Stephan Link

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Academic Positions

Charles W. and Genevieve M. Walton Professor of Chemistry (since January 2024)
Department of Chemistry and Electrical & Computer Engineering, University of Illinois Urbana-Champaign, Urbana, Illinois
Charles W. Duncan, Jr.-Welch Professor of Chemistry (July 2021- December 2023)
Professor of Chemistry (July 2017-December 2023)
Visiting Scholar, Stanford University, Department of Materials Science and Engineering (February 2019 – May 2019, hosted by Prof. Jennifer Dionne)
Associate Professor of Chemistry (July 2013, - June 2017)
Assistant Professor of Chemistry (July 2006, - June 2013)
Department of Chemistry, Rice University, Houston, Texas
Department of Electrical and Computer Engineering (July 2008 – present)

Postdoctoral Research Associate (July 2003 – June 2006)
University of Texas at Austin, Department of Chemistry and Biochemistry, Center for Nano- and Molecular Science and Technology, Austin, Texas; Supervisor: Prof. Paul F. Barbara

Postdoctoral Research Associate (January 2001 – June 2003)
Georgia Institute of Technology, Laser Dynamics Laboratory (Assistant Director July 2001 – June 2003), School of Chemistry and Biochemistry, Atlanta, Georgia; Supervisor: Prof. M. A. El-Sayed

Education

Ph.D. in Physical Chemistry (December 2000)
Georgia Institute of Technology, Laser Dynamics Laboratory, School of Chemistry and Biochemistry, Atlanta, Georgia; Supervisor: Prof. M. A. El-Sayed
Ph.D. thesis entitled "Spectral Properties and Relaxation Dynamics of Surface Plasmon Electronic Oscillations in Gold and Silver Nanodots and Nanorods".

Diplom (Masters) in Chemistry (July 1996)
Technical University of Braunschweig, Braunschweig, Germany; Supervisor: Prof. H.-G. Löhmannsröben
Diplom thesis in physical chemistry on "Photophysical Investigations of Mono-, Di-, and Tetra-Arylnaphthalenes by Steady-State and Time-Resolved Absorption and Fluorescence Spectroscopy".

Awards

- DFG Mercator Fellow, Universität Duisburg-Essen 2018
- Charles Duncan Award for Outstanding Academic Achievement, Rice University, 2016
- Elsevier Lectureship Award of the Japanese Photochemistry Association, 2015
- Norman Hackerman Award in Chemical Research, 2015
- NANOSMAT Outstanding Young Scientist Award, 2014
- MAINZ Visiting Professorship, 2014
- NSF CAREER Award, 2010
- Graduate Student Association Faculty Teaching/Mentoring Award, Rice University, 2008
- John L. Margrave Memorial Innovation and Excellence Award, Rice University, 2008 and 2009
- 3M Nontenured Faculty Award, 2008
- ORAU Ralph E. Powe Junior Faculty Enhancement Award, 2008
- 2001 IUPAC Prize for Young Chemists (given to the top five dissertations worldwide)
- Molecular Design Institute fellowship 1998-2000, Georgia Tech

- First place in the Ashby-House-Flashka Student Award contest, Georgia Tech 1999 and 2000
- Georgia Tech - Motorola SPS fellowship, 1998
- Kekule PhD fellowship of the German Chemical Industry, 1997-1999

Leadership Roles:

- Senior Editor, *The Journal of Physical Chemistry*, 2018 – present
- Chair of the 2018 Noble Metal Nanoparticles Gordon Research Conference
- Guest Editor, *Chemical Reviews*, Plasmonics in Chemistry, 2018; with David Masiello
- "Blue Sky" University Strategic Planning Committee, 2016-2018
- Graduate Studies Committee Chair and Associate Department, Chair 2015-2019
- Member, Editorial Advisory Board, *The Journal of Physical Chemistry*, 2014 – 2018

Organizer for Conference Symposia

- *Advances in Single-Particle Imaging: From Single Molecules to Nanomaterials.* National American Chemical Society Meeting, Chicago, August 2022. With Katherine Willets, David Masiello
- *Symposium on Plasmonics*. ACS Colloid and Surface Science Symposium*,* Virtual, June 2021. With Matthew Sheldon
- *Trends in Plasmonic Photochemistry*. Pacifichem 2020, Virtual, December 2021. With Hiroaki Misawa, Prashant V. Kamat, Paul Mulvaney
- *Physical Principles in Functional Nanoscience: Symposium in Honor of Mostafa A. El-Sayed.* National American Chemical Society Meeting, San Diego, March 2016. With Prashant Jain, Christy Landes
- *Probing Nano-Plasmonic Phenomena at the Single Molecule, Single Electron, and Single Photon Level.* National American Chemical Society Meeting, Denver, August 2015. With Katherine Willets, David Masiello
- *Paul Barbara in Texas: Single Molecules and Single Particles*. Southwest Regional Meeting of the American Chemical Society, Austin, November 2011. With Christy Landes
- *From Ultrafast Electron Transfer to Single Molecule Spectroscopy: Forces Driving Contemporary Themes in Physical Chemistry.* National American Chemical Society Meeting, Denver, August 2011. With Christy Landes, Gilbert Walker

Professional Affiliations

American Chemical Society, American Physical Society, Materials Research Society, Electrochemical Society, American Association for the Advancement of Science, SPIE, NANOSMAT Fellow, Sigma Xi

Research Interests

Professor Link's research program is focused on understanding the interactions of plasmonic nanostructures with light, typically carried out on the single-particle level to enable detailed electromagnetic simulations based on morphologies obtained from correlated electron microscopy. A main theme is to elucidate the role structural defects play on plasmonic modes for individual as well as coupled nanostructures by following how collective properties emerge from individual components and how the incident photon energy is converted into hot carriers, heat, acoustic vibrations, and radiation. Specific research problems focused on the interactions among nanoparticles have included waveguiding in plasmonic nanoparticle chains below the diffraction limit, generation of RGB colors by far-field diffractive coupling, and the characterization of chiral assemblies. Research directions uncovering the energy conversion of light by plasmons have involved resolving charge and energy transfer to surface acceptors via plasmon damping, elucidating the mechanism of emission from plasmonic nanostructures, and the ultrafast electron and phonon relaxation dynamics in metal nanostructures. To enable his research, new microscopic spectroscopy approaches are constantly pioneered and refined.

To date Professor Link has directed the research of 32 graduate students, 20 postdocs, and 33 undergraduate students. He has presented >160 invited talks and authored ~200 research publications that have been cited >30,000 times with a current *h*-index of 68 (data from Web of Science February 2024).