Processes via Nanoimaging and Nanospectroscopy", Department of Physics, Drexel University, PA, November 2016.

2015

97. "New Directions in Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy with Molecular-Resolution Scanning Tunneling Microscopy", EMN Fall Meeting, Las Vegas, NV, November 2015.
98. "New Directions in Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy", Pittcon Conference & Expo, New Orleans, LA, March 2015.
99. "New Directions in Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy with Molecular-Resolution Scanning Tunneling Microscopy", Department of Physics, McGill University, Montreal, **Canada**, March 2015.

TEACHING EXPERIENCE

University of Illinois Chicago

Special Topics in Physical Chemistry (CHEM 549), Spring 2016, enrollment =10

Surface Chemistry & Catalysis (CHEM 541), Fall 2016, enrollment = 6

Physical Chemistry I (CHEM 342), Spring 2017, enrollment = 90

Physical Chemistry Laboratory (CHEM 343), Fall 2017, enrollment = 63

Physical Chemistry I (CHEM 342), Spring 2018, enrollment = 75

Optical Spectroscopies in Analytical Chemistry (CHEM 524), Fall 2018, enrollment = 24

Physical Chemistry Laboratory (CHEM 343), Spring 2019, enrollment = 53

Physical Chemistry Laboratory (CHEM 343), Spring 2020, enrollment = 41

Problems in Physical Chemistry (CHEM 540), Spring 2020, enrollment = 12

Optical Spectroscopies in Analytical Chemistry (CHEM 524), Fall 2020, enrollment = 17

Physical Chemistry Laboratory (CHEM 343), Spring 2021, enrollment = 58

Physical Chemistry Laboratory (CHEM 343), Fall 2021, enrollment = 48

Physical Chemistry Laboratory (CHEM 343), Spring 2022, enrollment = 53

Optical Spectroscopies in Analytical Chemistry (CHEM 524), Fall 2020, enrollment = 19

Physical Chemistry Laboratory (CHEM 343), Spring 2023, enrollment = 70

Physical Chemistry Laboratory (CHEM 343), Spring 2024, enrollment = 60

Problems in Physical Chemistry (CHEM 540), Spring 2024, enrollment = 13

SUPERVISED PERSONNEL

Postdoctoral Scholar: Dr. Linfei Li (2018-present)

Graduate Students: Philip Whiteman (2015-2019); Zachary Porach (2015-2016); Jeremy Schultz, (2016-2021); Sayantan Mahapatra (2017-2022); Kai Wang (2018-2024); Zhongyi Lu (2019-2021); Dairong Liu (expected graduation date, July 2024); Chamath Siribaddana (expected graduation date, May 2026); Shilpa (expected graduation date, May 2027); Soumyajit Rajak (expected graduation date, May 2027); Rima Chandra (expected graduation date, May 2028).

Undergraduate Students: Erin Ehlers (2017-2018); Eunbyoel Kim (2017-2018); Brian Spencer (2018-2020); Tay Porro (2021-2022); Emily Aponte (2022-2023).

Graduate Student Honors and Awards

The Paaren Fellowship for Graduate Research, awarded to Dairong Liu (2024)

UIC Graduate College Outstanding Thesis/Dissertation Award, awarded to Sayantan Mahapatra (2023)

Wayne B. Nottingham Prize, awarded to Sayantan Mahapatra (2023)

American Vacuum Society National Student Award, awarded to Dairong Liu (2023)

Finalist for Morton M. Traum Surface Science Student Award, Dairong Liu (2023)

FACSS Hirschfeld Scholar Award, awarded to Sayantan Mahapatra (2022)

Coblentz Society Student Award, awarded to Sayantan Mahapatra (2022)

The first-place Student Poster Award at the 82nd Physical Electronics Conference, awarded to Dairong Liu (2022)

Russell and Sigurd Varian Award, American Vacuum Society, awarded to Sayantan Mahapatra (2021)

Wayne B. Nottingham Prize, awarded to Jeremy Schultz (2021)

Barbara Stull Graduate Student Award, Society for Applied Spectroscopy (SAS), awarded to Jeremy Schultz (2021)

Finalist for the ACS Graduate Award in Experimental Physical Chemistry, Jeremy Schultz (2021)

UIC Graduate College Dean's Scholar Fellowship Award, awarded to Sayantan Mahapatra (2021)

Morton M. Traum Surface Science Student Award, awarded to Sayantan Mahapatra (2020)

American Vacuum Society National Student Award, awarded to Jeremy Schultz (2020)

The Paaren Fellowship for Graduate Research, awarded to Jeremy Schultz (2020)

Nanometer-scale Science and Technology Division Graduate Student Award Winner, American Vacuum Society, awarded to Jeremy Schultz (2019)

Dorothy M. and Earl S. Hoffmann Travel Grant, American Vacuum Society, awarded to Jeremy Schultz and Sayantan Mahapatra (2019)

Bodmer International Travel Award, University of Illinois Chicago, College of Liberal Arts and Sciences, awarded to Sayantan Mahapatra (2019)

Student Presenter Scholarship, University of Illinois Chicago, awarded to Jeremy Schultz (2019)

Dorothy M. and Earl S. Hoffmann Travel Grant, American Vacuum Society, awarded to Jeremy Schultz (2018)

Bodmer International Travel Award, University of Illinois Chicago, College of Liberal Arts and Sciences, awarded to Jeremy Schultz (2018)

3rd Place Image of Research Competition, University of Illinois Chicago, awarded to Jeremy Schultz (2018)

The Best Poster Award at The International Conference on Raman Spectroscopy (Jeju, Korea), awarded to Jeremy Schultz (2018)

Bodmer International Travel Award, University of Illinois Chicago, College of Liberal Arts and Sciences, awarded to Philip Whiteman (2017)

Undergraduate Student Honors and Awards

The Leonard Kotin Award for Physical Chemistry, awarded to Eunbyoel Kim (2018)

SERVICES

1. Program Chair / Chair-Elect, American Vacuum Society Surface Science Division, 2023-2026

2. Vice-chair / Chair-Elect, American Vacuum Society Prairie Chapter, 2024-2027

3. Executive member, American Vacuum Society Prairie Chapter, 2016-2020, 2022-present

4. American Vacuum Society Prairie Chapter Awards Committee Chair, 2022-present

5. Committee member, Physical Electronic Conference, 2022-present

6. Guest Associate Editor for *The Journal of Physical Chemistry C, Optics Communications,* and *Applied Spectroscopy*

7. Reviewer for academic journals including *Science*, *Nature Chemistry, Nature Materials, Nature Reviews Physics, Nature Communications, Science Advances, Angewandte Chemie International Edition, Journal of the American Chemical Society, Journal of the American Chemical Society Au, Nano Letters, ACS Nano, Advanced Materials, Advanced Science, National Science Review, Light: Science & Application, Light: Advanced Manufacturing, ACS Photonics, ACS Applied Materials & Interfaces, ACS Applied Optical Materials, The Journal of Physical Chemistry Letter, The Journal of Physical Chemistry, The Journal of Chemical Physics, Accounts of Chemical Research, Langmuir, Nanoscale, Carbon, Analytical Chemistry, Physical Chemistry Chemical Physics, Surface Science, Journal of Raman Spectroscopy, Advanced Optical Material, Journal of Physics: Condensed Matter, Applied Physics Letters, Applied Physics A, Journal of Physics D, ChemCatChem, ChemPhysChem, Nanotechnology, CrystEngComm, ECS Journal of Solid State Science and Technology, Journal of Vacuum Science & Technology, Talanta, Analytical Methods, Biosensors, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, ChemistrySelect*

8. Grant reviewer for National Science Foundation, Department of Energy, American Chemical Society

9. Grant reviewer for the French National Research Agency

10. Grant reviewer for the Swiss National Science Foundation (SNSF)

11. Conference organizer: 82nd Physical Electronics Conference, 2022

12. Conference symposium organizer: 2023 American Vacuum Society National Meeting, Spring 2022 American Chemical Society National Meeting, Pacifichem 2021, Fall 2020 American Chemical Society National Meeting

13. Tutorial on nanoscale imaging for Department of Energy, 2021

14. Mentor, Hinsdale High School District 86's Science Inquiry and Research course, 2017-present

15. Research Mentor, Chicago City College, 2018-present

16. Organizer, "Standard High & Ultra High Vacuum Seminar", University of Illinois Chicago, 2016