Christy F. Landes

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Education

Ph.D., School of Chemistry and Biochemistry, Georgia Institute of Technology.
Directed by Prof. Mostafa El-Sayed.
Major: physical chemistry. Minor: inorganic chemistry. Completed: May 2003

B.S. in Chemistry, George Mason University. Completed: 1998

Positions

7/21- Present: Kenneth S. Pitzer-Schlumberger Chair
1/19 - Present: Professor, Department of Chemical and Biomolecular Engineering, Rice University
2/19 - 5/19: Visiting Scholar, Stanford University, Department of Chemistry. Host: W.E. Moerner.
7/17 - Present: Professor, Department of Chemistry, Department of Electrical and Computer Engineering, Rice University
7/14 - 6/17: Associate Professor, Department of Chemistry, Department of Electrical and Computer Engineering, Rice University.
1/12 - 6/14: Assistant Professor, Department of Electrical and Computer Engineering, Rice University.
7/09 - 6/14: Assistant Professor, Department of Chemistry, Rice University.
7/06 - 6/09: Assistant Professor, Department of Chemistry, University of Houston.
3/04 - 6/06: NIH Postdoctoral Fellow; University of Texas at Austin.
6/03 - 2/04: Postdoctoral Research Associate; University of Oregon.

Research Interests

- Interfacial dynamics at the single molecule scale
- Separation and purification at the single analyte scale
- Image processing and analysis development
- Nanomaterials/biomolecular surface chemistry
- Plasmonic materials surface chemistry
- Biophysics of dynamic structure-function relationships
- Single molecule spectroscopy methods development

Honors and Awards

- 2020: Award for Special Creativity, National Science Foundation
- 2019: Kavli Fellow: U.S. National Academy of Science
- 2019: Hamill Innovation Award, Rice Institute of Biosciences and Bioengineering
- 2016-2018: Defense Science Study Group (DSSG)
- 2016: ACS Early-Career Award in Experimental Physical Chemistry
- 2011-2016: NSF CAREER Award
- 2009-2011: ACS PRF Doctoral New Investigator
- 2009-2012: Norman Hackerman-Welch Young Investigator
- 2005-2006: Ruth L. Kirschstein National Individual Service Award Postdoctoral Fellowship, National Institutes of Health
- 2003-2004: Sigma Xi Best PhD Thesis Award, Georgia Institute of Technology
- 2002-2003: House-Ashby-Flashka Award Winner, School of Chemistry and Biochemistry, Georgia Institute of Technology
- 2001-2002: Molecular Design Institute Fellowship, Office of Naval Research, Georgia Institute of Technology
- 1998: Cherry Emerson Fellowship, Georgia Institute of Technology
- 1998: American Chemical Society Outstanding Senior Chemistry Student Award, George Mason University

Publications

105) Warning, L.A.; Miandashti, A.R.; McCarthy, L.A.; Zhang, Q.; Landes, C.F.; Link, S. "Nanophotonic Approaches for Chirality Sensing" *ACS Nano* (invited review) under revision.

104) Shiratori, K.; Bishop, L.D.C.; Ostovar, B.; Baiyasi, R.; Cai, Y.; Rossky, P.J.; Landes, C.F.; Link, S.; "Machine-learned decision trees for predicting gold nanorod sizes from spectra" *J. Phys. Chem A.* **2021** under revision.

103) Misiura, A.; Shen, H.; Tauzin, L.J.; Dutta, C.; Bishop, L.D.C.; Carrejo Moringo, N.; Zepeda O, J.; Ramezani, S.; Moringo, N.A.; Marciel, A.B.; Rossky, P.J.; Landes, C.F. "Single-molecule dynamics reflects IgG conformational changes associated with ion-exchange chromatography" *Analytical Chem*. **2021** in press.

102) Bishop, L.D.C.; Misiura, A.; Landes, C.F. "A new chemometric for assessing chromatographic separations: the Distribution Function Ratio (DMR)" *Analyst* **2021** in press.

101) Zepeda O.; J. Bishop, L.D.C.; Dutta, C.; Sarkar-Banerjee, S.; Landes, C.F. "Untying the Gordian KNOT: Unbiased single particle tracking using point clouds and adaptive machine learning" submitted.

100) Flatebo, C.; Dutta, C.; Ostovar, B.; Link, S.; Landes, C.F. "Heterogeneity and hysteresis in the scattering of single core-shell stimuli-responsive plasmonic nanohybrids" *J. Phys. Chem. B.* **2021** in press.

99) Al-Zubeidi, A.; Stein, F.; Rehbock, C.; Hosseini Jebeli, S.A. ; Landes, C.F.; Barcikowski, S.; Link, S. "Single Particle Hyperspectral Imaging Reveals Kinetics of Silver Ion Leaching from Allow Nanoparticles" *ACS Nano* **2021** in press.

98) Baiyasi,R; Goldwyn, H.J.; McCarthy, L.A.; West, C.A.; Jebeli, S.A.H. Masiello, D.J.M.; Link, S.; Landes, C.F. "Coupled Dipole Modeling and Experimental Characterization of Geometry-Dependent Trochoidal Dichroism in Nanorod Trimers" *ACS Photonics* **2021** in press.

97) Abbott-Lyon, H.; Baiz, C.R.; Bera, PP.; Crabtree, K.; Cui, Q.; Fortenberry, R.C.; Landes, C.F.; McCoy, A.B.; Noriega, R.; Woon, D.E. "Viewpoint on ACS PHYS Division Sponsored Virtual Seminars" *J. Phys. Chem. C.* **2021**, in press.

96) Heiderscheit, T.S.; Oikawa, S.; Sanders, S.; Minamimoto, H.; Searles, E.K.; Landes, C.F.; Murakoshi, K.; Manjavacas, A.; Link, S. "Tuning Electrogenerated Chemiluminescence Intensity Enhancement Using Hexagonal Lattice Arrays of Gold Nanodisks" *J. Phys. Chem. Lett.* **2021** in press.

95) Collins, S.S.E.; Searles, E.K.; Tauzin, L.J.; Lou, M.; Bursi, L.; Liu, Y.; Song, J.; Flatebo, C.; Baiyasi, R.; Cai, Y.; Foerster, B.; Lian, T.; Nordlander, P.; Link, S.; Landes, C.F. "Plasmon energy transfer in hybrid nanoantennas" *ACS Nano* **2021** in press.

94) Calabrase, W.; Bishop, L.D.C.; Dutta, C.; Misiura, A.; Landes, C.F.; Kisley, L. "From single analyte statistics to separations-by-design" Invited Perspective *Anal. Chem*. **2020** 92, 13622-13629.

93) Baiyasi, R.; Gallagher, M.J.; McCarthy, L.; Searles, E.; Zhang, Q.; Link, S.; Landes, C.F. "Quantitative Analysis of Nanorod Aggregation and Morphology from Scanning Electron Micrographs using SEMseg". Invited Emily Carter Festschrift: *J. Phys. Chem. A*. **2020**, 124, 5262-5270.

92) Bishop, L.D.C.; Misiura, A.; Moringo, N.A.; Landes, C.F. "Unraveling asymmetric trends in chromatography through stochastic theory powered Monte Carlo simulations" *J. Chroma. A*. **2020** 1625, 461323.

91) Dutta, C.; Bishop, L.D.C.; Zepeda, J.; Chatterjee, S.; Flatebo, C.; Landes, C.F. "Confined diffusion is the dominant mode of protein transport at an active porous polymer support" Invited Special Issue on "Time-Resolved Microscopy" *J. Phys. Chem. B* **2020** 124, 4412-4420.

90) Ostovar, B.; Su, M.N; Renard, D.; Dongare, P.; Dutta, C.; Gross, N.; Sader, J.; Landes, C.F.; Chang, W.S.; Halas, N.J.; Link, S. "Acoustic Vibrations of Al

Nanocrystals: Size, Shape, and Crystallinity Revealed by Single-Particle Transient Extinction Spectroscopy" Invited Special Issue on "Time-Resolved Microscopy" *J. Phys. Chem. A* **2020**, 124, 3924-3934.

89) Moringo, N.A.; Shen, H.; Tauzin, J.F.; Wang, W.; Landes, C.F. "Polymer free volume effects on protein dynamics at polystyrene revealed by single-molecule spectroscopy" *Langmuir* **2020** 26, 2330-2338.

88) Warning, L.A.; Zhang, W.; Baiyasi, R.; Landes, C.F.; Link, S. "Nanoscale Surface-Induced Unfolding of Single Fibronectin is Restricted by Serum Albumin Crowding" *J. Phys. Chem. Lett.* **2020** 11, 1170-1177.

87) Zhang, Q.; Hernandez, T.; Smith, K.W.; Jebeli, S.A.H.; Dai, A.X.; Warning, L.; Baiyasi, R.; McCarthy, L.W., Guo, H.; Dionne, J.A.; Landes, C.F.; Link, S. "Unraveling the Origin of Chirality from Plasmonic Nanoparticle-Protein Complexes" *Science* **2019** 365, 1475-1478.

86) Moringo, N.A.; Bishop, L.D.C.; Shen, H.; Misiura, A.; Carrejo, N.C.; Baiyasi, R.; Wang, W.; Ye, F.; Robinson, J.T.; Landes, C.F. "A mechanistic examination of salting out in protein-polymer membrane interactions" *Proc. Natl. Acad. Sci. U.S.A.* **2019** 116, 22938-22945.

85) Al-Zubeidi, A.; Hoener, B.S.; Collins, S.E.; Wang, W.; Kirchner, S.R.; Jebeli, S.A.H.; Joplin, A.; Chang, W.S.; Link, S.; Landes, C.F. "Hot Holes Assist Plasmonic Nanoelectrode Dissolution" *Nano Lett*. **2019**, 19, 1301-1306.

84) Cai, Y.; Collins, S.S.E.; Gallagher, M. J.; Bhattacharjee,U.; Zhang, R.; Chow, T.H.; Ahmadivan, A.; Ostovar, B.; Al-Zubeidi, A.; Wang, J.; Nordlander, P.; Landes, C.F.; Link, S. "Single particle emission spectroscopy resolves d-hole relaxation in copper nanocubes. *ACS Energy Letters* **2019** 4, 2458-2465.

83) Wang, W. Ye, F.; Shen, H.; Moringo, N.A.; Dutta, C.; Robinson, J. T.; Landes, C. F. "A generalized method to design phase masks for 3D super-resolution microscopy" *Optics Express* **2019**, 27, 3799-3816.

82) Flatebo, C.; Collins, S.S.E; Hoener, B.S.; Cai, Y.; Link, S.; Landes, C.F. "Electrodissolution Inhibition of Gold Nanorods with Oxoanions" *J. Phys. Chem. B* **2019** 123, 22, 13983-13992.

81) Baiyasi, R.; Jebeli, S.A.H.; Zhang, Q.; Su, L.; Hofkens, J.; Ujii, H.; Link, S.; Landes, C.F. "PSF Distortion on Dye-Plasmonic Nanomaterials Interactions: Friend or Foe?" *ACS Photonics* **2019** 6, 3, 699-708.

80) Heiderscheit,T.S.; Gallagher, M.J.; Baiyasi, R. Collins, S.S.E.; Jebeli, S.A.H.; Scarabelli, L.' Al-Zubeidi, A.; Chang, W.S.; Landes, C.F. Link, S. "Nanoelectrode-

Emitter Spectral Overlap Amplifies Surface Enhanced Electrogenerated Chemiluminescence" *J. Chem. Phys.* **2019** 151, 144712.

79) Chatterjee, S.; Dutta, C.; Carrejo, N.C.; and Landes, C.F. "Mechanistic understanding of the phosphorylation-induced conformational rigidity at the AMPA receptor C-terminal domain" *ACS Omega* **2019**, 4, 14211-14218.

78) Chatterjee, S.; Ade, C.; Nurik, C.E.; Dutta, C.; Carrejo, N.C.; Jayaraman, V.; Landes, C.F. "Phosphorylation induces conformational rigidity at the C-terminal domain of AMPA receptors" *J. Phys. Chem B*. **2019,** 123 (1), 130-137.

77) Bishop, L.D.C.; and Landes, C.F. "From a Protein's Perspective: Elution at the Single Molecule Level" (invited review) *Acc. Chem Res*. **2018**, 51, 2247-2254.

76) Wang, W.; Shen, H.; Moringo, N.A.; Correjo, N.C.; Ye, F.; Robinson, J.T.; Landes, C.F. "Super-temporal resolved microscopy reveals desorption kinetics of α-lactalbumin from thin nylon 6.6 films" *Langmuir* **2018,** 34, 6697-6702.

75) Hoener, B.S.; Kirchner, S.R.; Heiderscheit, T.S.; Collins, S.S.E.; Chang, W.S.; Link, S.; Landes, C.F. "Plasmonic Sensing and Control of Single Nanoparticle Electrochemistry" (invited review) *Chem* **2018,** 4, 1560-1585.

74) Moringo, N.A.; Shen, H.; Bishop, L.D.C.; Wang, W.; Landes, C.F. "Enhancing Analytical Separations using Super-resolution Microscopy" (invited review) *Ann. Rev. Phys. Chem*. **2018**, 69, 353-375.

73) Kirchner, S.R.; Smith, K.; Wang, W.; Cai, Y.Y.; Chang, W.S.; Kinnear, C.; Zhang, H.; Mulvaney, P.; Landes, C.F.; Link, S. "Snapshot hyperspectral imaging for revealing irreversible and heterogeneous plasmonic processes" *J. Phys. Chem. C* **2018**, 122, 6865-6875.

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71) Shen, H.; Tauzin, L.J.; Baiyasi, R.; Wang. W.; Moringo, N.; Shuang, B.; Landes, C.F. "Single Particle Tracking from Theory to Biophysical Applications" (invited review) *Chemical Reviews* **2017**, 117, 7331-7376.

70) Moringo, N.A.; Shen, H.; Tauzin, L.J.; Wang, W.; Bishop, L.D.C.; Landes, C.F. "Variable lysozyme transport dynamics on oxidatively functionalized polystyrene films" *Langmuir* **2017,** 33, 10818-10828.

69) Hoener, B.S.; Zhang, H.; Heiderscheit, T.S.; Kirchner, S.R.; Indrasekara, A.S.D.S; Baiyasi, R.; Cai, Y.; Nordlander, P.; Link, S.; Landes, C.F.; Change, W-S. "Spectral

Response of Plasmonic Gold Nanoparticles to Capacitive Charging: Morphology Effects" *J. Phys. Chem Lett.* **2017,** 8, 2681-2688.

68) Kisley, L.; Patil, U.; Dhamane, S.; Kourentzi, K.; Tauzin, L.J.; Willson, R.C.; Landes, C.F. "Competitive multicomponent anion exchange adsorption of proteins at the single molecule level" *Analyst* **2017**, 142, 3127-3131.

67) De Silva Indrasekara, A.S.; Shuang, B.; Hollenhorst, F.; Hoener, B.S.; Hoggard, A.; Chen, S.; Villarreal, E.; Cai, Y.Y.; Kisley, L.; Derry, P.J.; Chang, W.S.; Zubarev, E.R.; Ringe, E.; Link, S.; Landes, C.F. "Optimization of Spectral and Spatial Conditions to Improve Super-Resolution Imaging of Plasmonic Nanoparticles" *J. Phys. Chem. Lett.* **2017**, 8, 299-306.

66) Wang, W.; Shen, H.; Shuang, B.; Hoener, B.S.; Tauzin, L.J.; Kelly, K.; Landes, C.F. "Super Temporal-Resolved Microscopy (STReM)" *J. Phys. Chem Lett.* **2016** 7, 4524-4529.

65) Shen, H.; Tauzin, L.J.; Wang, W.; Hoener, B.; Shuang, B.; Kisley, L.; Hoggard, A.; Landes, C.F. "Single-Molecule Kinetics of Protein Adsorption on Thin Nylon 6,6 Films" *Anal. Chem.* **2016**, 88, 9926-9933.

64) Shaikh, S.A.; Dolino, D.M.; Lee, G.; Chatterjee, S.; MacLean, D.M.; Flatebo, C.; Landes, C.F.; Jayaraman, V. "Stargazin Modulation of AMPA Receptors" *Cell Reports*, **2016**, 17, 328-335.

63) Hoener, B.S.; Byers, C.P.; Indrasekara, S.; Hoggard, A.; Chang, W.S.; Link, S.; Landes, C.F. "Spectroelectrochemistry of Halide Anion Adsorption and Dissolution of Single Gold Nanorods" *J. Phys. Chem. C* **2016**, 120, 20604-20612.

62) Shuang, B.; Wang, W.; Shen, H.; Tauzin, L.J.; Flatebo, C.; Chen, J.; Kelly, K.F.; Landes, C.F. "Generalized Recovery Algorithm for 3-D Super-Resolution Microscopy" *Sci. Rep.* **2016**, 6, 30826.

61) Chen, J.; Pyle, J.R.; Piecco, K.W.S.; Kolomeisky, A.B.; Landes, C.F. "A Two-Step Method for smFRET Data Analysis" *J. Phys. Chem. B.* **2016**, 120, 7128-7132.

60) Byers, C.P.; Hoener, B.S.; Chang, W.S.; Link, S.; Landes, C.F. "Single-particle plasmon voltammetry (cpPV) for detecting anion adsorption" *Nano Letters* **2016**, 16, 2314-2321.

59) Tauzin, L.J; Shen, H.; Moringo, N.A.; Roddy, M.H.; Bothof, C.A.; Griesgraber, G.W.; McNulty, A.K.; Rasmussen, J.K.; Landes, C.F. "Variable Surface Transport Modalities on Functionalized Nylon Films Revealed with Single Molecule Spectroscopy" *RSC Advances* **2016** 6, 27760-27766.

58) Dominguez-Medina, S.; Kisley, L.; Tauzin, L.J.; Hoggard, A.; Shuang, B.; Indrasekara, A.S.D.S.; Wang, L.-Y.; Chen, S.; Derry, P.J.; Liopo, A.; Zubarev, E.R.; Landes, C.F; Link, S. "Adsorption and unfolding of a single protein triggers nanoparticle aggregation" *ACS Nano* **2016** 10, 2103-2112.

57) Poongavanam, M.V.; Kisley, L.; Kourentzi, K.; Landes, C.F.; Willson, R.C. "Ensemble and Single-Molecule Biophysical Characterization of D17.4 DNA Aptamer-IgE Interactions" *BBA Proteins and Proteomics* **2016** 1864, 154-164.

56) Dominguez-Medina, S.; Chen, S.; Blankenburg, J.; Swanglap, P.; Landes, C.F.; Link, S. "Measuring the Hydrodynamic Size of Nanoparticles using Fluctuation Correlation Spectroscopy" *Ann. Rev. Phys. Chem.* **2016**, 67, 489-514.

55) Kisley, L.; Poongavanam, M.-H.; Kourentzi, K.; Willson, R.C.; Landes, C.F. "pH dependence of single protein adsorption and diffusion at a liquid chromatographic interface" *J. Sep. Sci.* **2016** 39, 682-688.

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53) Kisley, L.; Brunetti, R.; Tauzin, L.J.; Shuang, B.; Yi, X.; Kirkeminde, A.W.; Higgins, D.A.; Weiss, S.; Landes, C.F. "Characterization of Porous Materials by fcsSOFI" *ACS Nano* **2015**, 9 9158-9166.

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49) Landes, C.F. "Single-molecule tracking and super-resolution imaging shed light on cholera toxin transcription activation" (invited micro-commentary) *Molecular Microbiology* **2015** 96, 1-3.

48) Kisley, L.; Landes, C.F. "Molecular Approaches to Chromatography using Single Molecule Spectroscopy" (invited review) *Anal. Chem.* **2015**, 87, 83-98.

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44) Landes, C.F.; Link. S.; Wine, P.H.; Zhang, Z.J. "2013 Southeastern Regional ACS Meeting. Nanochemistry and Spectroscopy: Symposium Honoring Mostafa El-Sayed" (editorial) *J. Phys. Chem. B* **2014**, 14009-14009.

43) Shuang, B.; Cooper, D.; Taylor, J. N.; Kisley, L.; Chen, J.; Wang, W. Li, C-B.; Komatsuzaki, T.; Landes, C.F. "Fast Step Transition and State Identification (STaSI) for Single-Molecule Data Analysis" *J. Phys. Chem. Lett.* **2014**, 5, 3157-3161.

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19) Taylor, J. N.; Makarov, D.E.; Landes, C.F. "Denoising Single-Molecule FRET Trajectories with Wavelets and Bayesian Inference" *Biophys. J.*, **2010**, 98, 164-173.

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8) Darugar, D.; Landes, C.; Link, S.; Schill, A.; El-Sayed, M.A. "Why is the Thermalization of Excited Electrons in Semiconductor Nanoparticles So Rapid? Studies on CdSe Nanoparticles" *Chem. Phys. Lett.* **2003,** *373*, 284.

7) Landes, C.; Braun, M.; El-Sayed, M.A. "The Effect of Surface Adsorption on the Hyper-Rayleigh Scattering of Large and Small CdSe Nanoparticles" *Chem. Phys. Lett.* **2002,** *363*, 465.

6) Landes, C.; El-Sayed, M.A. "Thermodynamic and Kinetic Characterization of the Interaction Between N-Butylamine and ~1 nm CdSe NPs" *J. Phys. Chem. A* **2002**, *106*, 7621.

5) Landes, C.F.; Link, S.; Mohamed, M.B.; Nikoobakht, B.; El-Sayed, M.A. "Some Properties of Spherical and Rod-Shaped Semiconductor and Metal Nanocrystals" *Pure Appl. Chem.* **2002**, *74*, 1675.

4) Landes, C.; Braun, M.; El-Sayed, M.A. "On the Nanoparticle to Molecular Size Transition: Fluorescence Quenching Studies" *J. Phys. Chem. B* **2001**, *105*, 10554.

3) Landes, C.; Burda, C.; Braun, M.; El-Sayed, M. A. "Photoluminescence of CdSe Nanoparticles in the Presence of a Hole Acceptor: n-Butylamine" *J. Phys. Chem. B* **2001**, *105*(15), 2981-2986.

2) Landes, C.; Braun, M.; Burda, C.; El-Sayed, M.A. "Observation of Large Changes in the Band Gap Absorption Energy of Small CdSe Nanoparticles Induced by the Adsorption of a Strong Hole Acceptor" *Nano Lett.* **2001**, *1*, 667.

1) Burda, C.; Green, T.; Landes, C.; Link, S.; Little, R.; Petroski, J.; El-Sayed, M. A. "Optical spectroscopy of nanophase material" *Charact. Nanophase Mater.* **2000**, 97-241.

Presentations

(Future)

Invited Oral Presentation: Hole Burning, Single Molecules and Related Spectroscopies 2021. Bad Staffelstein, Germany. Aug. 26-Sept. 2, 2022. Host: Juergen Koehler.

Invited Oral Presentation: Noble Metal Nanoparticles GRC. Mt. Holyoke College. Summer, 2022. Host: Sara Scrabalak.

Invited Oral Presentation: Plasmonics and Nanophotonics GRC. Newry, ME. Summer, 2022. Host: Jennifer Dionne.

Invited Oral Presentation: Experimental and Computational Analysis of the Nano-Bio Interface for Sustainable Nanotechnology. Pacifichem. Honolulu, HI. Dec. 14-20, 2021. Hosts: Qiang Cui, Joel Pederson.

Invited Oral Presentation: Invited Oral Presentation: Plasmonic Electrode Reshaping. Pacifichem. Honolulu, HI. Dec. 14-20, 2021. Host: Hiroaki Misawa.

Invited Oral Presentation: Towards predictive protein separations: quantitative protein dynamics in polymer supports. Pacifichem. Honolulu, HI. Dec. 14-20, 2021. Host: Paul Bohn.

Invited Oral Presentation: Session Leader, Molecular Architecture and Function, The Welch Conference. Houston, TX Oct. 25, 2021. Host: Xiaowei Zhuang.

Invited Oral Presentation: Frontiers of Spectroscopy and Chemical Theory Workshop, June 18-20, 2021, Nanjing University. Host: Greg Scholes.

(Past)

-cancelled- Discussion Leader: 1st GRC on Chemical Imaging. May 30-June 4, 2020. Southern New Hampshire University. Hosts: Ji-Xin Cheng, and Ning Fang.

Invited Webinar: Nanophotonic Approaches for Chirality Sensing. International Gold Conference. Mar. 24, 2021. Host: Marc-Andre Fortin.

Invited Webinar: Towards quantitative protein separations: Imaging protein dynamics at nanoscale interfaces. Department of Chemistry, Virginia Commonwealth University, Mar. 18, 2021. Host: Soma Dhakal.

Invited Webinar: Towards quantitative protein separations: Imaging protein dynamics at nanoscale interfaces. Department of Chemistry, University of Texas at Austin, Feb. 25, 2021. Host: Carlos Baiz.

-cancelled- Invited Oral Presentation: Enhanced Spectroscopies and Nanoimaging, SPIE. San Diego, CA. Aug. 23-27, 2010. Hosts: Prahbat Verma and Yung Doug Suh.

-cancelled- Invited Oral Presentation: Surface-Enhanced Spectroscopy: From Fundamentals to the Market Place Symposium American Chemical Society Physical Sub-Division. San Francisco, CA. Aug. 16-20. Hosts: Jon Camden and Amanda Haes.

-cancelled- Invited Oral Presentation: Plasmonics and Nanophotonics GRC. Newry, ME. July 12-17, 2020. Host: Jennifer Dionne.

-cancelled- Invited Oral Presentation: HPLC 2020. San Diego, CA. June 20-25, 2020. Host: Mary Wirth.

-cancelled- Invited Oral Presentation: Noble Metal Nanoparticles GRC. Mt. Holyoke College. June 14-19, 2020. Host: Sara Scrabalak.

-cancelled- Invited Oral Presentation: Frontiers in Lasers and Applications. May 25-29, 2020. Hosts: Yongfeng Lu, John Fourkas, Henry Helvajian.

-cancelled- Invited Oral Presentation: Biophysics Seminar, Cornell University. Apr. 29, 2020. Host: Peng Chen.

-cancelled- Invited Oral Presentation: Department of Chemistry, Northwestern University. Apr. 1, 2020. Host: Franz Geiger

-cancelled- Invited Oral Presentation: Department of Chemistry, University of Arizona. Mar. 26, 2020. Host: Vanessa Huxter.

-cancelled- Invited Oral Presentation: Nanolight 2020, Benasque, Spain. Mar. 8-14, 2020. Hosts: Nik van Hulst and Luis Martin-Moreno.

Invited Oral Presentation: Department of Chemistry, University of Kentucky. Feb. 28, 2020. Host: Jason DeRouchey.

Invited Oral Presentation: Fitzpatrick Institute for Photonics, Duke University. Feb. 12, 2020. Host: Kevin Welsher.

Invited Oral Presentation: Pacific Conference on Spectroscopy, San Diego, CA. Jan. 30-Feb. 2, 2020. Host: Judy Kim.

Invited Plenary Presentation: SciX, Palm Springs, CA. Oct. 18, 2019. Host: Garth Simpson.

Invited Oral Presentation: Rice-Mainz Workshop, Oct. 3-5, 2019. Rice University, Houston, TX. Host: Stephan Link.

Invited Plenary Presentation: 4th Biennial Israeli-American Kavli Frontiers of Science Symposium, Israel. Sept. 16-18, 2019. Host: Shane Ardo and Aharon Blank

Invited Keynote Lecture (declined-conflict): GDCh-Wissenschaftsforum Chemie (German Chemical Society) Sept. 16, 2019. Host: Dominik Woll.

Invited Oral Presentation: ACS National Meeting, San Diego, CA. Aug. 25-29, 2019. Host: Dan Schwartz.

Invited Oral Presentation: ACS National Meeting, San Diego, CA. Aug. 25-29, 2019. Host: Julie Biteen.

Invited Oral Presentation: "Hyperspectral Optical Imaging" ACS National Meeting, San Diego, CA. Aug. 25-29, 2019. Host: Wei Xiong.

Invited Oral Presentation: "Hyperspectral Methods to Observe Nonequilibrium Plasmonic Processes" Plasmonically Powered Processes GRC, Hong Kong University of Science and Technology, Hong Kong. Jul. 28-Aug. 2, 2019. Hosts: Gilad Haran and Luat Vuong.

Invited Plenary Presentation: 29th International Conference on Photochemistry, Boulder, CO. July 21-26, 2019. Hosts: Garry Rumbles and Greg Scholes.

Invited Oral Presentation: Emerging Methods in Single Molecule Spectroscopy, June 25-29, 2019. TSRC, Telluride, CO. Hosts: Randy Goldsmith and Ziad Ganim.

Invited Oral Presentation: "Engineering Phase Masks for Multi-Dimensional Fluorescence Imaging" 102nd Canadian Chemistry Conference And Exhibition, June 3-7, 2019. Quebec, CA. Host: Gonzalo Cosa.

Invited Oral Presentation: Electrochemical Society Meeting, Dallas, TX. May 27, 2019. Host: Kei Murakoshi.

Invited Oral Presentation: Department of Chemistry, University of California, Irvine, May 16, 2019. Host: Matt Law.

Invited Oral Presentation: Department of Chemistry, Purdue University, West Lafayette, IN. Apr. 30, 2019. Host: Shelley Claridge.

Invited Oral Presentation: ACS National Meeting, Orlando, FL. Mar. 31-Apr. 3, 2019. Hosts: Wolfgang Parak and Luis Liz-Marzan.

Invited Oral Presentation: ACS National Meeting, Orlando, FL. Mar. 31-Apr. 4, 2019. Host: Sichun Yan and Steffen Lindert.

Invited Oral Presentation: "Linking protein transport mechanisms at polymer interfaces to macroscale elutions". Pittcon March 17-21, 2019. Philadelphia, PA. Hosts: M. Lei Geng and Joel Harris.

Invited Oral Presentation: Department of Chemistry, UMBC, Baltimore, MD. Nov. 9, 2018. Host: Zeev Rosenzweig.

Invited Oral Presentation: Department of Chemistry, University of Oregon, Eugene, OR. Oct. 8, 2018. Host: Geri Richmond.

Invited Oral Presentation: "Linking the fate of single analytes to macroscale separations - what we have and where we need to go." National Academies of Science, Engineering, and Medicine Committee on a Research Agenda for a New Era in Separations Science. Washington, DC. Aug. 22-23, 2018. Host: Board on Chemical Sciences and Technology.

Invited Oral Presentation: "Towards predictive separations, one protein at a time" International Workshop on Coupled Plasmonic Nanostructures and their Applications to Chemical Sensing/Reactions" Research Institute for Electronic Science, University of Hokkaido, Sapporo, Japan. Aug. 6, 2018. Host: Hiroaki Misawa.

Invited Oral Presentation: "Single nanoelectrode photodissolution" Department of Chemistry, Graduate School of Science, University of Hokkaido, Sapporo, Japan. Aug. 3, 2018. Host: Kei Murakoshi.

Invited Oral Presentation: ACS National Meeting, Boston, MA. Aug. 19-23, 2018. Host: Ning Fang.

Invited Oral Presentation: ACS National Meeting, Boston, MA. Aug. 19-23, 2018. Host: Zeev Rosenzweig.

Invited Oral Presentation: ACS National Meeting, Boston, MA. Aug. 19-23, 2018. Host: Peter Nordlander.

Invited Oral Presentation: Single-Molecule Approaches to Biology GRC, Mt. Snow, VT. July 15-20, 2018. Host: Julie Biteen.

Invited Oral Presentation: Excited State Processes in Electronic and Bio Nanomaterials, Santa Fe, NM, Jun 4-7, 2018. Host: Sergei Tretiak.

Invited Oral Presentation: OSA Conference on Lasers and Electro-Optics (CLEO 2018), May 14-18, San Jose, CA. Host: Amit Agrawal.

Invited Oral Presentation: Department of Chemistry, Columbia University, May 3, 2018. Host: Laura Kaufman.

Invited Oral Presentation: Department of Chemistry, University of Michigan, Apr. 17, 2018. Host: Julie Biteen.

Invited Oral Presentation: "Towards Predictive Separations using 4D Super-Resolution Microscopy" Priestley Medal Award Symposium Honoring Prof. Geri Richmond. Mar. 19, 2018. New Orleans, LA. Host: Rob Walker.

Invited Oral Presentation: Pittcon, Orlando, Florida, Feb. 28-Mar. 3, 2018. Host: Josh Vaughan.

Invited Oral Presentation: Department of Chemistry, UCSD, Feb. 20, 2018. Host: Vicki Grassian

Invited Oral Presentation: International Conference on SERS, Xiamen, China, Dec. 5-9, 2017. Host: Zhong-Qun Tian.

Invited Oral Presentation: Department of Chemistry, University of Notre Dame, Nov. 28, 2017. Host: Graduate Student Association.

Invited Oral Presentation: McElvain Seminar, Department of Chemistry, University of Wisconsin, Nov. 16, 2017. Host: Graduate Student Association.

Invited Oral Presentation: "Resolving interfacial protein dynamics by Super Temporal-Resolved Microscopy (STReM)" Midwest Regional American Chemical Society Meeting, University of Kansas, Oct. 19-20 2017. Host: Carey Johnson.

Invited Oral Presentation: "Single particle tracking: Recent advances in methods and applications" Midwest Regional American Chemical Society Meeting, Unversity of Kansas, Oct. 19-20 2017. Host: Carey Johnson.

Invited Oral Presentation: Department of Chemistry, Ohio University, Sept. 28, 2017. Host: Jixin Chen.

Invited Oral Presentation (declined): Methods and Applications in Fluorescence, Brugge, Belgium, Sep. 10-13, 2017. Host: Johan Hofkens.

Invited Oral Presentation: Environmental Nanotechnology GRC, Stowe, VT, June 18-23, 2017. Host: Sharon Walker.

Invited Oral Presentation: 20th Argentinian Congress on Physical and Inorganic Chemistry, Cordoba, Argentina, May 16-19, 2017. Host: Luis A. Otero.

Invited Oral Presentation: NanoCordoba, Carlos Paz, Argentina, May 19-20, 2017. Host: Rodrigo Palacios.

Invited Oral Presentation: ACS Spring Meeting, San Francisco, CA, March 2-6, 2017. Host: Wolfgang Parak.

Invited Oral Presentation: Biophysical Society Annual Meeting, New Orleans, LA, February 11, 2017. Host: Julie Biteen.

Invited Oral Presentation: Department of Chemistry, University of Illinois, Urbana-Champagne, IL, Feb. 8, 2017. Host: Prashant Jain.

Invited Oral Presentation: Keynote Speaker at ACS Southwest Regional Meeting, Nov. 10-13, 2016. Host: Lisa Biswal

Invited Oral Presentation: ACS National Awards Symposium, Philadelphia, PA, Aug. 23, 2016. Host: Greg Engel.

Invited Oral Presentation: Department of Chemistry, Massachusetts Institute of Technology, Boston, MA, 2017 TBD. Host: Gabriela Schlau-Cohen.

Invited Oral Presentation: “Electrochemical control of plasmonic nanomaterial surface chemistry” META, Malaga, Spain, July 25-28, 2016. Host: Sasha Govorov.

Invited Oral Presentation: “Active Electrochemical Tuning of the Plasmon Response” Plasmonics and Nanophotonics GRC, Sunday River Resort, Newry, ME, July 10-15, 2016. Host: Harald Giessen

Invited Oral Presentation: Department of Chemical and Biological Engineering, University of Pennsylvania, Philadelphia, PA, May 5, 2016. Host: John Vohs.

Invited Oral Presentation: Department of Chemistry, Penn State University, State College PA, Apr. 28, 2016. Host: Tae Hee Lee.

Invited Oral Presentation: Department of Chemistry, University of California, Los Angeles, CA. Apr. 18, 2016. Host: Shimon Weiss.

Invited Oral Presentation: Department of Chemistry, University of California, Irvine, CA, Apr. 14, 2016.

Invited Oral Presentation: Frontiers of Plasmonics, Hefei, China. Apr. 6-10, 2016. Host: Zhenchao Dong and Zhenyu Zhang.

Invited Oral Presentation: Department of Chemistry, University of Washington, Seattle, WA, Mar. 1, 2016. Host: David Masiello.

Invited Oral Presentation: "Maximizing information and minimizing computation when imaging in 4D" International Conference on Nanoscience and Nanotechnology, Canberra, Australia, Feb. 7-11, 2016. Host: Justin Gooding.

Invited Oral Presentation: Department of Chemistry, University of Pennsylvania, Philadelphia, PA Jan. 20, 2016. Host: Joe Subotnik.

Contributed Oral Presentation: "Imaging Porous Nanomaterials" Quantitative Bioimaging Conference, Delft, The Netherlands Jan. 13-15, 2016.

Invited Oral Presentation: "Active Control of Broadband Plasmonic Response" PQE, Snowbird, UT, Jan. 3-7, 2016. Host: Peter Nordlander.

Invited Oral Presentation: "Active Control of Surface Chemistry on Plasmonic Nanomaterials" Single-Molecule Fluorescence and Imaging Symposium, Pacifichem, Honolulu, HI, Dec. 15-20, 2015. Host: Hiroaki Misawa.

Invited Oral Presentation: "Hit 'em where they ain't: super-resolution imaging of porous nanomaterials" Challenges in Plasmonic Photochemistry Symposium, Pacifichem, Honolulu, HI, Dec. 15-20, 2015. Host: Peng Chen.

Invited Oral Presentation: "Imaging Porous Nanomaterials" Japanese Annual Meeting on Photochemistry, Osaka, Japan, Sep. 9-11, 2015. Host: Hiroaki Misawa

Invited Oral Presentation: "Single-Molecule Methods to Quantify Adsorptive Separations" Physical Chemistry of Interfaces and Nanomaterials XIV, SPIE, Aug. 9-13, 2015. Host Eric Bittner

Invited Oral Presentation: "Hit 'em where they ain't: super-resolution imaging of porous nanomaterials" META15, New York, NY, Aug. 4-7, 2015. Host: Alexander Govorov.

Invited Oral Presentation: "How do you measure something smaller than your ruler: The 2014 Nobel in Chemistry, Super-Resolution Imaging" Whitman College, Walla Walla, WA, Apr. 3, 2015. Host: Marion Gotz.

Invited Oral Presentation: “Active Control of Surface Chemistry on Plasmonic Nanomaterials” 2015 Spring ACS National Meeting in Denver, CO, Mar 22-26, 2015. Host: Eric Borquet.

Invited Oral Presentation: “A Mechanistic Study of Serum Albumin Interaction with Therapeutic Nanoparticles” 2015 Spring ACS National Meeting in Denver, CO, Mar 22-26, 2015. Host: David Masiello.

Invited Oral Presentation: “Single Molecule Methods to Quantify Adsorptive Separations” 2015 Pittcon Conference New Orleans, LA, Mar. 8-12, 2015. Host: Gufeng Wang.

Invited Oral Presentation: “Single Molecule Methods to Quantify Adsorptive Separations” Quantitative Bioimaging III, Paris, France, Jan. 7-9, 2015. Host: Raimund Ober.

Invited Oral Presentation: “Spectroelectrochemistry of plasmonic nanoparticles” ACS National Meeting San Francisco, CA, August 10-14, 2014. Host: Franz Geiger.

Invited Oral Presentation: “Super-resolution methods for understanding adsorptive protein separations” ACS National Meeting, San Francisco, CA, August 10-14, 2014. Host: Ning Fang.

Invited Oral Presentation “Unified super-resolution experiments and stochastic theory provide mechanistic insight into protein ion-exchange adsorptive separations” ACS National Meeting, Dallas, TX, March 17, 2014. Host: Dan Schwartz.

Invited Oral Presentation: “Charge Clustering Dominates Protein Ion-Exchange Separations” in 2014 Chromatography Forum of Delaware Valley Nogare Award Symposium Honoring Dr. Mary Wirth, 2014 Pittsburgh Conference, Chicago, IL, Mar. 2-6, 2014. Host: Mary Wirth

Invited Oral Presentation: “Super-Resolution Analysis of Protein Ion-Exchange Separations” Workshop on Applications of Supported Bilayers at the 58th Annual Meeting of the Biophysical Society, San Francisco, CA, Feb. 15-19, 2014. Host: Vasanthi Jayaraman

Invited Oral Presentation: “Solute Dynamics in Thin Films” 3M Corporate Research Laboratory, St. Paul, MN, Feb. 7, 2014, Host: Corey Radloff.

Invited Oral Presentation: “In Search of Concurrence between Biological and Synthetic Single Molecule Structure/Function” University of British Columbia, Vancouver, British Colombia, Canada, Jan. 21, 2014, Host: Tim Storr.

Invited Oral Presentation: “In Search of Concurrence between Biological and Synthetic Single Molecule Structure/Function” University of Victoria, Victoria, British Colombia, Canada, Jan. 20, 2014, Host: Keng Chou.

Invited Oral Presentation: “In Search of Concurrence between Biological and Synthetic Single Molecule Structure/Function” University of Victoria, Victoria, British Colombia, Canada, Jan. 20, 2014, Host: Dennis Hore.

Invited Oral Presentation: “Spectroelectrochemistry of Single Gold Nanorods” Physics of Quantum Electronics Conference, Snowbird, UT, Jan. 5-9 2014. Hosts: Peter Nordlander and Naomi Halas.

Contributed Oral Presentation: “Overcoming Signal Intermittency in Short Particle Tracking Trajectories” 26th International Conference on Photochemistry, Leuven, Belgium, July 21-26 2013. Hosts: Johan Hofkens and Hiroaki Misawa.

Invited Oral Presentation: “Fundamentals of Fluorescence Spectroscopy at the Single Molecule/Particle Limit” 2nd International Summer Course, National Chiao Tung University, Taiwan June 25-26 2013. Host: Hiroshi Masuhara.

Invited Oral Presentation: “Overcoming Signal Intermittency in Particle Tracking Experiments” 2nd International Workshop on Single Molecule/Nanoparticle Spectroscopy and Imaging, National Chiao Tung University, Taiwan June 27-28 2013. Hosts: Hiroshi Masuhara and Ian Liao.

Invited Oral Presentation: “In Search of Concurrence between Biological and Synthetic Single Molecule Structure/Function” Colorado State University, Ft. Collins, CO May 2, 2013. Host: Nancy Levinger.

Invited Oral Presentation: “In Search of Concurrence between Biological and Synthetic Single Molecule Structure/Function” University of Chicago James Frank Institute Seminar, Chicago, IL Apr. 16, 2013. Host: Greg Engel.

Contributed Oral Presentation: “Understanding Molecular-Scale Separations on Agarose Supported Peptide Surfaces” ACS National Meeting, New Orleans, LA, Apr. 7-11, 2013.

Invited Oral Presentation: “In Search of Concurrence between Biological and Synthetic Single Molecule Structure/Function” Notre Dame Chemistry and Biochemistry Departmental Seminar, South Bend, IN Mar. 28, 2013. Hosts: Steven Corcelli and Greg Hartland.

Invited Oral Presentation: “In Search of Concurrence between Biological and Synthetic Single Molecule Structure/Function” University of Houston Biochemistry Departmental Seminar, Houston, TX Mar. 20, 2013. Host: Yuhong Wang.

Invited Oral Presentation: “Environmental Separations from a Single Molecule Perspective” Research Partnership Workshop on Water, Energy and the Environment for Women Scientists from the U.S., Morocco, Algeria and Tunisia, Casablanca, Morocco, March 6-8, 2013. Host: Geraldine Richmond.

Invited Oral Presentation: “In Search of Concurrence between Biological and Synthetic Single Molecule Structure/Function” Ohio State University Chemistry and Biochemistry Departmental Seminar, Columbus, OH. Jan. 24, 2013. Host: Karin Musier-Forsyth.

Invited Oral Presentation: “In Search of Concurrence between Biological and Synthetic Single Molecule Structure/Function” Los Alamos National Lab, Los Alamos, NM, Jan. 17, 2013. Host: Sergei Tretiak.

Contributed Oral Presentation: “Understanding Molecular-Scale Separations on Agarose Supported Peptide Surfaces” Quantitative Bioimaging, Albuquerque, NM, Jan. 11-12, 2013. Hosts: Keith Lidke, Raimund Ober, and Bernd Rieger.

Invited Oral Presentation: “Overcoming Signal Intermittency in Short Particle Tracking Trajectories” Physics of Quantum Electronics Colloquium, Snowbird, UT, Jan. 9, 2013. Host: Peter Nordlander.

Invited Oral Presentation: “In Search of Concurrence between Biological and Synthetic Single Molecule Structure/Function” University of Maryland Chemistry Departmental Seminar, College Park, Md, Nov. 12, 2012. Hosts: Garyk Papoian and John Fourkas.

Invited Oral Presentation: “Diffusion Coefficient Estimation for Short Single-Particle Trajectories with Photoblinking” Southwest Regional ACS Meeting, Baton Rouge, La, Nov. 6, 2012. Host: Doug English

Invited Oral Presentation: “In Situ Measurement of Bovine Serum Albumin Interaction with Gold Nanospheres” Southwest Regional ACS Meeting, Baton Rouge, LA, Nov. 6, 2012. Host: Ken Knappenberger.

Invited Oral Presentation: “In Search of Concurrence between Biological and Synthetic Single Molecule Structure/Function” Southern Biomedical Engineering Conference, Houston, TX May 5, 2012. Host: Michael Diehl.

Invited Oral Presentation: “In Search of Concurrence between Biological and Synthetic Single Molecule Structure/Function” University of Wisconsin Chemistry Departmental Seminar, Madison, WI, Apr. 24, 2012. Hosts: Randall Goldsmith and Arun Yethiraj.

Invited Oral Presentation: “In Search of Concurrence between Biological and Synthetic Single Molecule Structure/Function” Georgia Institute of Technology Chemistry Departmental Seminar, Atlanta, GA, Apr. 17, 2012. Host: Christine Payne.

Invited Oral Presentation: “In Search of Concurrence between Biological and Synthetic Single Molecule Structure/Function” Emory University Chemistry Departmental Seminar, Atlanta, GA, Apr. 16, 2012. Host: Tim Lian.

Invited Oral Presentation: “In Search of Concurrence between Biological and Synthetic Single Molecule Structure/Function” Frontiers of Plasmonics II, Chengdu, China, Apr. 8-12, 2012. Host: Hongxing Xu.

Invited Oral Presentation: “When Complexity Meets Function: Enhanced Analysis of Noisy Single Molecule Data” ACS Spring 2012 National Meeting, San Diego, CA Mar. 25, 2012. Hosts: Jianshu Cao and Rob Dickson.

Invited Oral Presentation: “When Complexity Meets Function: Enhanced Analysis of Noisy Single Molecule Data” Trinity University Chemistry Departmental Seminar, San Antonio, TX, Feb. 9, 2012. Host: Bert Chandler.

Invited Oral Presentation: “When Complexity Meets Function: Enhanced Analysis of Noisy Single Molecule Data” Physics of Quantum Electronics 2012, Snowbird, UT Jan. 3, 2012. Host: Peter Nordlander.

Invited Oral Presentation: “In Search of Concurrence between Biological and Synthetic Single Molecule Structure/Function” 1st Joint Meeting of Women Chemists from the United States and China, Beijing, China, Oct. 25, 2011. Host: Geri Richmond.

Invited Oral Presentation: “Wavelet shrinkage to resolve single molecule FRET structural landscape of the isolated ligand binding domain of the AMPA receptor”, ACS Fall National Meeting, Denver, CO August 29, 2011. Host: Geri Richmond.

Invited Oral Presentation: “Transient 3D Transport in Ordered Polyelectrolyte Membranes”, ACS Fall National Meeting, Denver, CO August 29, 2011. Host: Christine Payne.

Invited Oral Presentation: “In Search of Concurrence Between Biological and Synthetic Single Molecule Structure/Function”, University of New Mexico Chemistry Departmental Seminar, Albequerque, NM, April 15, 2011. Host: John Grey.

Invited Oral Presentation: “Dynamic Heterogeneity and Function”, Physical Chemistry Group Meeting, Johannes Guttenberg University Mainz, Mainz, Germany, January 10, 2011. Host: Carsten Soennichsen.

Invited Oral Presentation: “When ~~Structure~~ Complexity Meets Function: Enhanced Analysis of Noisy Single Aptamer Data” ACS National Meeting, San Francisco, CA Mar. 22, 2010. Host: Clemens Burda.

Invited Oral Presentation: “Single Molecule Biophysical Chemistry” Austin College Chemistry Departmental Seminar, Sherman, TX, Feb. 10, 2010. Host: Karla McCain.

Invited Oral Presentation: “In search of concurrence between biological and synthetic single molecule structure and function” Texas A&M Chemistry Departmental Seminar, College Station, TX, Nov. 24, 2009. Hosts: Paul Cremer and James Batteas.

Invited Oral Presentation: “Weak-binding aptamers: the role of structural dynamics in inhibitor functionality” NCTU-NAIST Workshop on Molecular/Nano Science, Hsinchu, Taiwan, Nov. 13, 2009. Host: Hiroshi Masuhara.

Invited Oral Presentation: “Dynamic Complexity Meets Functionality” Nanobiology Training Program Summer Symposium, Houston, TX July 10, 2009.

Invited Oral Presentation: “Dynamic Complexity Meets Functionality” Chemical Dynamics in Complex Environments, Telluride, CO, June 22-26, 2009. Hosts: Rigoberto Hernandez and Ward Thompson.

Invited Oral Presentation: "Signal Transduction in Single Molecules: How Can Biology Inform Materials Design?" University of Arkansas Departmental Seminar, Houston, TX December 4, 2008. Host: Colin Heyes.

Invited Oral Presentation: "Signal Transduction in Single Molecules: How Can Biology Inform Materials Design?" Rice University Departmental Seminar, Houston, TX October 17, 2008. Host: Seiichi Matsuda.

Invited Oral Presentation: "Signal Transduction in Single Molecules: How Can Biology Inform Materials Design?", C. Landes, Baylor University Chemistry Departmental Seminar, Waco, TX, October 10, 2008.

Invited Oral Presentation: "Single-Molecule Dynamics of a DNA Aptamer Targeting VEGF Protein", C. Landes, American Physical Society Annual Meeting, New Orleans, LA, March 13, 2008.

Invited Oral Presentation: "Nucleic Acid Structural Dynamics" C. Landes, University of Houston Department of Biology and Biochemistry Departmental Seminar, Houston, TX, Oct. 31, 2007.

Invited Oral Presentation: "Nucleic Acid Structural Dynamics" C. Landes, Mary Baldwin College Department of Chemistry Departmental Seminar, Staunton, VA, Oct. 9, 2007.

Invited Oral Presentation: "Modern Biophysics Research: Choices for Undergraduate and Graduate School" C. Landes, Central Shenandoah Valley Governor's School Biophysics Class Guest Lecturer, Fishersville, VA, Oct. 10, 2007.

Invited Oral Presentation: "Single-Molecule Biophysics: Understanding Complexity in Disease-Related Biological Processes" C. Landes, James Madison University Department of Chemistry and Biochemistry Departmental Seminar, Harrisonburg, VA, Oct. 5, 2007.

Invited Oral Presentation: "Single Molecule Studies of NC-Chaperoned HIV-1 TAR DNA:DNA Annealing" C. Landes, H.W. Liu, Y.N. Zeng, G. Cosa, K. Musier-Forsyth, P.F. Barbara, 5th International Retroviral NC Symposium, Montreal, Canada, Sept. 18-20, 2005.

Invited Oral Presentation: "Single-Molecule Spectroscopic Studies on the Minus-Strand Transfer Step in HIV-1" C. Landes, H.W. Liu, Y.N. Zeng, G. Cosa, K. Musier-Forsyth, P. F. Barbara, George Mason University Chemistry Departmental Seminar, April 28, 2005.

Invited Oral Presentation: "The Effects of Surface Interactions on the Opto-Electronic Properties of CdSe Nanoparticles" C. Landes, M.A. El-Sayed, SACNAS Annual Meeting, Austin, TX, October 22, 2004.

Invited Oral Presentation: "Single Molecule Techniques to Study the Nucleocapsid Protein Chaperoned Minus Strand Transfer Step in the Reverse Transcription of HIV-1" C. Landes, Nucleocapsid Protein Mini-Symposium, University of Minnesota, October 8, 2004.

Invited Oral Presentation: "The Effects of Surface Interactions on the Opto-Electronic Properties of CdSe Nanoparticles" C. Landes, M.A. El-Sayed, Chemistry Department Seminar, Xiamen University, in conjunction with the International Symposium on Physical Chemistry of Surface Nanostructures and Related Nanomaterials, Xiamen, China, Oct. 18-21, 2003.

Invited Oral Presentation: "Spectroscopic Investigations of Interfacial Processes in Tribology: Coupling Experiment and Theory" G. Richmond, C. Landes 2003 DARPA/AFOSR/ONR Tribology Program Review, Annapolis, MD Aug. 13-14, 2003.

Invited Oral Presentation: "Inducing Phase Changes in Small CdSe Nanocrystals as a Result of Surface Adsorption" C. Landes *Symposium in Honor of Professor Mostafa El-Sayed* Universite Pierre & Marie Curie, Paris France, Sept. 23, 2002.

Service

Leadership:

- Director: CCI Phase I: NSF Center for Adapting Flaws into Features. 2021-2024.
- Vice-Chair Elect, Vice-Chair, Chair-Elect, Chair: Physical Chemistry Division, American Chemical Society. 2020-2023.
- Senior Editor: *Journal of Physical Chemistry Letters*. February 2020 – present.
- Co-Chair: 94th ACS Colloids and Surface Science Symposium at Rice University in Houston. June 7-10, 2020 – online only.
- Chair: Physical Chemistry Faculty Search, 2019. Successful, CPRIT awarded.
- Chair: Biophysical Subdivision of the Division of Physical Chemistry, American Chemical Society. 2017-2018.

- Chair: University Committee on Research, 2015-2017.
- Chair: Departmental Awards Committee, 2017-2020.
- Chair: Departmental External Review Committee, 2016.

Professional Editorial Service:

- Guest Editor: *Proceedings of the National Academy of Sciences*. January 2021.
- Senior Editor: *Journal of Physical Chemistry Letters*. February 2020 – January present.
- Editorial Advisory Board Member: *Journal of Physical Chemistry*. January 2020 – December 2022.
- Editorial Committee Member: *Annual Review of Physical Chemistry*. January 2017 – December 2021.
- Editorial Advisory Board Member: *ACS Nano*. January 2016 – present.
- Associate Editor: *Royal Society of Chemistry Advances*. November 2015 – October 2016.
- Editorial Advisory Board Member: *Royal Society Advances*. March 2014 – June 2015.
- Guest Editor: *Journal of Physical Chemistry B*, Special Issue Honoring Mostafa El-Sayed (Dec. 11, 2014).
- Guest Editor: *Accounts of Chemical Research*, Special Issue Honoring Paul Barbara (Nov. 20, 2012).

Other Professional Service:

- Co-Organizer: Single-molecule and Single-particle Fluorescence Imaging Symposium, Pacifichem 2020.
- Panelist: NSF Chemistry Division. Feb. 10-11, 2020.
- Organizer: 1st Wintergreen Meeting of Physical Chemists. Wintergreen, VA. Jun. 8-12, 2019.
- Panelist: Ford Foundation Fellowship Review. Irvine, CA. 2019, 2021.
- Panelist: NSF CCI Phase I Review. Feb. 20-22, 2019.
- Member: Defense Science Study Group. 2016-2018.
- Reviewer: DOE Early Career Proposals. Spring 2018.
- Organizer: ACS National Meeting Physical Chemistry Symposium. Spring 2018.
- Awards Committee: ACS National Award Selection Committee. 2018-2021.
- Awards Committee: ACS Physical Chemistry Division, 2017.
- Awards Committee: Journal of Physical Chemistry, 2017.
- Chair: Biophysical Subdivision of the Division of Physical Chemistry, American Chemical Society. 2017-2018.
- Chair-Elect: Biophysical Subdivision of the Division of Physical Chemistry, American Chemical Society. 2016-2017.
- Co-Chair: 94th ACS Colloids and Surface Science Symposium at Rice University in Houston. June 7-10, 2020.
- Organizer: ACS National Meeting Physical Chemistry Symposium. March 13-17, 2016.

- Organizer: Rice Workshop on Light-Driven Processes in Bio-Inspired Materials. Dec. 14-16, 2014.
- Organizer: ACS National Meeting Physical Chemistry Symposium. August 28-September 1, 2011.
- Co-Organizer: ACS Southwest Regional Meeting Physical Chemistry Symposium. November 9-12, 2011.
- Co-Organizer: ACS National Meeting Physical Chemistry Symposium. March 21-25, 2010.
- Session Chair: APS National Meeting. March 13, 2008.
- Organizer: 11th Annual Workshop for the Consortium of Nanostructured Materials, Oct. 17-18, 2002, Atlanta, GA
- Reviewer: *Nature, Nature Nanotechnology, Nature Chemical Biology, Journal of the American Chemical Society, Proceedings of the National Academy of Sciences, Accounts of Chemical Research, ACS Nano, Nanoletters, Journal of Physical Chemistry, Journal of Chemical Physics, Chemical Physics Physical Chemistry, Biophysical Chemistry, Journal of Colloid and Interface Science, Langmuir, Analytical Chemistry, Nucleic Acids Research, Proteins: Structure, Function and Bioinformatics, Angewandte Chemie, Science Advances.*
- Foreign expert reviewer: JST (Japan Science and Technology Agency) PRESTO project reviewer, Oct. 24-25, 2014.
- Ad-hoc Panelist: NIH Nanotechnology Study Section, June 2-3, 2016.
- Panelist: National Science Foundation Chemical and Biological Engineering Separations CAREER Panel, Oct. 7, 2013. (delayed due to furlough)
- Ad-hoc Panelist: NIH NIDA CEBRA Panel, November 29, 2012.
- Panelist: National Science Foundation Chemical and Biological Engineering Separations Panel. December 5-6, 2011.
- Panelist: National Science Foundation, Chemistry Division, Experimental Physical Chemistry Panel. April 6-7, 2009.
- Ad-hoc reviewer: Department of Energy.
- Ad-hoc reviewer: National Science Foundation Chemistry Division.

University:

- Chair: University Committee on Research, 2015-2017.
- Advisory Board of the Smalley-Curl Institute (SCI), 2015-2018.
- University Committee on Research, 2014-2017.
- Applied Physics Graduate Committee, 2010-present.
- Shared Equipment Authority Faculty Board, 2011-2018.
- Rice Quantum Institute Summer REU mentor, 2010-2015.

College System:

- Faculty Associate: Wiess College, 2009-present.
- New Student Mentor: Wiess College, 2014-2015.
- Division Adviser: Wiess College, 2010-2014.

Department:

- Chair: Physical Chemistry Faculty Search, 2019. Successful, CPRIT award.
- Chair: Awards Committee, 2017-2020.
- Chair: External Review Committee, 2016.
- Chair: Alumni Committee, 2013-2017.
- Undergraduate Curriculum Committee, 2009-2016.
- Major Track Adviser (Med Chem), 2010-2014.
- Graduate Admissions Committee, 2009-2015.
- Graduate Recruiting Committee, 2009-2015.
- Awards Committee, 2011-2012.

Outreach and Community Service:

- Podcast Guest: Science Off Camera, Episode 3. Jan. 7, 2021.
- Sponsor: Python course for middle school teachers. Summer 2019.
- Speaker: Fort Defiance High School Science Talk. Mar. 22, 2019.
- Creator: MATLAB intro course. Available at lrg.rice.edu.
- Mentor: Rice Triad Program for Tenure-Track Faculty, Fall 2015-present.
- Speaker: Rice Science Café, Black Labrador Pub, Houston, TX, Dec. 2, 2014.
- Speaker: Project Grad Summer Program for High School Students (2009-present).
- Faculty Mentor: COACH (Committee on the Advancement of Women Chemists) 2013: Casablanca, Morocco and Indianapolis, IN USA; 2012: Beijing, China. Host: Prof. Geraldine Richmond.
- Speaker at Primarily Undergraduate Institutions (PUIs): Whitman College (2015); Trinity University (2012); Austin College (2010); James Madison University (2007); Mary Baldwin College (2007); George Mason University (2005).
- High School Outreach: Presentation at Central Shenandoah Valley Governor's School for the Gifted (2007)
- Mentor: Texas Academy of Math and Science Summer Research. Andrea Wheat (co-author on 2008 JPCB paper), 2007.

Courses Taught

- Spring 2021: Chem 559 Spectroscopy at the Single Molecule/Particle Limit
- Fall 2020: Chem 367 Materials Chemistry Laboratory
- Fall 2019: Chem 301 Physical Chemistry (co-taught)
- Fall 2019: Chem 367 Materials Chemistry Laboratory
- Fall 2018: Chem 367 Materials Chemistry Laboratory
- Spring 2018: Chem 559 Spectroscopy at the Single Molecule/Particle Limit
- Fall 2017: Chem 367 Materials Chemistry Laboratory
- Fall 2017: Chem 600 Graduate Seminar
- Spring 2017: Chem 559 Spectroscopy at the Single Molecule/Particle Limit
- Spring 2016: Chem 559 Spectroscopy at the Single Molecule/Particle Limit
- Fall 2015: Chem 151 Honors Chemistry
- Spring 2015: Chem 391, 491, 493 Undergraduate Research
- Spring 2015: Chem 600 Graduate Seminar

- Fall 2014: Chem 220 Undergraduate Seminar
- Fall 2014: Chem 151 Honors Chemistry
- Spring 2014: Chem 559 Spectroscopy at the Single Molecule/Particle Limit
- Fall 2013: Chem 151 Honors Chemistry
- Spring 2013: Chem 600 Graduate Seminar
- Fall 2012: Chem 121 General Chemistry
- Spring 2012: Chem 600 Graduate Seminar
- Fall 2011: Chem 121 General Chemistry
- Fall 2010: Chem 121 General Chemistry
- Fall 2009: Chem 310 Physical Chemistry Co-creator of new undergraduate chemistry course.
- Spring 2009: Chem 6314 Spectroscopy (University of Houston)
- Fall 2008: Chem 4373 Survey of Physical Chemistry (University of Houston)
- Spring 2008: Chem 4373 Survey of Physical Chemistry (University of Houston)
- Fall 2007: Chem 4373 Survey of Physical Chemistry (University of Houston)
- Spring 2007: Spectroscopy (University of Houston)
- Fall 2006: Chem 4373 Survey of Physical Chemistry (University of Houston)

Students Mentored

Postdoctoral researchers:

1) Dr. Qusai Darugar (PhD, Georgia Tech). 2006 - 2008. Currently: Permanent Scientific Research Staff, Baker-Hughes.
2) Dr. Nitesh Poddar (PhD, Jamia Millia Islamia). 2009 - 2012. Currently: Assistant Professor of Biotechnology, IIET, Invertis University, Bareilly India.
3) Dr. Jixin Chen (PhD, TAMU). 2012 - 2014. Currently: Tenured Associate Professor of Chemistry, Ohio University.
4) Dr. Swarnapali (Pali) Indrasekara (PhD, Rutgers). September 2014 – May 2016. Currently, postdoctoral research at Duke University. Currently: Assistant Professor of Chemistry, UNC Charlotte.
5) Dr. Hao Chen (PhD, Cornell). August 2014 – August 2018. Currently: Assistant Professor of Chemistry, Kent State University.
6) Dr. Sean Collins, Carl and Lillian Illig Postdoctoral Fellow (PhD, Melbourne). January 2017 – August, 2019. Currently: Staff Scientist, Intel.
7) Dr. Chayan Dutta (PhD, USC). January 2018 – present.
8) Dr. Miranda Gallagher (PhD, Johns Hopkins). August 2018 – February 2021. Currently: Project Development Manager: American Physical Society.
9) Dr. Min Zhou (PhD, Chinese Academy of Sciences). December 2018 – August 2019. Currently: Assistant Professor, Chinese Academy of Sciences.
10) Dr. Suparna Sarkar-Banerjee (PhD, University of Calcutta). January 2019 – July 2021.
11) Dr. Moinul Choudhury (PhD, University of New South Wales). February 2020 – present.

PhD students:

1) Dr. Carmen Reznik, Chemistry. 2006 - 2011. PhD January 2011. Margrave Thesis Award. Currently: Permanent Scientific Research Staff, Shell.
2) Dr. Charlisa Daniels, Chemistry. 2007 - 2012. PhD April 2012. Currently: Tenured Associate Professor of Chemistry, Northern Kentucky University.
3) Dr. Nick Taylor, Chemistry. 2006 - 2012. PhD May 2012. Currently: Specially Appointed Assistant Professor, Hokkaido University.
4) Dr. Lydia Kisley, Chemistry. 2010 - 2015. PhD May 2015. Margrave Thesis Award. NSF Graduate Research Fellowship; NRC Postdoctoral Fellowship (declined). Forbes 30 under 30 (Healthcare). Beckman Postdoctoral Fellow, UIUC. 2017-2019. Currently: Assistant Professor of Physics, Case Western Reserve University.
5) Dr. David Cooper, Chemistry. 2010 – 2015. PhD May 2015. Visiting Assistant Professor, Southwestern University, 2015-2018. Currently: Assistant Professor of Chemistry, Nevada State College.

6) Dr. Chad Byers, Applied Physics. 2012 – 2015. PhD December 2015. NSF Graduate Research Fellowship. Currently: Technical Research Staff, Intel.
7) Dr. Bo Shuang, Chemistry. 2011 – 2016. PhD May 2016. Margrave Thesis Award. Currently: Technical Research Staff, Dow Chemical Company.
8) Dr. Joey Tauzin, Chemistry. 2012 - 2016. PhD May 2016. Currently: Research Scientist, Rice University.
9) Dr. Ben Hoener, Chemistry. October 2013 – May 2018. Currently: Technical Research Staff, Intel.
10) Dr. Wenxiao Wang, Electrical and Computer Engineering. October 2013 – December 2018. Currently: Technical Research Staff, Google.
11) Dr. Sudeshna Chatterjee, Chemistry. October 2014 – May 2019. Currently: Technical Research Staff, Intel.
12) Dr. Nicholas Moringo, Chemistry. October 2015 – December 2019. NSF Graduate Research Fellowship. Currently: Science Consultant: Alliantgroup.
13) Charlotte Flatebo, Applied Physics. October 2015 – June 2021. NSF GRFP Honorable Mention. NDSEG Graduate Fellowship. Currently: postdoctoral fellow, UC Santa Barbara.
14) Rashad Baiyasi , Electrical and Computer Engineering. October 2015 – January 2021. 2016 ECE Best Qualifying Exam Award.
15) Logan Bishop, Chemistry. October 2016 – March 2021. NDSEG Graduate Fellowship Alternate. NSF GRFP Fellowship. Currently: Technical Research Staff, 3M.
16) Anastasiia Misiura, Chemistry. October 2017 – present.
17) Emily Searles, Chemistry. October 2018 – present.
18) Dongyu Fan, Chemical and Biomolecular Engineering. January 2020 – present.
19) Wesley Leung, Applied Physics. January 2020 – present.

Master's student:

1) Ferandre Salatan, Chemistry. 2009 - 2010. Currently: Research Assistant, MD Anderson Cancer Center, Houston, TX.
2) Jorge Zepeda, Electrical and Computer Engineering. October 2018 – May 2021.

Undergraduate students:

1) Hannah Kim, UH Bioengineering. January 2007 - August 2010. Graduated, BS Engineering 2011. Currently: Employed in industry.
2) Rosalie Berg, Rice Chemistry. January 2010 - May 2012. BS Chemistry 2012. Currently: Process Technologist, KiOR, Inc.
3) Matthew Diasio, Rice Physics. January 2010 - May 2012. BS Chemistry 2012. PhD, Materials Science, University of Virginia.

4) Kerry Wang, Rice Chemical Engineering. January 2010 - May 2012. Currently: Graduate student at UMn.
5) Albert Riedel Mishaan, Rice Materials Science. January 2011 - May 2012.
6) Heui Uhm, Rice Chemistry. January 2011 - August 2012. Currently: Undergraduate at Rice.
7) Julia Zhao, Rice Chemistry. May 2012 - Spring 2013. Currently: NSF Graduate Fellow at MIT.
8) Andrea Mansur, Rice Chemistry. January 2012 - Spring 2014. Currently: Laboratory technician at Shell.
9) Alberto Enriquez, Rice Chemistry. January 2013 - 2015. Currently: MD/PhD student: UT Southwestern.
10) Rachel Brunetti, Summer RQI Undergraduate Fellow. 2014. NSF GRFP Honorable Mention. Currently: PhD student at UCSF.
11) Margaret Roddy, Rice Chemical Engineering. June 2015 – May 2016. Currently: Goldman Sachs, Houston, TX.
12) Theresa Leibig, Rice Chemistry. January 2018-December 2018.
13) Annette Jones, Rice Chemistry. July 2021 – present.

Funding

(current)

Sponsor: National Science Foundation (CHEM)
Title: Preproposal: CCI Phase I: NSF Center for Adapting Flaws into Features
Duration: September 1, 2021 – August 30, 2024
Amount Requested: $1,800,000 PI with Co-PIs Link, Rossky, Zanni, Dionne, Roberts, Gruebele

Sponsor: Department of Energy (BES)
Title: Photo-Electrochemistry of Hybrid Nanoelectrodes
Duration: September 1, 2021 – August 31, 2024
Amount Requested: $915,000 PI with Co-PI Link

Sponsor: Army Research Office, Chemical Science: Electrochemistry
Title: DURIP: Snapshot Hyperspectral Imaging and Scanning Electrochemical Microscope for Nanoelectrode Reshaping Studies
Duration: January 1, 2021 – December 31, 2023
Amount: $179,937 PI with Co-PI Link

Sponsor: Welch Foundation
Title: Orientational effects on protein dynamics at chromatographic supports from a single analyte perspective
Duration: July 1, 2021 – June 30, 2024
Amount: $240,000

Sponsor: National Science Foundation (CHEM)
Title: Two-Year Extension for Special Creativity, Instrument Development: 4-D Super Time Resolved Microscopy (4-D STREM) for Understanding Dynamics in Porous Materials
Duration: 07/01/2021-06/30/2023
Amount: $340,000

Sponsor: Army Research Office, Chemical Science: Electrochemistry
Title: Understanding plasmonic electrode reshaping
Duration: 06/01/2019-05/31/2022
Amount: $734,757 PI with co-PI Link

Sponsor: Department of Energy (BES)
Title: Mechanistic Investigations of Hot Carrier Induced Electrocatalysis by Single-Particle Spectroscopy
Duration: 04/15/2018-08/31/2021
Amount: $1,100,000 PI with co-PI Link

(past)

Sponsor: The Robert A. Welch Foundation
Title: A Mechanistic Description of Chromatographic Separations from the Single Molecule Perspective
Duration: 06/01/2018-05/31/2021
Amount: $330,000, PI

Sponsor: National Science Foundation (CHEM)
Title: Instrument Development: 4-D Super Time Resolved Microscopy (4-D STREM) for Understanding Dynamics in Porous Materials
Duration: 07/01/2018-06/30/2021
Amount: $466,300 PI

Sponsor: Hamill Foundation, Institute of Biosciences and Bioengineering at Rice University
Title: Elucidating the mechanism of ZEB1-driven early endosome dynamics in lung cancer cells at high spatio-temporal resolution
Duration: 2019-2020
Amount: $25,000 PI with Co-I Kurie

Sponsor: The Robert A. Welch Foundation Grant # C-1787
Title: Identifying Hidden Conformations in Multi-State Bio-Molecules
Duration: 06/01/2015-05/31/2018
Amount: $195,000, PI

Sponsor: Department of Energy
Title: Single Particle Spectro-Electrochemistry of Individual Plasmonic Nanostructures
Duration: 09/15/2016-04/14/2018
Amount Requested: $495,003, PI with co-PI Link

Sponsor: National Institutes of Health NIGMS
Title: Structure and Function of NMDA Receptors
Duration: 09/01/2015-08/30/2019
Amount: $380,707 to Landes, (with PI Jayaraman)

Sponsor: National Science Foundation (CBET)
Title: Probing Dynamics and Structure of the Nanoparticle Protein Corona to Understand its Impacts on Environmental Health and Safety
Duration: 09/01/2014-08/31/2017
Amount: $300,000 (with PI Link)

Sponsor: National Science Foundation (CHEM)
Title: CAREER: Transport in Supported Polyelectrolyte Brushes
Duration: 12/01/2011-11/30/2016
Amount: $623,250 PI

Sponsor: ACS Petroleum Research Fund New Directions
Title: Spectro-electrochemical microscopy of single nanoparticle catalysts
Duration: 09/01/2014 – 08/31/2016
Amount: $110,000, PI

Sponsor: IBB Hamill Innovations Grant Program
Title: Characterization of the Conformational Landscape of the NMDA Receptor by a Combined Theoretical/Experimental Approach
Duration: 01/01/2014-12/31/2014
Amount: $10,000 (with PI Clementi)

Sponsor: Rice University Brasil@Rice
Title: Travel Grant
Duration: 05/01/2014-04/30/2015
Amount: $5,000, PI

Sponsor: Rice University Faculty Initiative Fund
Title: Interfacial Dynamics Workshop
Duration: 09/01/2014 – 08/31/2015
Amount: $5,000, PI

Sponsor: National Institutes of Health (NIGMS)
Title: Structure and Function of NMDA Receptors
Duration: 09/30/11-09/29/15
Amount: $571,874 ($296,000 to Landes, PI Jayaraman)

Sponsor: 3M
Title: Stationary Phase Tuning at 'Super-Resolution' for Separations
Duration: 08/01/2015 – 07/31/2016
Amount: $100,000, PI

Sponsor: The Robert A. Welch Foundation
Title: Exploiting Molecular Fluorescence to Probe Local Chemical Dynamics
Duration: 06/01/12-05/31/15
Amount: $180,000, PI

Sponsor: National Science Foundation (CBET)
Title: Collaborative Research: Ion-Exchange Adsorption of Proteins: A Single-molecule investigation
Duration: 09/01/11-08/31/14
Amount: $408,122 ($204,227 to Landes; PI Willson)

Sponsor: Dunn Foundation Event Award
Title: Workshop: Plasmon-hybrid Superstructures for Functionally Biomimetic Light-Driven Processes

Duration: 01/01/2014-12/31/2014
Amount: $8,000 (PI: Landes, with Co-PI Link)

Sponsor: Rice University/Welch Foundation
Title: Norman Hackerman Welch Junior Investigator
Duration: 7/1/09-6/30/012
Amount: $250,000, PI

Sponsor: Department of Energy
Title: From ultrafast electron transfer to single molecule spectroscopy: Forces driving contemporary themes in physical chemistry
Duration: 7/1/2011-6/30/012
Amount: $8,000, PI

Sponsor: Welch Foundation
Title: Travel Support for a Workshop in Honor of Paul Barbara: From ultrafast electron transfer to single molecule spectroscopy: Forces driving contemporary themes in physical chemistry
Duration: 7/1/2011-6/30/2012
Amount: $5,000, PI

Sponsor: John S. Dunn Gulf Coast Consortium for Chemical Genomics
Title: Selective agonists and antagonists for AMPA receptors
Duration: 10/01/10 – 09/30/11
Amount: $100,000 ($30,000 to Landes; PI Jayaraman)

Sponsor: ACS Petroleum Research Fund Doctoral New Investigator
Title: Transport in Supported Polyelectrolyte Membranes
Duration: 1/1/2010-12/31/2011
Amount: $100,000, PI

Provisional Patent Applications

1) 06/20/2013: Methods for Preventing Nanoparticle Aggregation under Harsh Environmental Conditions with a Protein Monolayer. Co-Inventor with: S. Dominquez-Medina, J. Blankenburg, J. Olson, S. Link.
2) 02/15/2013: Super-resolution Optical Genome Sensing and Sequencing. Co-Inventor with: J. Chen, L. Kisley, B. Shuang.
3) 01/18/2013: Parallel Fluorescence-Based Imaging Identification of Open Through-Silicon Via (TSV) Microelectrodes. Co-Inventor with G. Woods, C. Byers, J. Chen.
4) 10/06/2011: Apparatus for Generating Controlled Temperature Gradients on Glass Coverslips for use in Fluorescent Microscopy. Co-Inventor with: K. Wang.

Collaborators

1) Stephan Link, Rice University
2) Tamiki Komatsuzaki, Hokkaido University

3) Rigoberto Advincula, Case Western Reserve University
4) Vasanthi Jayaraman, University of Texas Health Science Center at Houston
5) Richard Willson, University of Houston
6) David Vanden Bout, University of Texas at Austin
7) Peter Rossky, Rice University
8) Dimitri Makarov, University of Texas at Austin
9) Karin Musier-Forsyth, Ohio State University
10) Rob Gorelick, National Cancer Institute
11) Anatoly Kolomeisky, Rice University
12) Shimon Weiss, UCLA
13) Dan Higgins, Kansas State University
14) Paul Mulvaney, University of Melbourne
15) Kevin Kelly, Rice University
16) Naomi Halas, Rice University
17) Peter Nordlander, Rice University
18) Emilie Ringe, Rice University
19) Jacob Robinson, Rice University
20) Johan Hofkens, K.U. Leuven
21) Hiroshi Ujii, Hokkaido University
22) Jennifer Dionne, Stanford University
23) John Sader, University of Melbourne
24) Tim Lian, Emory University
25) Stephan Barcikoswki, University of Duisburg-Essen
26) Kei Murakoshi, Hokkaido University
27) Alejandro Manjavacas, University of New Mexico
28) David Masiello, University of Washington

Graduate and Postdoctoral Advisors

-Graduate Advisor: Mostafa El-Sayed, Department of Chemistry and Biochemistry, Georgia Institute of Technology, Atlanta, GA
-Postdoctoral Advisor: Geraldine Richmond, Department of Chemistry, University of Oregon, Eugene, OR
-Postdoctoral Advisor: Paul Barbara, Department of Chemistry and Biochemistry, University of Texas at Austin, Austin, TX