

CURRICULUM VITAE

Ding-Shyue (Jerry) Yang

Department of Chemistry
University of Houston
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Education

- 2009 Ph.D. in Chemistry, California Institute of Technology (Caltech), Pasadena, CA
Research Advisor: Professor Ahmed H. Zewail (Nobel laureate)
- 1999 M.S. in Chemistry, National Taiwan University, Taipei, Taiwan
Research Advisor: Professor Bih-Yaw Jin
- 1997 B.S. in Chemistry (minor in Mathematics), National Taiwan University, Taipei, Taiwan

Professional Experience

- 2025–present Professor of Chemistry, University of Houston (UH), Houston, TX
- 2019–2025 Associate Professor of Physics, University of Houston (UH), Houston, TX
- 2018–2025 Associate Professor of Chemistry, University of Houston (UH), Houston, TX
- 2012–2018 Assistant Professor of Chemistry, University of Houston (UH), Houston, TX
- 2010–2012 Scientist, California Institute of Technology, Pasadena, CA
- 2009–2010 Postdoctoral Scholar, California Institute of Technology, Pasadena, CA
- 2002–2009 Research and Teaching Assistant, California Institute of Technology, Pasadena, CA
- 2001–2002 Research Assistant, Chemistry, National Taiwan University, Taipei, Taiwan
- 1997–1999 Research Assistant, Chemistry, National Taiwan University, Taipei, Taiwan

Honors and Awards

- 2025 *President's Circle Award*, University of Houston
- 2024 *Outstanding Volunteer of the Year Award*, American Chemical Society
- 2023 *Salute to Excellence Award*, American Chemical Society Greater Houston Section
- 2017 *NSF Faculty Early Career Development (CAREER) Award*
- 2013–2015 *Welch Professorship*, Welch Foundation & Texas Center for Superconductivity at UH
- 2009 *Herbert Newby McCoy Award*, Chemistry Division, Caltech
- 2009 *Phi Tau Phi Scholarship*, Phi Tau Phi Scholastic Honor Society
- 2008 *Lecturer*, Everhart Lecture Series, Caltech
- 2000 *National Outstanding Graduate Research Award*, Taiwan
- 1999 *Dean's Award*, College of Science, National Taiwan University, Taiwan
- 1999 *Yen Thesis Award*, Chemistry Department, National Taiwan University, Taiwan
- 1997 *Summa cum laude*, B.S. Chemistry, National Taiwan University, Taiwan
- 1993–1997 *University President's List* (7 times), National Taiwan University, Taiwan
- 1993–1997 *Yen-Tze Lee (Nobel laureate) Scholarship*, Taiwan
- 1993–1997 *Full Scholarship for National Gifted Students in Fundamental Science*, Taiwan

1993 *Awardee, Ten Outstanding Adolescents of the Worldwide Chinese*

1993 *Gold Medal, 25th International Chemistry Olympiad, Italy*

Peer-Reviewed Publications

Publications based on work at the University of Houston (indicates corresponding author)*

1. Md Shahriar H. Shuvo, Xing He, M. Ghosh, D.-S. Yang*, "[Direct Observation of Energy Transport Dynamics and High Thermal Conductance across Single Solid-Molecule Junctions](#)," *Phys. Rev. Lett.* **2026**, 137, 038001.
2. Daniel X. Du, Adam C. Bartnik, Cameron J. R. Duncan, Usama Choudhry, Tanya Tabachnik, Chaim Sallah, Yuki Ogawa, Ebrahim Najafi, Ding-Shyue Yang, Jared M. Maxson*, Anthony W. P. Fitzpatrick*, "[Pulsed Laser Lensing for Phase Modulation in Electron Microscopy](#)," *eLife* **2026**, 15, 109793.
3. Daniel X. Du, Adam C. Bartnik, Cameron J. R. Duncan, Usama Choudhry, Tanya Tabachnik, Chaim Sallah, Ebrahim Najafi, Ding-Shyue Yang, Jared M. Maxson*, Anthony W. P. Fitzpatrick*, "[Progress in the Development of An Ultrafast Pulsed Ponderomotive Phase Plate for Cryo-Electron Tomography](#)," *Struct. Dyn.* **2025**, 12, 044302.
4. Syed A. Shah, Hamed Vali, Daijiro Okaue, Ken-Ichi Fukui, Ding-Shyue Yang, Steven Baldelli*, "[Surface Structure Characterization of Rubrene\(001\) Single Crystal with Sum Frequency Generation Spectroscopy and Reflection High-Energy Electron Diffraction](#)," *J. Chem. Phys.* **2025**, 162, 014701; part of Festschrift in honor of Yuen-Ron Shen.
5. Bijesh K. Malla, Ding-Shyue Yang*, Thalappil Pradeep*, "[Growth of Clathrate Hydrates in Nanoscale Ice Films Observed Using Electron Diffraction and Infrared Spectroscopy](#)," *J. Phys. Chem. Lett.* **2025**, 16, 365–371.
6. Xing He, Mithun Ghosh, Ding-Shyue Yang*, "[Impacts of Hot Carrier Diffusion, Electron–Phonon Coupling, and Surface Atoms on Metal Surface Dynamics Revealed by Reflection Ultrafast Electron Diffraction](#)," *J. Chem. Phys.* **2024**, 160, 224701.
7. Mazhar Chebl[†], Xing He[†], Ding-Shyue Yang*, "[Cross-Examination of Photoinitiated Carrier and Structural Dynamics of Black Phosphorus at Elevated Fluences](#)," *J. Chem. Phys.* **2024**, 160, 124703.
8. Xing He, Naveen K. Tailor, Soumitra Satapathi, Jakoah Brgoch, Ding-Shyue Yang*, "[Strong Coupling of Self-Trapped Excitons to Acoustic Phonons in Bismuth Perovskite Cs₃Bi₂I₉](#)," *Adv. Opt. Mater.* **2024**, 12, 2300199.
9. Xing He, Ding-Shyue Yang*, "[Nanoscale Energy Transport Dynamics across Nonbonded Solid-Molecule Interfaces and in Molecular Thin Films](#)," *J. Phys. Chem. Lett.* **2023**, 14, 11457–11464.
10. Usama Choudhry, Fengjiao Pan, Xing He, Basamat Shaheen, Taeyong Kim, Ryan Gnabasi, Geethal A. Gamage, Haoran Sun, Alex Ackerman, Ding-Shyue Yang, Zhifeng Ren*, Bolin Liao*, "[Persistent Hot Carrier Diffusion in Boron Arsenide Single Crystals Imaged by Ultrafast Electron Microscopy](#)," *Matter* **2023**, 6, 206–216.
11. Mazhar Chebl, Xing He, Ding-Shyue Yang*, "[Ultrafast Carrier-Coupled Interlayer Contraction](#),"

- [Coherent Intralayer Motions, and Phonon Thermalization Dynamics of Black Phosphorus](#)," *Nano Lett.* **2022**, 22, 5230–5235.
12. Xing He, Ding-Shyue Yang*, "[Ethanol on Graphite: Ordered Structures and Delicate Balance of Interfacial and Intermolecular Forces](#)," *J. Phys. Chem. C* **2021**, 125, 24145–24154.
 13. Mithun Ghosh, Ding-Shyue Yang*, "[Ordering of Small Molecules on Hydrophobic Self-Assembled *n*-Alkanethiols: Delicate Balance of Interfacial and Intermolecular Interactions](#)," *J. Phys. Chem. C* **2021**, 125, 19022–19031.
 14. Xing He, Ding-Shyue Yang*, "[Order-Determined Structural and Energy Transport Dynamics in Solid-Supported Interfacial Methanol](#)," *Nano Lett.* **2021**, 21, 1440–1445.
 15. Mithun Ghosh, Ding-Shyue Yang*, "[Structures of Self-Assembled *n*-Alkanethiols on Gold by Reflection High-Energy Electron Diffraction](#)," *Phys. Chem. Chem. Phys.* **2020**, 22, 17325–17335.
 16. Xing He[†], Mazhar Chebl[†], Ding-Shyue Yang*, "[Cross Examination of Ultrafast Carrier, and Structural, Interfacial, and Carrier Dynamics of Supported Monolayer MoS₂](#)," *Nano Lett.* **2020**, 20, 2026–2033.
 17. Chengyi Wu, Ding-Shyue Yang*, "[Ordered Structures and Morphology-Induced Phase Transitions at Graphite–Acetonitrile Interfaces](#)," *J. Phys. Chem. C* **2019**, 123, 22390–22396.
 18. Tahereh Ghaed-Sharaf, Ding-Shyue Yang, Steven Baldelli, Mohammad H. Ghatee*, "[From Micelles to Vesicle and Membrane Structures of Double-Strand Ionic Liquids in Water: Molecular Dynamics Simulation](#)," *Langmuir* **2019**, 35, 2780–2791.
 19. Ding-Shyue Yang*, Bolin Liao*, Omar F. Mohammed*, "[Scanning Ultrafast Electron Microscopy: Four-Dimensional Imaging of Materials Dynamics in Space and Time](#)," *MRS Bull.* **2018**, 43, 491–496. (Invited)
 20. Napat Punpongjareorn, Xing He, Zhongjia Tang, Arnold M. Guloy, Ding-Shyue Yang*, "[Ultrafast Switching of Valence and Generation of Coherent Acoustic Phonons in Semiconducting Rare-Earth Monosulfides](#)," *Appl. Phys. Lett.* **2017**, 111, 081903.
 21. Xing He, Napat Punpongjareorn, Weizheng Liang, Yuan Lin, Chonglin Chen, Allan J. Jacobson, Ding-Shyue Yang*, "[Photoinduced Strain Release and Phase Transition Dynamics of Solid-Supported Ultrathin Vanadium Dioxide](#)," *Sci. Rep.* **2017**, 7, 10045.
 22. Basamat S. Shaheen, Jingya Sun, Ding-Shyue Yang*, Omar F. Mohammed*, "[Spatiotemporal Observation of Electron-Impact Dynamics in Photovoltaic Materials Using 4D Electron Microscopy](#)," *J. Phys. Chem. Lett.* **2017**, 8, 2455–2462.
 23. Ding-Shyue Yang*, Xing He, "[Structures and Ultrafast Dynamics of Interfacial Water Assemblies on Smooth Hydrophobic Surfaces](#)," *Chem. Phys. Lett.* **2017**, 683, 625–632.
 - Invited submission to Ahmed Zewail Memorial Issue
 24. Xing He[†], Chengyi Wu[†], Ding-Shyue Yang*, "[Communication: No Guidance Needed: Ordered Structures and Transformations of Thin Methanol Ice on Hydrophobic Surfaces](#)," *J. Chem. Phys.* **2016**, 145, 171102.

25. Ding-Shyue Yang, Peter Baum, Ahmed H. Zewail*, "[Ultrafast Electron Crystallography of the Cooperative Reaction Path in Vanadium Dioxide](#)," *Struct. Dyn.* **2016**, 3, 034304.
 - Selected in Editor's Picks
26. Xing He, Napat Punpongjareorn, Chengyi Wu, Ilya A. Davydov, Ding-Shyue Yang*, "[Ultrafast Carrier Dynamics of CdTe: Surface Effects](#)," *J. Phys. Chem. C* **2016**, 120, 9350–9356.
27. Xing He, Chengyi Wu, Karjini Rajagopal, Napat Punpongjareorn, Ding-Shyue Yang*, "[Ordered Ionic Liquid Structure Observed at Terraced Graphite Interfaces](#)," *Phys. Chem. Chem. Phys.* **2016**, 18, 3392–3396.

Publications prior to UH appointment (indicates corresponding author)*

28. Ding-Shyue Yang, Omar F. Mohammed, Ahmed H. Zewail*, "[Environmental Scanning Ultrafast Electron Microscopy: Structural Dynamics of Solvation at Interfaces](#)," *Angew. Chem. Int. Ed.* **2013**, 52, 2897–2901.
29. Omar F. Mohammed, Ding-Shyue Yang, Samir K. Pal, Ahmed H. Zewail*, "[4D Scanning Ultrafast Electron Microscopy \(S-UEM\): Visualization of Materials Surface Dynamics](#)," *J. Am. Chem. Soc.* **2011**, 133, 7708–7711.
30. Ding-Shyue Yang, Omar F. Mohammed, Ahmed H. Zewail*, "[Scanning Ultrafast Electron Microscopy](#)," *Proc. Natl. Acad. Soc. USA* **2010**, 107, 14993–14998.
31. Ding-Shyue Yang, Ahmed H. Zewail*, "[Ordered Water Structure at Hydrophobic Graphite Interfaces Observed by 4D, Ultrafast Electron Crystallography](#)," *Proc. Natl. Acad. Soc. USA* **2009**, 106, 4122–4126.
32. Fabrizio Carbone, Ding-Shyue Yang, Enrico Giannini, A. H. Zewail*, "[Direct Role of Structural Dynamics in Electron–Lattice Coupling of Superconducting Cuprates](#)," *Proc. Natl. Acad. Soc. USA* **2008**, 105, 20161–20166.
 - Highlighted in [This Week in PNAS](#) **2008**, 105, 20047.
33. Ding-Shyue Yang, Changshi Lao, Ahmed H. Zewail*, "[4D Electron Diffraction Reveals Correlated Unidirectional Behavior in Zinc Oxide Nanowires](#)," *Science* **2008**, 321, 1660–1664.
34. Peter Baum, Ding-Shyue Yang, Ahmed H. Zewail*, "[4D Visualization of Transitional Structures in Phase Transformations by Electron Diffraction](#)," *Science* **2007**, 318, 788–792.
 - Highlighted by a [Perspective](#) in *Science* **2007**, 318, 755–756.
35. Jau Tang, Ding-Shyue Yang, Ahmed H. Zewail*, "[Ultrafast Electron Crystallography. 3. Theoretical Modeling of Structural Dynamics](#)," *J. Phys. Chem. C* **2007**, 111, 8957–8970.
36. Nuh Gedik, Ding-Shyue Yang, Gennady Logvenov, Ivan Bozovic, Ahmed H. Zewail*, "[Nonequilibrium Phase Transitions in Cuprates Observed by Ultrafast Electron Crystallography](#)," *Science* **2007**, 316, 425–429.
37. Ding-Shyue Yang, Nuh Gedik, Ahmed H. Zewail*, "[Ultrafast Electron Crystallography. 1. Nonequilibrium Dynamics of Nanometer-scale Structures](#)," *J. Phys. Chem. C* **2007**, 111, 4889–4949.
 - Highlighted as [Cover Article](#), *J. Phys. Chem. C* **2007**, 111, Issue 13.

- Selected in [Virtual Issue in Memory of Ahmed Zewail](#), *J. Phys. Chem. A* **2016**, 120, 7405–7407; *J. Phys. Chem. B* **2016**, 120, 10043–10045; *J. Phys. Chem. C* **2016**, 120, 21145–21147
- 38. Chong-Yu Ruan, Ding-Shyue Yang, Ahmed H. Zewail*, "[Structures and Dynamics of Self-Assembled Surface Monolayers Observed by Ultrafast Electron Crystallography](#)," *J. Am. Chem. Soc.* **2004**, 126, 12797–12799.
 - Highlighted in [Anal. Chem.](#) **2004**, 76, 425A.
- 39. D. Hern Paik, I-Ren Lee, Ding-Shyue Yang, J. Spencer Baskin, Ahmed H. Zewail*, "[Electrons in Finite-sized Water Cavities: Hydration Dynamics Observed in Real Time](#)," *Science* **2004**, 306, 672–675.
 - Highlighted by a [Perspective](#) in *Science* **2004**, 306, 618–619.
- 40. D. Hern Paik, Ding-Shyue Yang, I-Ren Lee, Ahmed H. Zewail*, "[The Transition State of Thermal Organic Reactions: Direct Observation in Real Time](#)," *Angew. Chem. Int. Ed.* **2004**, 43, 2830–2834.
- 41. Sundarraj Sudhakar, Jui-Hung Hsu, Yi-Hung Liu, Yu Wang, Ding-Shyue Yang, Bih-Yaw Jin, Tien-Yau Luh*, "[Synthesis and photophysical studies of siloxane-tethered cyclophanes](#)," *Silicon Chem.* **2002**, 1, 403–407.

Patents

1. "[Method and System for 4D Tomography and Ultrafast Scanning Electron Microscopy](#)," Ahmed H. Zewail, Oh-Hoon Kwon, Omar F. Mohammed, Ding-Shyue Yang, U.S. Patent No. US8,841,613, issued September 23, 2014.

Oral Presentations

1. Gordon Research Conference on Molecular Interactions and Dynamics, Easton, MA (07/02/2026) "Active adsorbate–substrate coupling and detailed energy transport dynamics across solid–molecule junctions"
2. Materials Research Society 2024 Fall Meeting, Boston, MA (12/04/2024)
"Cross-examination of carrier and structural dynamics reveals unexpected behavior of a bismuth-iodide perovskite, black phosphorus, and metal surfaces"
3. American Chemical Society 2024 Fall Meeting, Denver CO (08/19/2024)
"Reflection ultrafast electron diffraction: probing photoinduced structural dynamics of materials and molecular assemblies at surfaces"
4. 13th International Conference on Excitonic and Photonic Processes in Condensed Matter and Nano Materials (EXCON23), Santa Fe, NM (10/24/2023)
"Cross-examination of carrier and structural dynamics reveals unexpected behavior of a bismuth-iodide perovskite and black phosphorus"
5. Gordon Research Conference on Dynamics at Surfaces 2023, Newport, RI (07/27/2023)
"Structural dynamics of surface assemblies and underlying energy transport mechanisms revealed by reflection ultrafast electron diffraction"

6. Dept. of Chemistry, Columbia University, NY (06/01/2022)
"Structural dynamics of materials and molecular assemblies and underlying energy transport mechanisms at the atomic level"
7. Perovskite Society of India, Virtual/India (04/04/2022)
"Photoinitiated carrier and lattice dynamics of lead-free bismuth halide perovskite: Effects of structural deformation"
8. PacifiChem 2021, Virtual/Honolulu, HI (12/17/2021)
"Expected and unexpected structural dynamics of materials and molecular assemblies revealed by reflection ultrafast electron diffraction"
9. American Chemical Society Southwest Regional Meeting, Austin, TX (11/02/2021)
"Structural dynamics of materials and molecular assemblies and underlying energy transport mechanisms revealed by reflection ultrafast electron diffraction"
10. American Chemical Society Southwest Regional Meeting, El Paso, TX (11/14/2019)
"Visualizing structures and photoinduced dynamics of materials and interfaces with electrons"
11. Dept. of Chemistry, Louisiana State University, LA (10/01/2019)
"Visualizing structures, phase transitions, and ultrafast dynamics of materials and solid–molecule interfaces with electrons"
12. Dept. of Applied Chemistry, National Chiao-Tung University, Taiwan (08/12/2019)
"Visualizing structures, phase transitions, and ultrafast dynamics of materials and solid–molecule interfaces with electrons"
13. Institute of Atomic and Molecular Sciences, Academia Sinica, Taiwan (08/07/2019)
"Visualizing structures, phase transitions, and ultrafast dynamics of materials and solid–molecule interfaces with electrons"
14. 14th Femtochemistry Conference (FEMTO14), Shanghai, China (07/28/2019)
"Visualizing structures and photoinduced dynamics of materials and interfaces"
15. Dept. of Chemistry, National Taiwan Normal University, Taiwan (07/08/2019)
"Visualizing structures, phase transitions, and ultrafast dynamics of materials and solid–molecule interfaces with electrons"
16. Femtosecond Electron Imaging and Spectroscopy 2019, Lincoln, NE (05/13/2019)
"Ultrafast carrier and structural dynamics of supported monolayer MoS₂"
17. Dept. of Applied Physics, Kyung Hee University, S. Korea (05/30/2018)
"Visualizing structures and photoinduced dynamics of materials and interfaces using time-resolved electron imaging techniques"
18. 255th American Chemical Society National Meeting, New Orleans, LA (03/19/2018)
"Ordered ionic liquid structure observed at terraced graphite interfaces by reflection high-energy electron diffraction"
19. 255th American Chemical Society National Meeting, New Orleans, LA (03/18/2018)
"Comparison of photoinduced ultrafast dynamics of semiconducting rare-earth and transition-metal chalcogenides"

20. Dept. of Chemistry, Emory University, GA (09/18/2017)
"Visualizing Structures and Photoinduced Dynamics of Materials and Interfaces Using Time-Resolved Electron Imaging Techniques"
21. 2017 Korea–Japan Molecular Science Symposium, Busan, S. Korea (07/11/2017)
"Structural Phase Transitions and Dynamics of Solid-Supported Interfacial Assemblies"
22. Dept. of Chemistry, Pusan National University, S. Korea (07/07/2017)
"Visualizing Structures and Photoinduced Dynamics of Materials and Interfaces Using Time-Resolved Electron Imaging Techniques"
23. Dept. of Chemistry, Korea Advanced Institute of Science & Technology, S. Korea (07/06/2017)
"Visualizing Structures and Photoinduced Dynamics of Materials and Interfaces Using Time-Resolved Electron Imaging Techniques"
24. Dept. of Chemistry, Ulsan National Institute of Science & Technology, S. Korea (07/04/2017)
"Visualizing Structures and Photoinduced Dynamics of Materials and Interfaces Using Time-Resolved Electron Imaging Techniques"
25. Dept. of Materials Science and Engineering, Inha University, S. Korea (07/03/2017)
"Visualizing Structures and Photoinduced Dynamics of Materials and Interfaces Using Time-Resolved Electron Imaging Techniques"
26. Collaborative Conference on Materials Research 2017, Jeju, S. Korea (06/28/2017)
"Photoinduced Structural Phase-Transition Dynamics of Strained Ultrathin Vanadium Dioxide"
27. Dept. of Physics & Astronomy, Michigan State University, MI (05/01/2017)
"Visualizing Structures and Photoinduced Dynamics of Materials and Interfaces Using Time-Resolved Electron Imaging Techniques"
28. Materials Research Society 2017 Spring Meeting, Phoenix, AZ (04/20/2017)
"Structural Phase Transitions and Dynamics of Solid-Supported Interfacial Assemblies"
29. 253rd American Chemical Society National Meeting, San Francisco, CA (04/04/2017)
"Structural Transformations and Self-Assembly of Interfacial Methanol Ice on Hydrophobic Surfaces"
30. American Physical Society March Meeting, New Orleans, LA (03/17/2017)
"Photoinduced Structural Dynamics and Transformation Pathway of Sapphire-Supported Ultrathin Vanadium Dioxide"
31. Dept. of Chemistry, Texas A&M University, TX (03/10/2017)
"Visualizing Structures and Photoinduced Dynamics of Materials and Interfaces Using Time-Resolved Electron Imaging Techniques"
32. International Symposium on Chemical Sciences, UH, TX (01/21/2017)
"Visualizing Structures and Photoinduced Dynamics of Materials and Interfaces Using Time-Resolved Electron Imaging Techniques"
33. Nano Speaker Series, Dept. of Electrical & Computer Engineering, UH, TX (10/14/2016)
"Visualizing Photoinduced Structural Dynamics of Materials and Interfaces Using Time-Resolved Electron Imaging Techniques"

34. SPIE Optics + Photonics 2015, San Diego, CA (08/12/2015)
"Effect of Surface Conditions on Ultrafast Carrier Dynamics of Crystalline CdTe"
35. Electron Microscopy Frontiers, KAUST, Saudi Arabia (12/09/2014)
"Visualization of the Structural Dynamics of Interfacial Molecular Assemblies by Ultrafast Electron Imaging Techniques"
36. Femtosecond Electron Imaging and Spectroscopy 2013, Key West, FL (12/12/2013)
"Environmental Scanning Electron Microscopy: Probing Ultrafast Solvation Dynamics at Interfaces"
37. Dept. of Chemistry and Biochemistry, Baylor University, TX (02/08/2013)
"Time-resolved Electron Imaging of Ultrafast Electronic and Structural Dynamics"
38. Institute of Atomic and Molecular Sciences, Academia Sinica, Taiwan (07/06/2012)
"Structures, Dynamics, and Nonequilibrium Phase Transformations of Water Assemblies at Interfaces"
39. Dept. of Chemistry, National Taiwan University, Taiwan (05/31/2012)
"Seeing is Believing: 4D Visualization of Electronic and Structural Dynamics"
40. Dept. of Chemistry & Biochemistry, National Chung Cheng University, Taiwan (05/22/2012)
"Seeing is Believing: 4D Visualization of Electronic and Structural Dynamics"
41. Dept. of Physics, University of Texas at Austin, TX (02/20/2012)
"Seeing is Believing: Four-dimensional Visualization of Electronic and Structural Dynamics"
42. Dept. of Chemistry, Princeton University, NJ (12/09/2011)
"Seeing is Believing: Visualization of Electronic and Structural Dynamics by Ultrafast Electron Crystallography and Microscopy"
43. Dept. of Chemistry, University of Houston, TX (11/09/2011)
"Seeing is Believing: Visualization of Electronic and Structural Dynamics by Ultrafast Electron Crystallography and Microscopy"
44. Dept. of Chemistry, National Taiwan University, Taiwan (10/09/2008)
"Seeing is Believing: Visualization of Condensed-Matter Structure in Four Dimensions"

SERVICE ACTIVITIES

Within the Department of Chemistry, University of Houston

Chair of the Physical Chemistry Division	Fall 2022–
Co-Chair of Inorganic Faculty Search Committee	Fall 2022
Member of the Graduate Studies Committee	Fall 2012–Summer 2022
Member of the <i>ad hoc</i> Graduate Admissions Committee	Fall 2012–Spring 2022
Coordinator of the Departmental Seminar	Fall 2015–Spring 2016
Mentor in the Welch Summer Scholars Program	Summer 2014–
Member of Inorganic Faculty Search Committee	Fall 2013
Member of Oral Research Progress Committees	Fall 2012–
Member of M.S. Thesis Committees	Fall 2012–
Member of Ph.D. Dissertation Committees	Fall 2012–

Within the University of Houston

Member of the College of Natural Sciences and Mathematics Awards Committee	2026–
Member of the UH Campus Facilities Planning Committee	Fall 2025–
Member of the UH Faculty Senate	Fall 2022–Spring 2025
Member of the Budget & Facilities Committee	Fall 2022–Spring 2025

In the Broader Scientific Community

Co-Organizer of a symposium in the Fall 2024 Meeting of the *Materials Research Society (MRS)*
Review Panelist and Reviewer of funding proposals for the *National Science Foundation (NSF)*
Reviewer of funding proposals for the *Department of Energy (DOE)*
Review Panelist of the *NSF Graduate Research Fellowships Program (NSF GRFP)*
Reviewer of funding proposals for the *American Chemical Society Petroleum Research Fund (ACS-PRF)*
Reviewer of funding proposals for *Fonds de recherche du Québec – Nature et technologies, Canada (FRQNT)*
Reviewer of manuscripts for *Nature Communications, Science Advances, Physical Review Letters, Physical Review B, Physical Review Materials, ACS Nano, Nano Letters, Journal of Physical Chemistry, ACS Applied Materials & Interfaces, Journal of Chemical Physics, Journal of Applied Physics, Structural Dynamics, Advanced Functional Materials, RSC Advances, Scientific Reports, npj Quantum Materials, Advanced Science, Chemical Physics Letters, Chemical Physics, Journal of Vacuum Science and Technology, Optics Express, Ultramicroscopy, and Journal of Molecular Liquids*

In the Houston and Texas Community

Coordinator of the Chemistry Olympiad program for the ACS Greater Houston Section
Collaborator in the Day of Discovery program
Judge for the Science and Engineering Fair of Houston

EDUCATION CONTRIBUTIONS

Supervised Coworkers

Current Postdoctoral Scholars

Ting-Hsuan Wu	November 2025–
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Current Graduate Students

Md. Shaikot A. Shakil	Fall 2023–	(B.S./M.S., Univ. of Dhaka, Bangladesh)
Md. Shahriar H. Shuvo	Fall 2023–	(B.S./M.S., Univ. of Dhaka, Bangladesh)
Malith J. Arachchige	Fall 2023–	(B.S./M.S., Univ. of Peradeniya, Sri Lanka)
Zill E. Huma	Fall 2025–	(B.S./M.S., Government College Women Univ. Faisalabad, Pakistan)
Nawoda D. Waduge	Fall 2025–	(B.S./M.S., Univ. of Peradeniya, Sri Lanka)

Ding-Shyue (Jerry) Yang

Former Visiting Student

Bijesh Kumar Malla Jan. 2024–Apr. 2024 (Ph.D. student, Indian Institute of Technology Madras, India)

Former Postdoctoral Scholars

Xing He June 2013–Feb. 2024
Eby Nell McElrath Postdoctoral Fellowship (Sept. 2013–Aug. 2014)

Former Graduate Students

Mazhar Chebl Fall 2016–Spring 2022 (M.S., American University of Beirut, Lebanon)

Ph.D Thesis: "Direct Probing of Assembly Structures and Dynamics of Molecules Adsorbed on Solid Surfaces"

Hamed Vali Fall 2015–Fall 2021 (B.S., Amirkabir Univ. of Technology, Iran)

Ph.D Thesis: "Structural Characterization of Thin Films of Molecules on Solid Surfaces: Development of a Portable UHV Chamber to Bridge RHEED and SFG Spectroscopy Techniques"

Mithun Ghosh Fall 2015–Spring 2021 (M.S., Indian Institute of Technology, Bombay, India)

Ph.D Thesis: "Direct Probing of Assembly Structures and Dynamics of Molecules Adsorbed on Solid Surfaces"

Fei Wang Spring 2018–Fall 2019 (M.S., Stony Brook University)

Chengyi Wu Fall 2013–Spring 2019 (B.S., Wuhan University, China)

Ph.D Thesis: "Ordered Structures of Molecular Assemblies at Interfaces"

Napat Punpongjareorn Fall 2012–Fall 2017 (B.S., Mahidol University International College, Thailand)

Ph.D Thesis: "Ultrafast Dynamics of Transition Metal Oxides and Rare-Earth Chalcogenides"

Ilya Davydov Fall 2014–Fall 2016 (M.S., Moscow Institution of Physics and Technology, Russia)

Karjini Rajagopal Jan. 2013–Aug. 2015 (B.S., University of Colombo, Sri Lanka)
M.S. Thesis: "Instrumentation Development for Interfacial Studies and Analysis of Substrate-Supported Molecular Thin Films by Reflection High-Energy Electron Diffraction"

Undergraduate Students

Thierry Kochkarian June–July 2019 (University of Houston)

Hala Almatrouk Fall 2018 (University of Houston)

Mustafa Yıldırım July–August 2017 (Istanbul Technical University, Turkey)

High School Students

Faye Tang	June–July 2026, <i>Welch Summer Scholar</i>
Calvin Chiu	June–July 2022
Jake Fallek	June–July 2022, <i>Welch Summer Scholar</i>
Thomas Liang	June–July 2022
Siddharth Satish	June–July 2022
Samhitha Bandi	June–July 2019
Ye Jun Kwon	June–July 2019
Saiprasada Manikonda	June–July 2019
Jonathan Chang	June–July 2018
Allister Huang	June–July 2018
Emily Lu	June–July 2018, <i>Welch Summer Scholar</i>
Andrew Chuka	June–July 2016, <i>Welch Summer Scholar</i>
Vivian Zhou	June–July 2015, <i>Welch Summer Scholar</i>

Courses Taught at UH

1. Fall 2012	CHEM 1372: Fundamentals of Chemistry for Engineers	37 students
2. Fall 2013	CHEM 4372: Physical Chemistry II	28 students
3. Spring 2014	CHEM 4372: Physical Chemistry II	19 students
4. Fall 2014	CHEM 6321: Quantum Chemistry	14 students
5. Spring 2015	CHEM 4372: Physical Chemistry II	31 students
6. Fall 2015	CHEM 6321: Quantum Chemistry	9 students
7. Spring 2016	CHEM 4372: Physical Chemistry II	20 students
8. Fall 2017	CHEM 4372: Physical Chemistry II	26 students
9. Spring 2018	CHEM 6314: Spectroscopy	5 students
10. Fall 2018	CHEM 4372: Physical Chemistry II	44 students
11. Spring 2019	CHEM 1332: Fundamentals of Chemistry II	264 students
12. Fall 2019	CHEM 1331: Fundamentals of Chemistry I	298 students
13. Spring 2020	CHEM 1331: Fundamentals of Chemistry I	66 students
14. Fall 2020	CHEM 6321: Quantum Chemistry	6 students
15. Spring 2021	CHEM 6314: Spectroscopy	11 students
16. Fall 2021	CHEM 6321 Quantum Chemistry	9 students
17. Fall 2021	CHEM 6333: Fundamental Chemical Analysis (team)	5 students
18. Spring 2022	CHEM 6314: Spectroscopy	9 students
19. Fall 2022	CHEM 1312: Fundamentals of Chemistry II	81 students
20. Spring 2023	CHEM 6314: Spectroscopy	6 students
21. Fall 2023	CHEM 1312: Fundamentals of Chemistry II	150 students
22. Fall 2023	CHEM 6333: Fundamental Chemical Analysis (team)	11 students

Ding-Shyue (Jerry) Yang

23. Spring 2024	CHEM 6321: Quantum Chemistry	8 students
24. Fall 2024	CHEM 1311: Fundamentals of Chemistry I	226 students
25. Fall 2024	CHEM 6333: Fundamental Chemical Analysis (team)	6 students
26. Spring 2025	CHEM 6321: Quantum Chemistry	4 students
27. Fall 2025	CHEM 4372: Physical Chemistry II	31 students
28. Fall 2025	CHEM 6333: Fundamental Chemical Analysis (team)	10 students
29. Spring 2026	CHEM 1311: Fundamentals of Chemistry I	152 students

MEMBERSHIP

American Chemical Society (ACS)

American Physical Society (APS)

American Association for the Advancement of Science (AAAS)

Sigma Xi