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Education:

Oberlin College, B.A., B. Mus 1991 Chemistry
University of California-Berkeley, Ph.D. 1998 Physical Chemistry

Professional Experience:

2015-present Senior Research Staff, Center for Nanophase Materials Sciences, ORNL
2014-present Joint Faculty Research Associate Professor, Bredesen Center, University of Tennessee, Knoxville
2008-present Research Staff, Center for Nanophase Materials Sciences, ORNL
2001–2008 Assistant Professor, California Institute of Technology
1999–2001 Joint Hewlett-Packard – UCLA Postdoctoral Researcher
1998–1999 Postdoctoral Researcher, Dept. of Chem. and Biochemistry, UCLA
1991–1998 Graduate Research Associate, Dept. Chem., UC Berkeley
1990–1991 Undergrad. Research Assoc., Dept. Chem., Oberlin College
1990 NSF Undergrad. Research Fellow, Dept. Chem. Univ. of Utah
1989 NSF Undergrad. Research Fellow, Dept. Chem. Washington Univ.

Professional Activities, Honors and Awards:

Discussion leader for “Designing Structured Surfaces for Maximum Heat Transfer,” Gordon Research Conference on Micro & Nanoscale Phase Change Heat Transfer, 2017
Co-chair for CNMS Nano-Bio Conference, ORNL, 2013
Co-chair for “Micro and Nanotechnology; Nanopores” platform, Biophysical Society Meeting, 2011
Co-chair for “Molecular Electronic Circuit Assembly” track, Conference on Foundations of Nanoscience (DARPA), 2005-2007
Discussion leader for “Biomolecular and Supramolecular Electronics,” Gordon Research Conference on the Chemistry of Electronic Materials, 2005
Young Faculty Research Initiation Award, Center for Science and Engineering of Materials (NSF MRSEC) 2004
Research Innovation Award, Research Corp., 2002
Caltech President’s Fund Award, 2002
UCLA Chancellor’s Award for Excellence in Postdoctoral Research, 2001

Professional Memberships:

American Chemical Society, American Physical Society, Biophysical Society, Materials Research Society

Selected Peer-Reviewed Publications (Total > 90):

1. W.T. McClintic, G.J. Taylor, M.L. Simpson, C.P. Collier, “Macromolecular Crowding Affects Voltage-Dependent Alamethicin Pore Formation in Lipid Bilayer Membranes”, *J. Phys. Chem. B* **124**, 5095 (2020).
2. A.U. Chowdhury, G.J. Taylor, V. Bocharova, R.L. Sacci, Y. Luo, W.T. McClintic, Y.-Z. Ma, S.A. Sarles, K. Hong, C.P. Collier, B. Doughty, “Insight into the Mechanisms Driving the Self-Assembly of Functional Interfaces: Moving from Lipids to Charged Amphiphilic Oligomers”, *J. Am. Chem. Soc.* **142**, 290 (2020).
3. D. Bolmatov, W.T. McClintic, G. Taylor, C.B. Stanley, C. Do, C.P. Collier, Z. Leonenko, M.O. Lavrentovich, J. Katsaras, “Deciphering Melatonin-Stabilized Phase Separation in Phospholipid Bilayers”, *Langmuir* **35**, 12236-12245 (2019).
4. W. Shi, J.R. Vietez, A.S. Berrier, M.W. Roseveare, D.A. Surinach, B.R. Srijanto, C.P. Collier, J.B. Boreyko, “Self-Stabilizing Transpiration in Synthetic Leaves”, *ACS Appl. Mater. Inter.* **11**, 13768-13776 (2019).
5. J.S. Najem, M.S. Hasan, R.S. Williams, R.J. Weiss, G.S. Rose, G.J. Taylor, S.A. Sarles, C.P. Collier, “Dynamical Nonlinear Memory Capacitance in Biomimetic Membranes”, *Nat. Commun.* **10**, 3239 (2019).

6. F. Liu, S.M. Abel, L. Collins, B.R. Srijanto, R. Standaert, J. Katsaras, C.P. Collier, “Geometry-Dependent Nonequilibrium Steady-State Diffusion and Adsorption of Lipid Vesicles in Micropillar Arrays”, *Adv. Mater. Interfaces* (cover article) **6**, 1900054 (2019).
7. G. Taylor, M.A. Nguyen, S. Koner, E. Freeman, C.P. Collier, S.A. Sarles, “Electrophysiological Interrogation of Asymmetric Droplet Interface Bilayers Reveals Surface-Bound Alamethicin Induces Lipid Flip-Flop”, *BBA-Biomembranes* **1861**, 335-343 (2019).
8. J. S. Najem, G.J. Taylor, R.J. Weiss, M.S. Hasan, G. Rose, C.D. Schuman, A. Belianinov, C.P. Collier, S.A. Sarles, “Memristive Ion Channel-Doped Biomembranes as Synaptic Mimics”, *ACS Nano* **12**, 4702-4711 (2018).
9. S.E. Norred, P.M. Caveney, G. Chauhan, L.K. Collier, C.P. Collier, S.M. Abel, M.L. Simpson, “Macromolecular Crowding Induces Spatial Correlations That Control Gene Expression Bursting Patterns”, *ACS Synth. Biol.* **7**, 1251-1258 (2018).
10. G.J. Taylor, F.A. Heberle, J.S. Seinfeld, J. Katsaras, C.P. Collier, S.A. Sarles, “Capacitive Detection of Low-Enthalpy, Higher Order Phase Transitions in Synthetic and Natural Composition Lipid Membranes” *Langmuir* **33**, 10016-10026 (2017).

Collaborators:

Joseph Najem, Penn State University
 Jodie Lutkenhaus, Texas A&M University
 Stan Williams, Texas A&M University
 Eric Freeman, University of Georgia
 Drew Marquardt, University of Windsor
 Sergei Sukharev, University of Maryland
 Chuan-Hua Chen, Duke University
 Konstantinos Giapis, California Institute of Technology
 William Goddard III, California Institute of Technology
 Chris Richards, University of Kentucky
 Yuegang Zhang, Tsinghua University
 Jonathan Boreyko, Virginia Tech
 Jiangtao Cheng, Virginia Tech

Steve Abel, University of Tennessee, Knoxville
 Andy Sarles, University of Tennessee, Knoxville
 Garrett Rose, University of Tennessee, Knoxville
 Doug Hayes, University of Tennessee, Knoxville
 Francisco Barrera, University of Tennessee, Knoxville
 Fred Heberle, University of Tennessee, Knoxville
 Panos Datskos, ORNL
 Scott Retterer, ORNL
 Catherine Schuman, ORNL
 Alex Belianinov, ORNL
 Jason Fowlkes, ORNL
 Nickolay Lavrik, ORNL
 John Katsaras, Schull-Wollan Center, ORNL-UT

Graduate and Postdoc Advisors:

Graduate Advisor: Richard Saykally (UC-Berkeley)

Postdoctoral Advisor: James Heath (UCLA)

Thesis Advisor and Postgraduate-Scholars Sponsor (*denotes current)

Total Graduate Students Advised: 13

Rajan Kulkarni (California Institute of Technology, PhD)
 Garrett Bittner (California Institute of Technology, MS)
 Yoshie Narui (California Institute of Technology, MS)
 Ian Shapiro, (California Institute of Technology, PhD)
 Yu Liu, (California Institute of Technology, PhD)
 Jason Gamba (California Institute of Technology, PhD)
 Prachya Mruetusatorn (Univ. Tennessee-Knoxville, MS)

Charles Chin (Univ. Tennessee-Knoxville, PhD)
 Liz Norred (Univ. Tennessee-Knoxville, PhD)
 Patrick Caveney (Univ. Tennessee-Knoxville, PhD)
 Guru Venkatesan (Univ. Tennessee-Knoxville, PhD)
 Mary-Anne Nguyen (Univ. Tennessee-Knoxville, PhD)
 *William McClintic (Univ. Tennessee-Knoxville, PhD)

Total Postdoctoral Scholars Advised: 10

Hyungil Jung (Yonsei University)
 Seung-Yong Jung (San Francisco University)
 Maria Esplandiú (Universitat Autònoma de Barcelona)
 Donato Ceres (Aquamox, Inc.)
 Jinyu Chen (Henkel Corp.)
 Elizabeth Vargis (Utah State University)
 Jonathan Boreyko (Virginia Tech)
 Fangjie Liu (Uber Eats)
 Graham Taylor (T&T Scientific Corp.)
 Joseph Najem (Penn State University)