



**August 17, 2015  
Boston Convention Center, SciMix, Hall C  
Boston, MA  
250th ACS National Meeting**

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August 17, 2015

Thank you for your participation in the American Chemical Society's 12th Academic Employment Initiative (AEI) poster session.

This booklet contains brief biographical and contact information for more than 100 faculty candidates. At the start of this booklet there is a grid where you can search for candidates by their field of research. Furthermore the candidates have labeled their posters with colored stickers to indicate at which type of university they are seeking a faculty position:

- **Orange – research intensive university**
- **Blue – primarily undergraduate institution**

Please complete the attached survey found at the end of this booklet and give it to ACS staff at the check-in table before leaving the poster session. Please do not hesitate to talk to one of the ACS staff members at the check-in table if you have any questions or need assistance. We wish you successful interactions with the AEI candidates.

The electronic version of this booklet is available at [www.acs.org/aei](http://www.acs.org/aei). For more information about this and other programs from the ACS Graduate & Postdoctoral Scholars Office, please write to [GradEd@acs.org](mailto:GradEd@acs.org) or visit [www.acs.org/grad](http://www.acs.org/grad).

Thank you,

*AEI Program Chairs and Organizers*

**AEI Program Chairs and Organizers: Corrie Y. Kuniyoshi, Ph.D., Margaret E. Grow-Sadler, Ph.D. and Joe Z. Sostaric, Ph.D.**

**Production Editor: Susan Robinson, Assistant Editors: Colette Mosley and Catherine Bouyat**

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# AEI Poster Session Grid 2015

*Poster #	Name	AGRO	ANYL	BIOL	BIOT	CARB	CATL	CELL	CHAL	CHED	COLL	COMP	ENFL	ENVR	FLUO	FUEL	GEOC	INOR	MEDI	NUCL	ORGN	PHYS	PMSE	TOXI	POLY		
1	<a href="#">Dastmalchi</a>	●																			●						
2	Algaradah		●																								
3	<a href="#">Finkenstaedt-Quinn</a>		●	●																							
4	<a href="#">Forsythe</a>		●	●																							
5	Jahanbekam		●																								
6	<a href="#">Radney</a>		●												●												
7	<a href="#">Ramiah Rajasekaran</a>		●	●	●																						
8	<a href="#">Tavassol</a>		●								●					●			●								
9	(Withdrawn)																										
10	(Withdrawn)																										
11	Doud		●																	●		●					
12	<a href="#">Ford</a>		●																								
13	<a href="#">Kibble-Hill</a>		●							●												●					
14	<a href="#">Kostina Berezin</a>		●							●								●			●						
15	Kumar		●																								
16	<a href="#">Le</a>		●	●																							
17	<a href="#">Maianti</a>		●	●															●		●						
18	(Withdrawn)																										
19	<a href="#">Rhoads</a>		●	●																							
20	<a href="#">Smith</a>		●																●		●						
21	<a href="#">Guo</a>		●	●		●																					
22	<a href="#">Woo</a>		●		●																						
23	<a href="#">Zugic</a>						●																				
24	Marashi									●																	
25	<a href="#">Bharti</a>										●											●		●			
26	<a href="#">Braun</a>		●		●						●								●								
27	(Withdrawn)																										
28	<a href="#">Pallaoro</a>		●							●								●			●			●			
29	<a href="#">Rahman</a>		●		●					●								●			●						
30	(Withdrawn)																										
31	<a href="#">Fredin</a>											●												●			
32	<a href="#">Giambasu</a>											●												●			
33	<a href="#">Goeltl</a>											●		●				●			●			●			
34	<a href="#">Laury</a>											●															
35	<a href="#">Perryman</a>											●															
36	<a href="#">Pyzer-Knapp</a>											●															
37	<a href="#">Rasulev</a>											●								●		●		●		●	
38	<a href="#">Sambasivarao</a>											●									●	●	●	●			
39	<a href="#">Schwarz</a>											●															
40	<a href="#">Somarowthu</a>					●						●															

\*Poster numbers may change due to late withdrawals

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41	<a href="#">Vogiatzis</a>										●											●					
42	Yost										●							●					●				
43	<a href="#">Aich</a>										●			●	●												
44	<a href="#">Dressen</a>										●					●								●			
45	<a href="#">Laursen</a>										●					●	●										
46	Akbari																●										
47	<a href="#">Field</a>																	●									
48	<a href="#">Machan</a>																	●									
49	<a href="#">Mader</a>																	●									
50	<a href="#">Runyon</a>																	●					●				
51	<a href="#">Seo</a>															●		●									
52	<a href="#">Shen</a>																	●									
53	<a href="#">SHEN</a>										●							●									
54	<a href="#">Soltau</a>															●		●					●				
55	<a href="#">Tsitovich</a>																	●	●	●			●				
56	<a href="#">Zhang</a>															●	●										
57	<a href="#">zhou</a>										●					●	●					●					
58	<a href="#">Evdokimov</a>															●			●								
59	<a href="#">Ferracane</a>										●	●						●				●					
60	<a href="#">Journigan</a>																		●								
61	<a href="#">Medina-Ramos</a>														●				●								
62	(Withdrawn)																										
63	<a href="#">Thaxton</a>																		●		●						
64	<a href="#">Carrero</a>																				●		●				
65	<a href="#">Ayitou</a>																		●	●	●						
66	<a href="#">Baker</a>																		●				●			●	
67	Bishop					●	●													●	●						
68	<a href="#">Cohen</a>																				●						
69	<a href="#">Cui</a>																				●						
70	<a href="#">Lam</a>														●							●					
71	<a href="#">lang</a>																					●					
72	<a href="#">Lauer</a>																						●				
73	<a href="#">Lehnherr</a>																●				●			●			
74	<a href="#">Mallia</a>																	●					●				
75	<a href="#">McGarry</a>																					●					
76	<a href="#">Neufeldt</a>																					●					
77	<a href="#">Peterson</a>																			●	●						●
78	<a href="#">Picado</a>																					●					
79	<a href="#">Wang</a>																	●		●			●				
80	<a href="#">Whittaker</a>													●									●				

\*Poster numbers may change due to late withdrawals

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81	(Withdrawn)																								
82	Young																•			•					
83	Adachi																						•		
84	Begay			•								•											•		
85	Dangi		•											•									•		
86	Davtyan											•											•		
87	Goyal																						•		
88	Janssen																						•		
89	Li			•				•															•		
90	Lu																						•		
91	Mani																						•		
92	Mohan											•										•	•		
93	Pelzer										•			•									•		
94	Purnima Ruberu											•											•		
95	Quardokus																						•		
96	Schwarz																	•					•		
97	Shi										•												•		
98	Tyagi																						•		
99	Azagarsamy			•															•			•	•		
100	Gkikas										•												•	•	
101	He		•								•												•	•	
102	Hickey																							•	
103	Zarzar										•													•	
104	(Withdrawn)																								
105	Baker																						•	•	
106	Barnes																	•						•	
107	(Withdrawn)																								
108	Elacqua										•												•	•	
109	Neti											•												•	
110	Quadir																						•	•	

\*Poster numbers may change due to late withdrawals



## 2015 AEI Biosketches

**1. Keyvan Dastmalchi**, Department of Chemistry, The City College of New York (CCNY), The City University of New York (CUNY), 85 St. Nicholas Terr., Center for Discovery and Innovation (CDI), 1st Floor, 1S, Room 11310, New York, NY 10031; [kdastmalchi@ccny.cuny.edu](mailto:kdastmalchi@ccny.cuny.edu). Jamia Hamdard, India (Bachelor of Pharmacy, 1998; Master of Pharmacy, 2000; Faculty, Pharmacy); University of Helsinki, Finland, Faculty of Pharmacy, (Ph.D., Pharmacy, 2008), Dr. Raimo Hiltunen (Pharm) and Dr. H. J. Damien Dorman (Pharm), *Dracocephalum moldavica* L. and *Melissa officinalis* L.: Chemistry and bioactivities relevant in Alzheimer's disease therapy; Postdoctoral Research Associate at Lehman College, City University of New York (2009–2012), Dr. Edward J. Kennelly, Metabolite profiling and antioxidant assessment of Neotropical blueberries. Activity guided fractionation and identification of bioactive phytochemicals in tropical fruit extracts; Postdoctoral Research Associate at City College of New York, City University of New York (2012–present), Dr. Ruth E. Stark, Metabolomic analysis of potato wound periderm tissues using LC-MS, GC-MS, and solution NMR techniques. Solid-state NMR analysis of pyrogenic matter and plant polymers such as suberin and cutin.

I am interested in metabolomic studies of the wound-healing process in tubers of *Dioscorea* species (yam). They constitute a major crop and part of many countries' staple diet. Significant waste is associated with their cultivation, mainly due to mechanical damage. Identifying biomarkers associated with different stages of wound healing would help develop methods to expedite healing wounded yam tubers. I have the skills for this research, from GC-MS, LC-MS to NMR-based metabolite profiling of plant extracts. Solid residue from the wound periderm can be studied for its composition and biomechanical properties using solid state NMR spectroscopy and atomic force microscopy, respectively. I've supervised the research of graduate, undergraduate, and high school students. I hope to attain a faculty position to continue research and have an opportunity to inspire and be inspired by the students.

AGRO, ORGN Divisions

**3. Solaire A. Finkenstaedt-Quinn**, Department of Chemistry, University of Minnesota, L-13, 139 Smith Hall, 207 Pleasant St. SE, Minneapolis, MN 55455. [finke073@umn.edu](mailto:finke073@umn.edu); Macalester College (B.A., 2010); University of Minnesota (M.S., 2012; Ph.D., anticipated 2015), Dr. Christy Haynes, Mechanisms of platelet activation.  
<https://www.linkedin.com/pub/solaire-finkenstaedt-quinn/48/b5b/57>

My goal as a scientist is to increase the scientific literacy of the general public through teaching and outreach. My graduate career has trained me in the field of bioanalytical chemistry with an expertise in fluorescence imaging to probe biological systems. In addition, I have a background in biology and physics. This combination makes me an ideal candidate for teaching general chemistry, analytical chemistry, and biochemistry. I have taught four semesters of general chemistry lab. To gain lecturing and course design experience, I completed a Preparing Future Faculty course. I also participated in the Mentoring Program for Aspiring Chemistry Teachers and helped teach Honors Chemistry II by lecturing and preparing assessment materials. I am interested in teaching undergraduates at either a primarily undergraduate institution or as a lecturer at a state university.

ANYL, BIOL Divisions

**4. Jay G. Forsythe**, School of Chemistry and Biochemistry, Georgia Institute of Technology, 901 Atlantic Dr., Atlanta, GA 30332. [jay.forsythe@chemistry.gatech.edu](mailto:jay.forsythe@chemistry.gatech.edu); Furman University (B.S., 2009), Prof. John F. Wheeler, Capillary electrophoresis and isothermal titration calorimetry in the investigation of Cr(III) interactions with DNA; Vanderbilt University (Ph.D., 2014), Prof. John A. McLean, Advanced strategies for imaging mass spectrometry and ion mobility-mass spectrometry; Postdoctoral Fellow at Georgia Institute of Technology, NSF/NASA Center for Chemical Evolution (2014–present), Prof. Facundo M. Fernández, Methods for studying peptide formation on the prebiotic Earth. <https://www.linkedin.com/pub/jay-forsythe/21/77/140>.

My goal is to be an analytical chemistry professor at a PUI. I have a Certificate in College Teaching and enjoy teaching labs, introductory, and upper-level courses. I would like to start a research lab in which undergraduates can learn method development, instrumentation, or both in order to make exciting discoveries in prebiotic chemistry.

ANYL, BIOL Divisions

**6. James G. Radney**, 1530 East West Hwy. #242, Silver Spring, MD 20910. [Dr.j.radney@gmail.com](mailto:Dr.j.radney@gmail.com), 678-852-4532; Georgia Institute of Technology (B.S., Honors, 2006); Portland State University (Ph.D., Env Sci and Resources: Chem, 2012), Dr. Dean Atkinson, Development of a humidity controlled cavity ring-down transmissometer and nephelometry camera for the measurement of aerosol optical properties. Research associate at University of Maryland (2012–2014), Dr. Michael Zachariah, Measurement of mass traceable aerosol optical properties. Research chemist and National Research Council fellow at National Institute of Standards and Technology (2014–present), Dr. Christopher Zangmeister, Development of instrumentation to measure aerosol absorption spectra. <https://www.linkedin.com/pub/jimmy-radney/91/894/75a>

I am interested in the development of instrumentation to measure the wavelength dependent aerosol optical properties (absorption and scattering) to better improve our understanding of the aerosol contribution to regional air quality and climate. I want to interest students in analytical and atmospheric chemistry, environmental science, and computer programming through this research. In graduate school, I assisted with the quantitative and instrumental analysis laboratories and developing a scientific writing curriculum for the instrumental analysis laboratory. I want to teach at a four-year university with a small doctoral and master's degree program so that I can focus on teaching, but also pursue my research interests with a small group of three to five graduate and undergraduate students.

ANYL, ENVR Divisions

**7. Pradeep Ramiah Rajasekaran**, Department of Chemistry, Madurai Kamaraj University, India, 625019. [rrpradeepkumar@gmail.com](mailto:rrpradeepkumar@gmail.com); (B.S., Gold Medal, 2004; M.S., Gold Medal, 2006); Southern Illinois University Carbondale (Ph.D., Gower Fellowship, 2013), Dr. Punit Kohli, Application of track etched glass membranes for submicron fabrication, lithography, and error rectification; Postdoctoral Researcher at University of Florida (2013–present), Dr. Charles R. Martin, Study of ionics at interfaces for biological applications.

During graduate school, I received training in material fabrication and biochemistry. I was involved in fabrication of micro, nanostructures and designing instrumentation to put those structures to work as lithographic tools. I also collaborated in working on solar cells and optical nanoscopy out of interest. As a part of my postdoctoral training, I used electrochemical tools to investigate the ionic behavior at the interface of nanostructures. The electrical double layer, as simple as it may sound, is not completely understood. This double layer is at the interface of practically every bio-nano device, and understanding this is of great interest as it will aid in designing better devices for the future. Throughout my career, I have collaborated, done outreach, and mentored many students. I wish to use these skills in an academic research institute mentoring and conducting research.

ANYL, BIOL, BIOT Divisions

**8. Hadi Tavassol**, Material Science Department, California Institute of Technology and Northwestern University, Steele Laboratories, Room 305, 1200 California Blvd., Pasadena, CA 91125. [hadi@caltech.edu](mailto:hadi@caltech.edu); Sharif University of Technology (B.S., Applied Chem, 2007); Northern Illinois University (M.S., Anyl Chem, 2009), Prof. Petr Vanysek, Electrochemistry in non-aqueous systems; University of Illinois at Urbana–Champaign (Ph.D., Anyl Chem, 2014), Prof. Andrew Gewirth, Interfacial processes in Li-ion batteries; Postdoctoral Scholar at California Institute of Technology–Northwestern University (2014–present), Prof. Sossina Haile, Electrocatalysis in the solid acid electrochemical systems; ECS H. H. Uhlig Summer Fellowship Award (2014).

I am interested in developing a research program that focuses on fundamental understanding and design of the processes across different chemical interfaces, especially as they relate to advanced electrochemical devices. A combination of *in situ* and *ex situ* techniques will be developed and used to study and improve interfacial processes, especially those involving electrochemical reactions, such as energy storage, corrosion, and electrocatalysis. I have taught undergraduate and graduate level courses and mentored several students in research. I am very passionate about science outreach, mentoring, and using interdisciplinary research as a tool for training in the lab and classroom.

ANYL, INOR, PHYS, COLL, ENFL Divisions

**12. Geoffrey T. Ford**, Department of Chemistry and Biochemistry, JM Palms Ctr for GSR, 631 Sumter St., Columbia, SC 29208. 803-394-7305, [fordg@email.sc.edu](mailto:fordg@email.sc.edu); Presbyterian College (B.S., Most Outstanding Sr in Chem 2009, Beta Beta Beta Nat'l Honor Society 2008, 2009); University of South Carolina (Ph.D., 2015), Dr. F. Wayne Outten (Biochem), Iron homeostasis is a target of nickel toxicity in *E. coli*.  
<https://www.linkedin.com/pub/geoff-ford/52/279/7a1>

I am interested in the various extra- and intracellular changes that accompany metallome stresses in bacteria, as well as fusing traditional biochemical and molecular biology techniques with bioanalytical and biophysical approaches for studying these complex systems. The importance of these metal-dependent systems cannot be overstated, and their study is an important facet of biological chemistry. I am also interested in merging traditional educational tones found at liberal arts colleges with the forefronts of chemical and biochemical research. With regard to my own undergraduate and graduate edification, the knowledge and experience gained from personal research is just as important as a strong educational foundation. I would like to provide opportunities and courses that include all of these aspects to instill a critical advantage in undergraduate students at these institutions.

BIOL Division

**13. Ann C. Kimble-Hill**, Department Biochemistry and Molecular Biology, Indiana University School of Medicine, MS 4079, 635 Barnhill Dr., Indianapolis, IN 46202. [ankimble@umail.iu.edu](mailto:ankimble@umail.iu.edu); University of Michigan (B.S.E., 2000); University of Illinois at Chicago (M.Eng., 2003); Purdue University (Ph.D., 2008), Dr. Christoph Naumann, (Chem. & Chem. Biol.), Biophysical mechanisms of membrane protein recruitment to lipid rafts; DOE Traineeship at Argonne National Laboratory (2008–2009), Dr. Ursula Perez-Salas, Crystallization of membrane proteins using bicelles as a lipid scaffold; NIH Traineeship at Indiana University School of Medicine (2009–2012), Dr. Thomas Hurley, Selective inhibitors of aldehyde dehydrogenases; NIH Mentored Research Scientist Development Award at Indiana University School of Medicine (2012–present), Dr. Thomas Hurley and Dr. Clark Wells, Defining the role of Amot lipid binding in cellular proliferation and migration.

The overall goal of my research program will be to use biophysical methods to understand signaling events in cells, particularly proteins that interact with lipids in disease states, by employing proteomic, kinetic, and biophysical techniques such as small angle scattering, X-ray crystallography, atomic force microscopy, and fluorescence microscopy/spectroscopy for the manipulation of signaling pathways/effects. The central question of my research program can be summarized as: How can we modulate membrane protein interactions with lipids, thereby affecting signaling events? This research includes methodologies seen in biochemistry, biophysics, physical chemistry, biomedical and biochemical engineering, and pharmacology courses. My intent is to actively engage and motivate students at an institution that awards graduate degrees, focusing on teaching and research.

BIOL, COLL, PHYS Divisions

**14. Sofya Kostina Berezin**, Montreal, QC, Canada. [sofyaberezin@gmail.com](mailto:sofyaberezin@gmail.com); Higher Chemical College of Russian Academy of Sciences (Diploma Chem, Cum Laude, 2002); Catholic University of America (R.A., 2002–2003); University of Maryland, College Park (Ph.D., 2009), Prof. Davis, Supramolecular chemistry of ion transport; University of Montreal (2010) Stag. Postdoctorale, University of Toronto, (2011) Volunteer.

My research focuses mainly on Mechanochemistry and physiology of ion transport. We study all kinds of molecules (H-bond donors and Lewis acids, simple and complex synthetic compounds, off-the-shelf chemicals, and natural products—old and new ionophores) as *selective* (an)ion transporters in the model lipid bilayer and living cells. To break the tradition, only *scientific methods* are used to elucidate function and biologically relevant phenomena. My students obtain solid knowledge in a wide spectrum of disciplines, find and solve scientific problems, and receive hands-on training in kinetics, thermodynamics, dynamic modeling, biophysical methods, and chemical synthesis. As an innovative feature, I treat each and every student as a *colleague*, and the noble goal is to educate a new generation of *scientists* (rather than researchers) to maximize their life-long output and benefits for society.

BIOL, COMP, ORGN, INOR Divisions

**16. Cuong Q. Le**, Department of Chemistry and Biochemistry, University of Texas at Arlington, 700 Planetarium Pl., Arlington, TX 76019. [Cuong.Le@mavs.uta.edu](mailto:Cuong.Le@mavs.uta.edu); University of Texas at Arlington (B.S., Bio, 2010; B.S., Biol Chem, 2010; Ph.D., anticipated 2015); Teaching-As-Research Project Grant, University of Texas at Arlington, 2015.

Cuong Q. Le graduated from the University of Texas at Arlington with a bachelor's degree in biology (2009). He continued his undergraduate studies and graduated with a second bachelor's degree in biological chemistry (2010). With a high interest in enzyme kinetics, he directly joined Dr. Kayunta Johnson-Winters' group for the B.S.-Ph.D. degree program in 2010. The focus of his research is to study the hydride transfer reactions of F<sub>420</sub> dependent enzymes, specifically Fno, using site-directed mutagenesis, steady-state, and pre-steady-state kinetic methods. Currently, he is teaching and doing research at the University of Texas at Arlington. He plans to work in a national laboratory and eventually come back to academia.

BIOL, BIOT Divisions

**17. Juan Pablo “JP” Maianti, Ph.D.**, Department of Chemistry and Chemical Biology, Harvard University, 12 Oxford St. Cn224, Cambridge, MA 02181.  
[maianti@fas.harvard.edu](mailto:maianti@fas.harvard.edu); University of Canterbury, New Zealand (B.S., 2004); University of Montréal, Canada (M.S., 2010), Prof. Stephen Hanessian; Harvard University (Ph.D., 2015), Prof. David Liu, Therapeutic potential and physiological roles of Insulin-Degrading Enzyme illuminated by a DNA-templated macrocyclic inhibitor; Postdoctoral Researcher at Harvard University (May 2015–present), Prof. David Liu and Prof. Alan Saghatelian, Next-generation substrate-selective inhibitors of Insulin-Degrading Enzyme that allow Glucagon proteolysis.  
<https://www.linkedin.com/in/maianti>

I am interested in constructing and deploying large and diverse DNA-encoded libraries of small-molecules in collaborative multidisciplinary studies aiming to elucidate the physiological roles of new drug targets. For instance, despite decades of research on signaling cascades, the *in vivo* degradation pathways of most bioactive molecules remain unknown due to a lack of enzyme inhibitors. Such studies can illuminate the therapeutic relevance of limiting the turnover of signaling molecules and hormones in tumor microenvironments, inflammation, and metabolism. One-pot DNA-encoded libraries are easy to use, minimally consumed (<1 pmol) after each *in vitro* selection, and do not require intensive target-based assay optimization nor robotic infrastructure, given that the lead hit structures are deconvoluted using inexpensive DNA sequencing. I enjoy teaching organic chemistry and biochemistry.

BIOL, MEDI Divisions

**19. Timothy W. Rhoads**, Genome Center, University of Wisconsin–Madison, 425 Henry Mall, Madison, WI 53706. [tim.rhoads@gmail.com](mailto:tim.rhoads@gmail.com); Gonzaga University (B.S., 2007); Oregon State University (Ph.D., 2012), Dr. Joseph Beckman (Bio), Measuring protein metal binding via mass spectrometry: Copper, zinc superoxide dismutase and amyotrophic lateral sclerosis; CIBM Postdoctoral Fellow (2012–present), Dr. Joshua Coon (AnyL), Quantitative proteomics of model systems. [www.linkedin.com/in/timrhoods](http://www.linkedin.com/in/timrhoods)

I am broadly interested in global proteomics and post-translational modification analysis via mass spectrometry, with a special emphasis on the influence of oxidative stress on neurodegenerative disease. I will use traditional molecular biology techniques as well as large-scale proteomics approaches to investigate oxidative stress-based mechanisms of neurodegenerative diseases in cell culture and model organisms (rodents, nematodes). I envision this research attracting students in chemistry and biochemistry, as well as clinically oriented individuals. I have research experience in oxidative stress, neurodegeneration, and proteomics, as well as teaching experience in biology, biochemistry, chemistry, and proteomics. I wish to teach and direct graduate-level (Ph.D.) students at a Research I institution, although I'm also interested in teaching undergraduate research at a four-year college.

BIOL, ANYL Divisions

**20. Dr. Jacqueline Smith**, Center for Drug Discovery, Georgetown University Medical School, 3970 Reservoir Rd., Washington, DC 20057. [jas462@georgetown.edu](mailto:jas462@georgetown.edu); University of Maryland, Baltimore County (B.S., 2006); University of Maryland, College Park (Ph.D., 2011), Dr. Herman Sintim, Synthesis of autoinducer-2 analogs to investigate bacterial quorum sensing; Postdoctoral Fellow at Georgetown University Medical School (2011–present), Dr. Milton Brown, Synthesis of NPPTA analogs to treat tamoxifen-resistant breast cancer.

I plan to establish a research program that uses synthetic chemistry to develop tools for medicinal chemistry. I will develop small molecule compounds aimed to improve drug delivery to the brain, detect alternative splicing, and investigate the role of phosphorylation in resistance. I would like to conduct this research at a Ph.D.-granting university where I can mentor both graduate and undergraduate students. I have three years of independent teaching of general chemistry, and I am looking for work teaching organic and chemical biology courses in the future.

BIOL, MEDI, ORGN Divisions

**21. Qing Guo**, Gregg Hall 430, 35 Colovos Rd., Durham, NH 03824. [qsg2@unh.edu](mailto:qsg2@unh.edu); Beihang University (Beijing University of Aeronautics and Astronautics), Beijing, China (B.S., 2009); University of New Hampshire (Ph.D., 2015), Dr. Vernon N. Reinhold (Bio) and Dr. W. Rudolf Seitz (Chem), Development of an isotopic approach for detailing Heparin sequences; Postdoctoral scholar at University of New Hampshire Glycomics Center (2015–July 2016), Dr. Vernon N. Reinhold, Structural glycobiology (sequential mass spectrometry, MSn). <http://glycomics.unh.edu/Main/>

I am an analytical chemist with strong background in mass spectrometry and liquid chromatography. I'm seeking a research position where my expertise in MSn, liquid chromatography, and other bioanalytical techniques will be used. I am skilled in glycan characterization using various instrumentations like ESI-IT-MSn, MALDI-TOF-MS, LC-MS/MS, GC-MS.

CARB, ANYL, BIOL Divisions

**22. Christina M. Woo**, Department of Chemistry, Stanford University, 333 Campus Drive Mudd Building, Stanford, CA 94305. 201-320-6142, [cmwoo@stanford.edu](mailto:cmwoo@stanford.edu); Wellesley College (B.A., 2013); Yale University (Ph.D., 2013), Dr. Seth Herzon, Synthetic and chemical biological studies of the diazofluorene antitumor antibiotics; Jane Coffin Childs and BWF CASI Postdoctoral Fellow (2013–present), Dr. Carolyn Bertozzi, Isotope targeted glycoproteomics. <https://www.linkedin.com/in/christinamwoo>

I am an organic chemist turned chemical biologist seeking to use molecular engineering and mass spectrometry to create a new paradigm in precision pharmacology. My expertise is in the areas of synthetic chemistry, natural product isolation, DNA biochemistry, and glycoproteomics, and my body of work has produced 14 publications to date. I seek a faculty position at a research institution where I will establish a program in precision pharmacology to study the mechanism of action of small molecules in the proteome (i.e., therapeutics, natural products, glycans). Core skills: Students in my lab will be trained in synthetic organic chemistry, molecular biology, mass spectrometry, and data science. Teaching: I prefer to teach organic chemistry, chemical biology, and pharmacology courses in a university lecture or seminar setting.

BIOL, MEDI, ORGN Divisions

**23. Branko Zugic**, Department of Chemistry and Chemical Biology, Harvard University, 12 Oxford Street, Mallinckrodt B22, Cambridge MA 02138. 508-414-8555, [brankozugic@fas.harvard.edu](mailto:brankozugic@fas.harvard.edu); Worcester Polytechnic Institute (B.S., 2006); Tufts University (Ph.D., 2013), Dr. Maria Flytzani-Stephanopoulos, Development of platinum-based catalysts for hydrogen production and decarboxylation reactions; Postdoctoral Associate, Harvard University (2013–present), Dr. Cynthia Friend, In situ studies of gold-based nanomaterials for green fuels and chemical processes. <https://www.linkedin.com/pub/branko-zugic/10/91a/857>.

I am interested in understanding the dynamics of bimetallic, nanostructured materials as they relate to renewable energy applications using in situ IR, electron-microscopy, and X-ray-based analytical techniques. I hope to interest students in chemistry, materials science, and chemical engineering in a multidisciplinary research effort. In addition to assisting in thermodynamics, transport phenomena, and analytical laboratory courses, I have mentored numerous undergraduate and graduate students through successful laboratory research projects. I would like to teach and develop a research program at a doctoral or regional comprehensive university that involves graduate students (Ph.D. and master's degree level), undergraduates, and interdisciplinary collaborations across departments and other institutions.

CATL, ENVR, PHYS Divisions

**25. Dr. Bhuvnesh Bharti**, Department of Chemical and Biomolecular Engineering, North Carolina State University, 911 Partners Way, EB I, Raleigh, NC 27695-7905. [bbharti@ncsu.edu](mailto:bbharti@ncsu.edu); Panjab University Chandigarh (B.S., 2007; M.S., 2009); Technische Universitaet Berlin, Germany (Ph.D., 2012), Prof. Gerhard H. Findenegg, Adsorption, aggregation and structure formation in systems of charged particles: From colloidal to supracolloidal assembly; Postdoctoral Research Associate at North Carolina State University (2012–2014), Prof. Orlin D. Velev, Multidirectional colloidal assembly in external field; JSPS Postdoctoral Fellow at Shinshu University (2014), Prof. Katsumi Kaneko, Nanocarbon hybrid materials; Research Assistant Professor at North Carolina State University (2014–present), Prof. Orlin D. Velev, Environmentally friendly functional nanomaterials.

My research interests include programmed assembly of active colloids, multiresponsive soft matter, nanocarbon hybrid materials, and bio–nano interactions. I have coauthored multiple publications in high-profile journals including, *JACS*, *Nat. Nanotechnol.*, and *Nat. Mater.* I am a recipient of the Springer Theses Award (2014) for my Ph.D. work. I am also involved in international and national collaborative projects, undergraduate research supervision, and graduate student mentoring. My preferred teaching courses are general and physical chemistry, including thermodynamics and surface chemistry. In the future, I plan to continue my active involvement in scientific outreach and student mentoring along with establishing my own research group in the field of soft matter, colloids, and nanoscience at a doctoral university.

COLL, PHYS, POLY Divisions

**26. Gary B. Braun**, 139 Vista Del Mar Dr., Santa Barbara, CA 93109; 805-680-5549, [gbraun@sbmri.org](mailto:gbraun@sbmri.org); University of California, Santa Barbara (B.S., 2004; Ph.D., 2010), Dr. Norbert O. Reich, Light-activation of plasmonic nanomaterials for sensing and drug delivery; Mitsubishi Chemical Corp. Distinguished Graduate Fellowship award (2005–2006), Corning Inc. Foundation Science Fellowship (2008–2009); Postdoctoral Researcher at Sanford-Burnham Medical Research Institute, La Jolla, CA, Cancer Research Center, Dr. Erkki Ruoslahti; Research Fellowship from the Cancer Center of Santa Barbara (2009–2011), NIH Training Fellowship (2011–2013), Staff Scientist (2013–present), Novel nanomaterial strategies for imaging of cellular internalization in vivo, and for high-throughput RNAi screens. <https://www.linkedin.com/in/garybraun>

My research aim is to engineer nanomaterials for novel applications in cell identification, through use of targeting peptides, along with a new class of cores that can reconfigure or disassemble by external control, and pursue exciting avenues from tissue engineering to biological sensing. My research has been to develop molecularly assembled nanostructures, exploring their ability to sense molecules and for drug delivery. I have coauthored numerous papers through these exciting interdisciplinary collaborations. Importantly, besides various teaching assistant roles, I have mentored many undergraduate and graduate students, guiding their projects and personal development by building their confidence and creativity in science. I would like to teach at a university or medical institute that offers doctoral and/or master's degrees or four-year college with an undergraduate research program.

COLL, ANYL, INOR Divisions

**28. Alessia Pallaoro**, 139 Vista del Mar Dr. 805-570-1548, [apallaoro@chem.ucsb.edu](mailto:apallaoro@chem.ucsb.edu), [ale.pallaoro@gmail.com](mailto:ale.pallaoro@gmail.com); Università degli Studi di Trento (Laurea, B.S. Equivalent, 2003; Laurea Specialistica, M.S. Equivalent, 2005, 110/110 cum laude; Ph.D., 2009), Dr. Salvatore Iannotta, Growth of molecular films by supersonic beam methods and biofunctionalization of silicon, Drs. Antonella Motta and Salvatore Iannotta, Functionalization and sensitization of surfaces and nanostructures for biomedical applications; Postdoctoral Researcher at University of California, Santa Barbara (2009–present), Dr. Martin Moskovits, Surface enhanced Raman spectroscopy for multiplexed cancer cell detection. <https://www.linkedin.com/pub/alessia-pallaoro/9/6a7/111>

My long-term goal is aimed at developing novel nanomaterials for diagnostic, imaging, tissue engineering, and creating interactive tissue-resident nanodevices. My interest is to study the two-way communication between nanomaterials and the biological environment, under normal and pathological conditions. Our work will be quantitative and use advanced imaging and spectroscopy, materials science, and molecular biology techniques. I am currently developing a multiplexed surface enhanced Raman-based microfluidic sensor platform, a rapid cell diagnostic for urinary tract tumors in canine patients based on receptor expression. This research has thrived in a vibrant multidisciplinary environment, and I have mentored and trained graduate and international students through several projects. I would like to teach at a university that offers doctoral and master degrees, or four-year undergraduate.

COLL, ANYL, INOR, PHYS Divisions

**29. Masudur Rahman**, Department of Chemistry, Marshall University, One John Marshall Dr., Huntington, WV 25755. [rahmanm@marshall.edu](mailto:rahmanm@marshall.edu); National University (B.S., 2001); Toyohashi University of Technology (M.S., 2003; Ph.D. 2007), Dr. Akira Mizuno (Life Sci) and Dr. Katsuyuki Aoki (Chem), A study of metal complex and protein tag binding to DNA and its characterization for biotechnology; Professional Nanostructure Fabrication Training at MIT (2009); NSF Postdoctoral Fellowship at Marshall University, (2012–present), Dr. Michael Norton, Integrate chips into instruments for optical detection and downstream sensors utilizing riboswitches and FRET technology. <http://webpages.marshall.edu/~rahmanm/index.htm>

Self-assembling DNA nanostructure has been used to deliver cargos to cells, such as immunostimulatory oligonucleotides, apoptosis-inducing antibodies, and Anthracyclines for cancer therapy. DNA nanotechnology allows such a high degree of customization, the question is whether it's possible to tune the DNA nanostructures to optimize drug delivery to target cancer cells. I'm interested in investigating whether alternation in the origami design would enable a change in drug loading and release properties. DNA-nanostructure and transition metal complexes could target specific cancer cells or a cell line, which I would like to pursue as well. My primary classroom goal is creating a positive learning environment by valuing and encouraging intellectual diversity. This sets an example for students and allows them to develop an independent understanding and to engage with other students and me.

COLL, BIOT, INOR, ANYL Divisions

**31. Lisa A. Fredin, Ph.D.**, National Institute of Standards and Technology, Materials Measurement Laboratory, 100 Bureau Dr. Mailstop 8320, Gaithersburg, MD 20899.  
[lafredin@gmail.com](mailto:lafredin@gmail.com); The University of Texas at Austin (B.S., Chem, Biochem, Applied Math with minor in Computer Sci, cum laude, 2007); Northwestern University (Ph.D., 2012; MRSEC Fellowship 2010–2011), Profs. Mark A. Ratner and Tobin J. Marks, Nano and molecular scale dielectrics: Encapsulated inorganic nanoparticle-polymer nanocomposites and self-assembled nanodielectrics, theory and experiments; Postdoctoral Research Associateship at Lund University, Sweden (2012–2014, stipend 2012–2013), Asst. Prof. Petter Persson, Modeling light-harvesting transition metal complexes for photochemical processes; NRC Postdoctoral Research Associateship at National Institute of Standards and Technology (2015–present), Dr. Thomas C. Allison, Developing new tools to reduce computational cost of screening new materials for energy storage and generation applications.

Understanding fundamental electronic processes, especially charge and energy transfer, in complex electronic systems is important for a diverse set of energy storage and generation applications. I probe these systems computationally, allowing for many practical milestones appropriate for a spectrum of students of different backgrounds and interests. Using computational chemistry to understand fundamental ways that structure and environment affect a system's electronic properties, I employ quantum chemical electronic structure theory to predict experimentally relevant and measurable phenomena, such as excited state pathways, and to suggest new avenues for experimental study. I am looking for positions at collaborative research institutes that emphasize cross-department research and effective teaching at all levels.

COMP, PHYS, ENFL Divisions

**32. George M. Giambasu**, BioMaps Institute, Rutgers University, 174 Frelinghuysen Rd., Piscataway, NJ 08854-8087. [giambasu@rutgers.edu](mailto:giambasu@rutgers.edu); University of Bucharest (B.S., 2003; M.S., 2005); University of Minnesota, Twin Cities (Ph.D., 2010), Dr. Darrin M. York, Multiscale models for RNA catalytic activity; Postdoctoral Associate at Rutgers University (2010–present), Dr. David A. Case and Dr. Darrin M. York, Development of predictive models for nucleic acid solvation.  
<https://www.linkedin.com/in/georgemgiambasu>

I am interested in developing and testing molecular models that describe and predict the function, folding, structure, and dynamics of nucleic acids and their relation to NMR, SAXS, and other biophysical and biochemical techniques. My current and proposed research aims to bridge the gap between theory and experiment, and I hope to interest with my research chemists, biologists, physicists, and theoreticians. I intend to teach and coordinate the research of Ph.D. and master's degree students at a major research university.

COMP, PHYS, BIOL Divisions

**33. Florian Görtl**, University of Wisconsin–Madison, Department of Chemistry, 1101 University Ave., WI 53715. [fgoeltl@chem.wisc.edu](mailto:fgoeltl@chem.wisc.edu); University of Vienna, Faculty of Physics (Mag. rer. nat., graduation with honors, 2007; Dr. rer. nat., with honors, 2011), Prof. Jürgen Hafner, The catalytic properties of chabazite: A computational study; Postdoctoral Researcher at ENS-Lyon, France (2012–2014), Philippe Sautet, Studying surface phenomena using high-level quantum chemical methods; Postdoctoral Researcher at University of Wisconsin–Madison (2014–present), Ive Hermans, Modeling zeolite catalysts under realistic conditions.

I am interested in arriving at a solid fundamental understanding of zeolite catalysis using electronic structure calculations. This includes characterization of such materials under realistic conditions, correlating this knowledge to zeolite synthesis as well as reaction pathways and predicting their activity in various reactions. So far, I have taught selected classes in chemistry and mentored graduate and undergraduate students, and I am looking forward to developing my own research program and teaching at the graduate and undergraduate level at a large research institution.

PHYS, COMP, CATL Divisions

**34. Marie L. Laury**, Department of Chemistry, Washington University in St. Louis, Campus Box 1134, One Brookings Dr., St. Louis, MO 63130-4899. [marielaury@wustl.edu](mailto:marielaury@wustl.edu); Washington and Jefferson College (B.A., Chem, Math, Spanish, magna cum laude, 2008); University of North Texas (Ph.D., 2013), Dr. Angela K. Wilson, Accurate and reliable prediction of energetic and spectroscopic properties via electronic structure methods; Keck Fellow at Washington University in St. Louis (2013–present), Dr. Jay Ponder and Dr. Garland R. Marshall (Biochem), Force field optimization for drug design.

My research plans include developing and applying computational methods to examine problems in the areas of proteins, drug design, and chemical mechanisms. Undergraduates (potentially master's degree students) would benefit from my research plans. I hope to apply my academic experiences to a position at a four-year college or regional comprehensive university, where I will teach, lead research, and mentor students. Preparations for this career include: instructing a second-semester general chemistry course (enrollment: 125, responsible for the course lectures, exams, lab lectures), assisting in graduate- (computational chemistry) and undergraduate- (physical chemistry) level courses, and mentoring graduate and undergraduate students in research resulting in publications in peer-reviewed journals. I have a keen interest in the liberal arts and believe in cultivating a student's curiosity.

COMP, PHYS Divisions

**35. Alexander L. Perryman, Ph.D.**, Dept. of Medicine, Division of Infectious Diseases, Center for the Study of Emerging and Reemerging Pathogens, Rutgers University–New Jersey Medical School, MSB I-503, 185 South Orange Ave., Newark, NJ 07103. 973-972-0798, [Alex.L.Perryman@rutgers.edu](mailto:Alex.L.Perryman@rutgers.edu); University of Missouri in Columbia (B.S., Biochem, summa cum laude, Arnold and Mabel Beckman Foundation Scholar, Goldwater Scholar, 2000); University of California, San Diego School of Medicine (Ph.D., Biomedical Sci, Dept. of Pharmacology, Howard Hughes Medical Institute Predoctoral Fellow, 2005), Professor J. Andrew McCammon, Computational chemistry and structure-based drug design against HIV; Amgen Postdoctoral Fellow at the California Institute of Technology (2005–2007), Professor Stephen L. Mayo, Protein design and protein engineering applied to the optimization of antiviral proteins and to a DARPA project on biomolecular electronics; Research Associate in Department of Integrative Structural and Computational Biology at The Scripps Research Institute (2007–2013), Professor Arthur J. Olson, Molecular modeling, structure analysis, and massive virtual high-throughput screening; Research Teaching Specialist III at the Rutgers University–New Jersey Medical School (2013–present), Associate Professor Joel S. Freundlich, Computational and biological techniques applied to targets from *Mycobacterium tuberculosis*. <https://www.linkedin.com/in/AlexLPerryman>, <http://njms.rutgers.edu/departments/labs/freundlich/>

I am driven by the need to advance infectious diseases research, especially against drug-resistant pathogens. I will develop and combine different computational approaches, to create and hone novel workflows that increase the efficiency of chemical tool discovery. We will study targets involved in *Mycobacterium tuberculosis* cell wall synthesis and remodeling. My lab will also perform the enzyme activity assays to assess the potency of the compounds we discover computationally. I enjoyed teaching structural biochemistry. I led 2 sessions of a graduate course on Critical Readings in the Chemical Biology of Pathogens, which was fun and fulfilling. I hope to teach courses on biochemistry, chemical biology, and molecular modeling. I want to teach, train, and lead the research of undergrad. and grad. students at a state or private university, especially one affiliated with a medical school.

COMP Division

**36. Edward O Pyzer-Knapp**, Dept. of Chemistry, Harvard University, 12 Oxford St., Cambridge, MA 02138. [epyzerknapp@fas.harvard.edu](mailto:epyzerknapp@fas.harvard.edu); Durham University (MChem, 2010); University of Cambridge (Ph.D., awarded associateship to Cambridge NanoDTC, 2013), Dr. G. M. Day, Exploring the crystal energy landscape of porous molecular crystals; Lead Postdoctoral Researcher for Harvard Clean Energy Project, Using quantum chemistry and machine learning to accelerate materials discovery.  
[www.linkedin.com/profile/view?id=312199216](http://www.linkedin.com/profile/view?id=312199216), <http://cleanenergy.molecularspace.org>

I am interested in combining techniques from machine learning and information theory, especially those which utilize Bayesian statistics, to provide a route to algorithmically encoding chemical intuition and devising intelligent ways to navigate chemical space. I would like to apply these techniques to accelerating high-throughput virtual screening for both materials and pharmaceutical molecules. During my Ph.D., I performed small group teaching, and during my postdoc I have supervised seven students ranging from undergraduate to master's degree level. I want to teach and supervise both master's degree and graduate-level students at a doctoral institution, and I would like to teach courses that bridge chemistry, data science, and computer science.

COMP, CINF Divisions

**37. Dr. Bakhtiyor Rasulev**, Center for Computationally Assisted Science and Technology, North Dakota State University, 1602 47th St. S, #209, Fargo, ND 58103. [bakhtiyor.rasulev@ndsu.edu](mailto:bakhtiyor.rasulev@ndsu.edu); Jackson State University (Postdoc, 2004–2008, Research Assoc, 2008–2014), Prof. Jerzy Leszczynski; Institute of the Chemistry of Plant Substances, Academy of Sciences of Uzbekistan (Ph.D., 2002), Dr. N. Abdullaev; Tashkent State University (B.S./M.S., 1993); Investigation of sesquiterpene lactones by NMR-spectroscopy and computational modeling methods; ResMed School at Drew University, NJ (2003); Online Course—Intro to relational databases at Stanford University (2011). <https://www.linkedin.com/in/brasulev>

I am interested in a range of topics in structure–activity relationship studies (chemoinformatics), predicting biological activity, physico-chemical and toxicity estimation of chemicals, polymers and nanomaterials. I am an author of publications in *Nature Nanotechnology*, *Chemistry of Materials*, *Nanoscale*, and *Advanced Drug Delivery Reviews*. I received scholarships and awards: Award of Drew University (ResMed School), ACS Toxicological Division Award, Travel Award of CRDF, UNESCO Scholarship. I hope to interest students in computational chemistry and nanoscience. I assisted in analytical chemistry, quantum chemistry, and computational chemistry courses and developed a Nanoscience and Nanotoxicology course (30 h). I want to teach and organize a comprehensive research program for undergraduate and graduate students at a four-year college or regional comprehensive university.

COMP, TOXI, CINF Divisions

**38. Somisetty V. Sambasivarao**, University of Virginia, Department of Chemistry, Charlottesville, VA 22903. 434-270-5226, [vss8j@virginia.edu](mailto:vss8j@virginia.edu); Mysore University (B.S., 1999); SGSITS (M.S., 2003), Dr. S. G. Kaskhedikar (Pharmacy), QSAR studies and design of aldose reductase II inhibitors; Auburn University (Ph.D., 2011), Dr. Orlando Acevedo, [Elucidation of cyclophilin inhibition through free energy perturbation simulations and the development of custom ionic liquid force fields](#); Lecturer at Nalanda College of Pharmacy (2003–2006); REMRSEC Postdoc Fellow at Colorado School of Mines (2011–2014), Drs. C. Mark Maupin and Andrew M. Herring (Chem and Biological Eng), Computational investigation of proton exchange membranes for fuel cell applications and nAChRs homology models; Postdoctoral Research Associate at University of Virginia (2014–present), Dr. Kateri DuBay, Computational modeling of conjugated polymers. <http://scholar.google.com/citations?user=vXk0z0QAAAJ&hl=en>

I enthusiastically seek to apply for Assistant Professor positions in Departments of Chemical Engineering, Material Science, Chemistry, and Pharmaceutical Sciences. I am an expert in developing and applying theoretical calculations and computational simulations to address problems associated with energy materials and drug design. My present work focuses on reaction modeling of conjugated polymers, with an emphasis on nano-assembly and the step growth mechanism. In my independent research career, I will develop and apply force field based simulation tools to investigate sustainable energy technologies and biomedical systems. I taught several courses in the pharmacy curriculum at Nalanda College of Pharmacy. In the future, I would be interested in teaching several courses, including polymer chemistry, thermodynamics, statistical mechanics, computational simulation, and medicinal chemistry.

COMP, PMSE, ORGN, PHYS, MEDI Divisions

**39. Kathleen A. Schwarz**, Materials Measurement Laboratory, National Institute of Standards and Technology, 100 Bureau Dr., Mailstop 8320, Gaithersburg, MD 20899. [kas4@nist.gov](mailto:kas4@nist.gov); Washington University in St. Louis (B.A, 2007); Cornell University (M.S. 2009; NSF Graduate Research Fellowship 2009; Ph.D. 2014), Prof. T. Arias (Physics), Prof. J. Marohn (Chem), Prof. R. Hoffmann (Chem), Prof. R. Hennig (Materials Sci), Partitioning molecular and surface environments: Practice and approximations. NIST National Research Council Postdoctoral Fellowship (2014–present), Computational electrochemistry for fuel cell applications.

<https://www.linkedin.com/in/schwarzkathleen>

I am interested in building an understanding of fundamental electrochemical reaction processes through the development and application of computational methods. My current research focuses on reaction mechanisms of hydrogen evolution and formic acid oxidation on noble metals, and I have collaborated in the development of the ab initio software package JDFTx. I have assisted in general chemistry courses, and I have instructed a general chemistry course for prisoners. I hope to attract students to my group with diverse backgrounds such as chemistry, chemical engineering, and physics. I want to direct my research group and teach at a Ph.D.-granting institution.

COMP Division

**40. Srinivas Somarowthu**, Postdoctoral associate, Molecular, cellular and developmental Biology, Yale University, New Haven, CT 06511. [srinivas.somarowthu@yale.edu](mailto:srinivas.somarowthu@yale.edu); Andhra Loyola College, Vijayawada, AP, India (B.S., 2005); Indian Institute of Technology Delhi, New Delhi, India (M.S., 2007), Dr. B. Jayaram, Computational tool for docking ligands into minor-groove of DNA. Northeastern University (Ph.D., 2011), Dr. Mary Jo Ondrechen and Dr. Penny Beuning, Prediction and experimental verification of compact versus extended enzyme active sites: A tale of two isomerases.

My current research focus is on understanding the function of long non-coding RNAs (lncRNAs) using a combination of computational and experimental approaches. In addition, I am interested in understanding RNA design principles and using large RNAs as scaffolds for RNA nanotechnology. I want to direct a research lab specialized in understanding the structure–function relationship in large RNAs, with graduate and undergraduate students who will be trained in both computational chemistry and experimental biochemistry. My teaching interests include not only general chemistry, but also developing specialized courses such as molecular modeling and nucleic acids biochemistry.

COMP, BIOL Divisions

**41. Konstantinos D. Vogiatzis**, Department of Chemistry, University of Minnesota, 207 Pleasant St. SE, Minneapolis, MN 55455. [kvogiatz@umn.edu](mailto:kvogiatz@umn.edu); University of Athens, Greece (B.S., 2006); University of Crete, Greece (M.S., 2008), Prof. George E. Froudakis, Theoretical study of interaction of CO<sub>2</sub> with nanomaterials; Karlsruhe Institute of Technology, Germany (Ph.D., 2012), Prof. Wim Klopper, Interference-corrected explicitly-correlated second-order perturbation theory; Postdoctoral researcher at Karlsruhe Institute of Technology, Germany (2012–2013), Dr. Karin Fink, Theoretical studies of mono-, di-, and trinuclear complexes; Postdoctoral Researcher at University of Minnesota (2014–present), Prof. Laura Gagliardi, New electronic structure theory methods and high-throughput computational screening algorithms for catalytic processes. <https://www.linkedin.com/in/kvogiatzis>

I plan to develop new electronic structure theory methods and algorithms, using them to explore large molecular systems. My M.S. and Ph.D. involved developing the TURBOMOLE quantum chemistry software under Prof. Klopper's supervision. In postdoctoral research, I've focused on 1. Developing novel and efficient computational methods that describe the strong correlation of molecules, which is particularly relevant for open-shell systems, excited states and transition metals. 2. Also, high-throughput computational screening algorithms, as part of a collaboration between the Gagliardi and Siepmann groups. I've lectured undergrad and grad students on theoretical and computational chemistry and supervised them in research projects, and I've been involved with numerous general, physical, and computational chemistry lab courses. I'll strive to attract students in theoretical inorganic chemistry.

PHYS, COMP, INOR Divisions

**43. Nirupam Aich**, Department of Civil, Architectural, and Environmental Engineering, University of Texas at Austin, 301 E. Dean Keeton St., Stop C1700, Austin, TX 78712. [nirupamaich@utexas.edu](mailto:nirupamaich@utexas.edu); Bangladesh University of Engineering and Technology (B.S., 2009); University of South Carolina (M.S., 2012); University of Texas at Austin (Ph.D., anticipated Aug 2015), Dr. Navid Saleh (Envr), Aqueous solubilization and environmental implications of hierarchical nanostructures. [www.linkedin.com/pub/nirupam-aich/1a/23b/833](http://www.linkedin.com/pub/nirupam-aich/1a/23b/833).

I will develop multifunctional nanohybrids for membrane technologies for salinity gradient energy and organic pollutant degradation at the water–energy nexus. My expertise includes synthesis and characterization of nanomaterials to understand their environmental implications and to apply them in biosensing, adsorption, and advanced cement structures. Besides, I want to teach undergraduate and graduate students the core environmental engineering courses along with nanomaterial implications in a research university.

ENVR, FUEL, COLL Divisions

**44. Donald G. Dressen**, Biophysics Program/Department of Physics, Harvard University, 17 Oxford St., Cambridge, MA 02138. [ddressen@fas.harvard.edu](mailto:ddressen@fas.harvard.edu); University of Denver (B.S., B.Sc., *summa cum laude*, 2008); Harvard University (Ph.D., 2015), Prof. Jene Golovchenko (Phys), An investigation of the interaction between graphene and hydrated ions; Postdoctoral position at Harvard University (beginning fall 2015), Prof. Lene Hau, Generating biofuels by coupling light-driven photosynthetic proteins to engineered nanoscale structures.

I am primarily interested in pairing engineered biomolecules with solid-state materials to develop useful molecular-detection and energy-harvesting devices. I am also interested in synthetic biology for the purpose of engineering biomolecular machines. I expect my research to attract students from chemistry, biochemistry, physics, materials science, and molecular biology. I have been a teaching fellow for both graduate- and undergraduate-level chemistry and physics courses. As a part of these courses, I helped create laboratory units on Fourier transforms, NMR, and graphene supercapacitors. I also helped create most of the theoretical content for a graduate-level statistical mechanics course. I envision myself running a research program and teaching undergraduate and graduate students at a research-centric university.

PHYS, ENFL, BIOL Divisions

**45. Anders B. Laursen**, Department of Chemistry and Chemical Biology, Rutgers, the State University of New Jersey, 610 Taylor Rd., Piscataway, NJ 08854. [anders.laursen@rutgers.edu](mailto:anders.laursen@rutgers.edu); Technical University of Denmark (M.Sc.Eng., Chem, 2009; Ph.D., Phys, 2012), Prof. J. D. Grunwaldt (Chem Eng), Prof. C. H. Christensen (Chem), and Prof. I. Chorkendorff (Phys), Nanoscale design of molybdenum sulfides for more efficient electro- and photoelectrocatalytic hydrogen evolution (Ph.D.), and, A study of “plum pudding” type catalysts (M.Sc.Eng.); Postdoctoral Associate, IAMDN Postdoctoral Scholar (Honorary Rank), at Rutgers University (2013–present), Prof. G. C. Dismukes, Electrochemical hydrogen evolution and renewable fuel production by water splitting.

I am interested in the storage and utilization of renewable energy resources in fuels and for the synthesis of bulk and platform chemicals. In particular, the nanoscale design of catalysts for optimal performance and selectivity toward a single useful product. I hope to interest students and conduct high-quality research in the areas of renewable energy, renewable fuels and chemicals, electrochemistry, electrochemical surface science, and catalyst synthesis. I assisted in teaching both graduate lectures and lab classes as well as undergraduate lectures in catalysis as a guest lecturer. In addition, I assisted in directing undergraduate research as a mentor. I wish to teach and direct the research of undergraduate and graduate students at a research-oriented university.

FUEL, INOR, CHED Divisions

**47. Kathleen D. Field**, Department of Chemistry and Biochemistry, Worcester Polytechnic Institute, 60 Prescott St., Worcester, MA 01609. [kfield@wpi.edu](mailto:kfield@wpi.edu), [kdfmonmouth@gmail.com](mailto:kdfmonmouth@gmail.com); Monmouth University (B.S., 2008); Rutgers University (Ph.D., 2014), Alan Goldman, Activation of small molecules by pincer iridium catalysts; ARL Postdoctoral Fellow, Worcester Polytechnic Institute (2014–present), Marion Emmert, Separation of rare earth elements.

I am interested in pursuing a career at a primarily undergraduate institution. I have been a mentor for various undergraduates; a teaching assistant for general, organic, and analytical chemistry courses; and a coordinator for a high school outreach program during my graduate studies. My research interests are focused in the area of organometallic chemistry, specifically in the area of catalyst synthesis, and in their application to organic transformations.

INOR Division

**48. Charles W. Machan**, Department of Chemistry and Biochemistry, University of California, San Diego, 9500 Gilman Dr. MC 0358, La Jolla, CA, 92093-0358. [cmachan@ucsd.edu](mailto:cmachan@ucsd.edu); Washington University in St. Louis (A.B., 2008); Northwestern University (Ph.D., 2012), Prof. Chad A. Mirkin, Developing new reactions for assembling supramolecular systems; Postdoctoral Researcher at University of California, San Diego, Prof. Clifford P. Kubiak, Inorganic and organometallic electrocatalysts. <https://www.linkedin.com/pub/charles-machan/27/44b/9b1>

I am interested in developing new inorganic and organometallic coordination compounds for energy-relevant small molecule activation and interfacing these with biologically inspired macromolecular structures to optimize their reactivity. A particular focus will be the use of non-covalent interactions, which will allow large structures to equilibrate in response to external stimulus, as a major structural component to interface molecular catalysts with bio-inspired macromolecules and surfaces. I am interested in mentoring students in chemistry and biochemistry from graduate to undergraduate levels in these research areas. I have previously assisted with undergraduate organic and graduate-level inorganic courses. My research experience includes synthesis, NMR techniques, small-molecule X-ray crystallography, electrochemistry, spectroelectrochemistry, and IR and UV-Vis spectroscopies.

INOR, ENFL Divisions

**49. Elizabeth A. Mader**, Research Scientist, Department of Chemistry, Yale University, Box 208107, New Haven, CT 06520. 206-816-4384, [Elizabeth.mader@yale.edu](mailto:Elizabeth.mader@yale.edu); University of Ottawa, ON, Canada (Hon. B.Sc., 2002); University of Washington (Ph.D., NSERC Postgraduate Scholarship 2002–2006, 2007), Prof. James M. Mayer, Hydrogen atom transfer reactions of metal di-imine complexes; Director's Postdoctoral Fellow, Argonne National Laboratory (2008–2010), Dr. Christopher Marshall, Catalyst-support interactions in a PtII/IV catalytic cycle for alkane oxidation; Argonne Scholar and Assistant Chemist at Argonne National Laboratory (2010–2013), Metalated porous organic polymers as catalyst supports for hydrogenation reactions; Acting Assistant Professor at University of Washington (2013–2014), Prof. James M. Mayer, Electrochemistry of copper-based water oxidation catalysts, and Hydrogenation reactions of early transition metal nitrides; Research Scientist at Yale University (2014–present), Prof. James M. Mayer, Electrochemistry of copper-based water oxidation catalysts, and Hydrogenation reactions of early transition metal nitrides.

<https://www.linkedin.com/in/elizabethmader>

I want to advance energy technologies by using computer methodologies to identify key gaps in our existing thermochemical knowledge of catalysts for energy relevant reactions in solution, and then measure these missing parameters experimentally. This knowledge will then be used to design new catalysts, particularly for multi-proton multi-electron transformations. I want to use active learning and scientific teaching methods in my undergraduate classes to inspire the next generation of scientists. Currently, I am designing and teaching a short course for high school students about solar cells, and I recently attended the National Academy of Science Summer Institute on Undergraduate teaching to design a course in Environmental Chemistry. I want to teach and direct the research of undergraduate and master's degree students at a primarily undergraduate institution.

INOR, CATL, PHYS, ANYL Divisions

**50. Jason Runyon**, Department of Chemistry, The University of Alabama, 250 Hackberry Ln., Tuscaloosa, AL 35401. [jwrunyon@crimson.ua.edu](mailto:jwrunyon@crimson.ua.edu); Kennesaw State University (B.S., 2006); The University of Alabama (Ph.D., Award for Outstanding Dissertation Research, 2011), Prof. Anthony Arduengo III, Fluoroalkoxy functionalized carbene ligands for main group and transition metal complexes; Postdoctoral Researcher at Technische Universität Braunschweig, Germany (2011–2012), Prof. Matthias Tamm, Reactivity of tungsten alkyne metathesis catalysts; Postdoctoral Researcher at The University of Alabama (2012–present), Prof. Anthony Arduengo III, Cyanation of imidazol-2-ylidene and High oxidation state first row metal complexes; Cofounder and COO of Innovative Valency, LLC (2013–present). [www.jrunyon.com](http://www.jrunyon.com)

My chemistry background is at the interface of physical organic and inorganic chemistry, with interests in “unusual” bonding arrangements in main group elements, as well as in developing catalysts from abundant first row metals. I enjoy mentoring students and have extensive experience teaching lab courses and lectures. My current position requires directing research projects with undergraduate and graduate students, and I envision continuing this in my future academic career. Because of these positive experiences, I would like to teach at an institution that grants graduate degrees (M.S. or Ph.D.) and has the facilities to provide for an active research program.

ORGN, INOR Divisions

**51. Junhyeok Seo**, Department of Chemistry, The University of Texas at Austin, 105 E. 24th St. Stop A5300, Austin, TX 78712. [Junhyeok.seo@cm.utexas.edu](mailto:Junhyeok.seo@cm.utexas.edu); Yonsei University (B.S., 2004); Seoul National University (M.S., 2006), Dr. Young Keun Chung (Organometallics), Syntheses of Pd- and Pt-NHC complexes and their uses for organic reactions; Brown University (Ph.D., 2013), Dr. Eunsuk Kim (Inorg. Chem.), Synthetic analogues of the molybdenum and tungsten enzymes and their reactivity with carbon dioxide and protons; Postdoctoral Researcher at the University of Texas at Austin (2013–present), Dr. Michael J. Rose (Inorg. Chem.), Semiconductor/molecular hybrid catalyst, and Fe-complexes as synthetic models of [Fe]-hydrogenase.  
<https://www.linkedin.com/profile/view?id=74803656&trk>

My scientific background is in inorganic and organometallic chemistry, and my primary interest is in the area of energy and bioinorganic chemistry. I have expertise in the synthesis and characterization of metal complexes (NMR, IR, UV-Vis spectroscopy, X-ray crystallography), molecular modification of surface to make semiconductor/molecular hybrid (X-ray photoelectron spectroscopy), and electrochemistry. My research experience extends into catalytic applications such as solar fuel generation, small molecule (CO<sub>2</sub>) activation, and methodology development for organic products. I have worked as a teaching assistant in general and inorganic chemistry courses. With this research and teaching experience, I hope to teach organometallic and inorganic chemistry at the undergraduate/graduate level and advise the research of graduate (master's degree and doctoral) students at the University level.

INOR, FUEL Divisions

**52. Jingmei Shen**, 2337 Claymont Dr., Troy, MI 48098. [Jingmeishen1125@gmail.com](mailto:Jingmeishen1125@gmail.com); Beijing Institute of Technology (B.S., 2007); University of Delaware (Ph.D., 2012), Dr. Klaus Theopold, Small molecule activation by alpha-diimine quintuply bonded chromium dimer; Postdoctoral Fellow at Northwestern University (2012–2014), Dr. Harold H. Kung, A) Polysiloxane based core-shell nanocage structure to support single site metal catalyst and sub-nanometer particles, B) UCST polymer based membrane for lithium or lithium ion batteries. Postdoctoral Researcher at General Motor Global R&D (2014–present), Dr. Mei Cai, Microporous materials as adsorbents for adsorbed natural gas storage application.

I'm interested in developing porous materials such as MOFs based materials for energy conversion and storage applications. I'll mainly focus on catalysis and natural gas storage areas. I'll focus on (1) nanoporous bimetallic metal organic frameworks; (2) confined metal nanoparticles supported by MOFs; and (3) various MOFs with different morphologies, especially nanomorphologies. I hope to interest students in chemistry and materials. My experience with nanomaterials and inorganic chemistry, including organometallic complexes, graphene, metal nanoparticles, polymer, and porous materials in energy conversion and storage field prepared me well for the projects. I assisted in inorganic and physical chemistry courses and taught general chemistry labs. I want to teach and direct the research of undergrad (and perhaps M.S.) students at a four-year college or regional comprehensive university.

INOR, PHYS Divisions

**53. Yi Shen**, Department of Chemistry and Biochemistry, University of South Carolina, 631 Sumter St., Columbia, SC 29208. 803-237-8712, [shen8@email.sc.edu](mailto:shen8@email.sc.edu); Nanjing University, China (B.S., 2006); University of South Carolina, Columbia (Ph.D., anticipated Dec 2015), Andrew Greytak, Sequential chemistry on semiconductor nanocrystals: Synthesis, purification, and surface modification.

My research focus has been on nanocrystal fabrication, purification, surface modification, and quality control. I am very familiar with various analytical techniques for nanoscience, including characterization of nanocrystal structure, surface chemistry, and ligand/particle interaction. I have been working as a recitation and lab teaching assistant for general chemistry, physical chemistry, and instrumental analysis, and I have received two teaching awards so far. I have trained several graduate and undergraduate students working with nanocrystals toward their own independent projects. I would like to teach undergraduate courses and direct M.S.- and B.S.-degree research at a four-year undergraduate college or a comprehensive university.

INOR, PHYS, Material Science, Nanotechnology

**54. Sarah R. Soltau**, Chemical Sciences and Engineering Division, Argonne National Laboratory, 9700 S. Cass Ave., Argonne, IL 60439. 630-252-5474, [soltausr@anl.gov](mailto:soltausr@anl.gov); Skidmore College (B.A., 2007); Boston University (M.A., 2010; Ph.D., 2014), Dr. John Caradonna, Studies toward the mechanism of allosteric activation of phenylalanine hydroxylase; Postdoctoral Appointee at Argonne National Laboratory (2013–present), Dr. Lisa Utschig-Johnson, Protein-based approaches to solar fuels using natural and artificial photosynthesis. <https://www.linkedin.com/pub/sarah-soltau/9/a62/3b7>

I am interested in understanding electron transfer in metalloproteins and manipulating electron transfer to gain understanding of native enzyme functions or develop novel protein functions through the merger of inorganic catalysts with a protein environment. I hope that my research will engage students in areas of biochemistry, inorganic, or environmental chemistry, as my research interests have multiple applications. I have taught a general chemistry course for nonmajor students and directed the laboratory component of a biochemistry course for 200 students. I have also assisted in several biochemistry and general chemistry courses. I want to teach and develop an undergraduate research program at a four-year college or regional comprehensive university. I am also interested in opportunities to teach at two-year colleges.

INOR, ENFL, BIOL Divisions

**55. Pavel B. Tsitovich**, Department of Chemistry, University at Buffalo (SUNY), 535 Natural Sciences Complex, Buffalo, NY 14260-3000. 716-645-4191, [paveltsi@buffalo.edu](mailto:paveltsi@buffalo.edu); Mendeleyev University of Chemical Technology of Russia, Moscow, Russia (B.Eng., 1998); Bowling Green State University, Bowling Green, OH (Ph.D., 2005), Prof. Michael Y. Ogawa, Protein-based electron-transfer in de novo designed coiled-coil metalloproteins; Postdoctoral Fellow at University at Buffalo (SUNY) (2009–2010), Dr. Matthew Disney, Chemo-enzymatic modifications of aminoglycosides and RNA recognition; Research Scientist at University at Buffalo (SUNY) (2010–present), Prof. Janet R. Morrow, Transition metal complexes as paraCEST MRI contrast agents for in vivo applications.

<https://www.linkedin.com/pub/pavel-tsitovich/7/260/1b0>

My research interests are on the interface of inorganic, bioinorganic chemistry, and chemical biology, with an emphasis on biomedical applications such as optical, radioisotope and magnetic probes for in vivo imaging. I plan to establish a research program allowing students to gain expertise in organic synthesis, coordination chemistry of transition metal ions, redox chemistry, and bioconjugation. For practical applications, I am interested in patenting and commercializing newly developed radioactive or paramagnetic metal complexes for imaging and designing smart materials. I have an established record of research patenting of my postdoctoral work toward potential commercialization. My anticipated occupation is at the assistant professor level in a research institution where I will establish a research program while training students. My teaching experience and philosophy motivate me to use novel online methodologies, such as IONiC/VIPER approach, which I have already contributed to.

INOR, MEDI, ORGN Divisions

**56. Qiang Zhang**, 1600 Southwest Pkwy., APT. 908, College Station, TX 77840. 803-553-2396, [qiang.zhang@chem.tamu.edu](mailto:qiang.zhang@chem.tamu.edu); Jilin University (B.S., 2008); University of South Carolina (Ph.D., 2013), Dr. Richard D. Adams, New transition metal carbonyl cluster complexes: Properties and reactivity; Postdoctoral Research Associate at Texas A&M University (2013–present), Dr. Hong-Cai Zhou, Design and synthesis stable metal-organic frameworks for applications in gas storage, gas separation, catalysis, and sensing. <http://www.researcherid.com/rid/E-1514-2012>

I am enthusiastic about exploring scientific topics that are intellectually challenging and of practical importance. The uniqueness of porous materials, such as metal-organic frameworks or porous organic polymers, make it possible to install versatile functionalities that promise a wide range of applications, from small molecule adsorption and separation, energy storage and conversion, to catalysis. I envision tackling the challenge of environmental and energy related topics, using porous materials as supportive hosts to incorporate guest moieties for CO<sub>2</sub> capture and fixation, and creating artificial enzymes for the production of renewable fuels. Equally important, I am enthusiastic about both mentoring students in research labs and teaching them in a classroom. I am planning to teach and direct the research of graduate students (Ph.D.) in chemistry or materials science.

INOR, FUEL Divisions

**57. Dr. Meng Zhou**, Chemistry Department, Colorado State University, Fort Collins, CO 80523. 203-737-0913, [meng.zhou@colostate.edu](mailto:meng.zhou@colostate.edu); Purdue University (B.S., 2008); Yale University (Ph.D., 2012), Prof. Robert H. Crabtree, Cp\* iridium precatalysts in selective C-H oxidation; Postdoctoral Associate at Rutgers University (2012–2015), Prof. Alan S. Goldman, Pincer Ir (III) complexes in C-H activation and oxidation of mesitylene and methane; Postdoctoral Associate at Colorado State University (2015–present), Prof. Richard G. Finke, Heterogeneous water oxidation catalysis.

[https://www.researchgate.net/profile/Meng\\_Zhou](https://www.researchgate.net/profile/Meng_Zhou)

I seek a tenure-track assistant professor position in inorganic chemistry at a doctoral university. With Robert Crabtree at Yale University (Ph.D.) and later with Alan Goldman at Rutgers University (postdoc), I studied organometallic C-H functionalization catalysis for the direct conversion of alkanes to fuels and feedstock chemicals. I currently work with Richard Finke at Colorado State University (postdoc) on heterogeneous water oxidation catalysis for solar fuel production. I plan to establish a catalysis research program to study and develop, at the molecular level, industrially relevant processes involving multiple phases (gas, liquid, and solid). The program will provide solutions to a sustainable energy future.

INOR, COLL, ORGN, FUEL Divisions

**58. Nikolai M. Evdokimov**, Department of Molecular and Medical Pharmacology, University of California, Los Angeles, 607 Charles E. Young Dr., Los Angeles, CA 90095. [nev dokim@chem.ucla.edu](mailto:nev dokim@chem.ucla.edu); Timiryazev Agrarian University (M.S., summa cum laude, 2007); New Mexico Institute of Mining and Technology (Ph.D., 2011), Dr. Alexander Kornienko, New methods for the synthesis of medicinally relevant compounds; The Phelps Family Foundation Postdoctoral Fellow at UCLA (2011–2015), Dr. Michael E. Jung, Development of new fluorination methodology and probes for Positron Emission Tomography. [www.linkedin.com/pub/nikolai-evdokimov/1b/955/4a](http://www.linkedin.com/pub/nikolai-evdokimov/1b/955/4a)

I plan to develop new clinical means for early diagnosis and treatment of neurodegeneration and cancer. Immediate interest is developing better methods for introducing fluorine atom into organic molecules, which would enable quick and efficient synthesis of new radiolabeled probes for PET. I have more than 4 years of teaching experience in Russia and the U.S. Timely scientific advice, encouragement, and personal attention to students have sparked curiosity and motivated many of them to pursue grad degrees. I've successfully introduced a new manual for organic chemistry course and developed new manual for organic and inorganic chemistry laboratories. I lectured chemistry and biology interface classes. I want to join a very collaborative faculty and perform research and teach undergrad and grad classes at schools with B.S. or M.S. in chemistry, organic/medicinal chemistry, or pharmacology.

MEDI, FLUO Divisions

**59. Michael J. Ferracane**, Department of Medicinal Chemistry, College of Pharmacy, University of Florida, P.O. Box 100485, Gainesville, FL 32610. [michaelj ferracane@gmail.com](mailto:michaelj ferracane@gmail.com); University of Arizona (B.S., 2008); University of Virginia (Ph.D., 2014), Dr. Timothy L. Macdonald, Design, synthesis, and evaluation of sphingosine 1-phosphate receptor agonists; Postdoctoral Associate at University of Florida (2014–present), Dr. Jane V. Aldrich, Design and synthesis of peptide-based opioid receptor modulators. <https://www.linkedin.com/in/michaelj ferracane>

My research interests lie at the interface of chemistry and biology: using synthetic organic chemistry, computational chemistry, and biochemistry to investigate problems relevant to medicine. Specifically, I would like to combine these tools to examine the chemistry and biology of metalloproteins and g protein-coupled receptors. This research spans a broad spectrum of fields and is designed to not only create novel science, but to aid in the education and training of students with a variety of interests. In the classroom, I plan to create an active learning environment that spans different learning styles, allowing for a diverse group of students to receive a personalized education. Overall, I wish to pursue these research and teaching goals in the unique environment of a primarily undergraduate institution, where I am able to have a direct impact on the education of students.

MEDI, COMP, ORGN Divisions

**60. V. Blair Journigan, Ph.D.**, Staff Scientist, Astraea Therapeutics, LLC, 320 Logue Ave., Suite 131, Mountain View, CA 94043. [velvet@astraeatherapeutics.com](mailto:velvet@astraeatherapeutics.com); The University of North Carolina at Wilmington (B.S., 2004); The University of Mississippi (Ph.D., 2010), Christopher R. McCurdy, Ph.D., R.Ph., Part I: Design, synthesis and biological evaluation of small molecules for neuropeptide FF1 and FF2 (NPFF) receptors. Part II: Synthesis and evaluation of dual-activity opioid-NPFF ligands for receptor affinity, antinociception and tolerance liabilities; Postdoctoral Research Associate at Astraea Therapeutics, LLC (2010–2013), Nurulain T. Zaveri, Ph.D., Bifunctional mu-opioid receptor (MOP) / nociceptin opioid receptor (NOP) ligands as non-addicting analgesics, Novel chemical scaffolds for NOP. Staff Scientist at Astraea Therapeutics (2013–present). <https://www.linkedin.com/pub/blair-journigan/1/6ab/483>

I am seeking a tenure-track assistant professor position at a Ph.D.-granting research university. My research interests include developing small molecules for nicotine and methamphetamine addiction, and translational medicinal chemistry approaches for the treatment of pain. I am well-versed in structure- and ligand-based drug design and organic synthesis, from the lead optimization stage to initial preclinical development. Moreover; I have NIH grant-writing experience as a principal investigator, and I mentored interns in the 2012–2014 Summer Research with NIDA program. I also played a major role in setting up the chemistry R&D labs for Astraea Therapeutics. I believe my industrial medicinal chemistry experience, including NIH grant-writing experience, has positioned me well to successfully apply for external funding as a potential assistant professor at a research university.

MEDI, ORGN Divisions

**61. Wilmarie Medina-Ramos**, 315 Ferst Dr., NW, Atlanta, GA 30332-0100. 678-353-7300, [wilmarie.medina@gatech.edu](mailto:wilmarie.medina@gatech.edu); University of Puerto Rico at Mayaguez (B.S., 2009); Georgia Institute of Technology (Ph.D., 2013), Dr. Charles A. Eckert (ChemE) and Dr. Charles L. Liotta (Chem), Water and carbon dioxide for sustainable synthesis and separation of pharmaceutical intermediates; NIH Diversity Postdoctoral Fellow at Georgia Institute of Technology (2013–present), Dr. Mark R. Prausnitz, Development of ionic liquids for topical drug delivery.

I am interested in investigating novel applications of ionic liquids in the areas of drug delivery, catalysis, and separations. I anticipate that many undergraduate and graduate students from chemistry and chemical engineering will be excited to be involved in such research. I believe my postdoctoral research work combined with my Ph.D. research experience, along with my commitment to teaching and professional development, will make me a strong candidate for faculty positions. I want to be able to share my passion for both teaching and research with my students, colleagues, and collaborators at a comprehensive or doctoral institution.

CATL, Separations, Pharmaceuticals

**63. Amber Thaxton**, 807 W. Longleaf Dr. Unit 60, Auburn AL 36832.

[ANThaxton@gmail.com](mailto:ANThaxton@gmail.com); Clemson University, (B.S., 2008); University of New Orleans (M.S., 2013; Ph.D., 2013), Dr. Mark Trudell, Synthesis of novel azetidines; Auburn University Harrison School of Pharmacy, Drug Discovery and Development Department (2014–present), Dr. C. Randall Clark, Medicinal Chemistry/Drug discovery.

<https://www.linkedin.com/in/amberthaxton>

I am interested in medicinal chemistry, specifically in the discovery and development of small molecule pharmacophores active in the CNS. I have coauthored two organic laboratory manuals for organic I and organic II labs at the University of New Orleans; I have also molded the curriculum for the advanced synthesis course there. As a graduate student, I also authored two NIH-style grants that were funded through different departments at the University of New Orleans. I have mentored numerous undergraduate students in independent lab work and hope to develop young scientists in organic chemistry. I am eager to begin a career as a professor with the ability to develop my own organic/medicinal research.

MEDI, ORGN Divisions

**64. Carlos A. Carrero**, Department of Chemistry, University of Wisconsin–Madison, 1101 University Ave., Madison, WI 53706. [ccarrero@chem.wisc.edu](mailto:ccarrero@chem.wisc.edu); University Los Andes, Venezuela (M.S., 2006); Technical University of Berlin, Germany (Ph.D., magna cum laude, 2012), Dr. Reinhard Schomaeker, Kinetic investigation for the oxidative dehydrogenation of propane; Postdoctoral Researcher at Max Planck Institute for Chemical Energy Conversion, Germany (2013–2014), Dr. Robert Schloegl and Postdoctoral Researcher at University of Wisconsin–Madison (2014–present), Dr. Ive Hermans, Synthesis and characterization of supported metal oxides catalysts for natural gas and biomass upgrading. [www.carloscarrero.weebly.com](http://www.carloscarrero.weebly.com)

My overarching goal is to understand the factors controlling reactivity and selectivity of supported transition metal oxide catalysts in the activation of alkanes. Developing novel designs and synthesis of catalysts for more sustainable routes to important bulk and fine chemicals, as well as linking chemical kinetics with *in situ* and *operando* (optical) spectroscopy drive my research. In parallel, I assisted and prepared courses at TU Berlin and UW–Madison on chemical kinetics and industrial catalysis, respectively. Moreover, I have passionately and dedicatedly mentored several graduate and undergraduate students along my career. Recently, I received the 2015 Mentor Award of the Department of Chemistry at UW–Madison. I'm eager to teach and pivot high-quality research at any recognized four-year college or regional university.

ORGN Division

**65. Jean-Luc Anoklase Ayitou**, Department of Chemistry and Biochemistry, University of California, Los Angeles, 607 Charles E. Young Dr. East, Los Angeles, CA 90095. [aja@chem.ucla.edu](mailto:aja@chem.ucla.edu); North Dakota State University (B.S., 2008; Ph.D., 2013), Dr. Sivaguru Jayaraman, Light-induced stereospecific photochemical transformations involving axially chiral acrylanilides and oxoamides; University of California President's Postdoctoral Fellowship (2013–present); UNCF-Merck Postdoctoral Fellowship (2013–present), Dr. Miguel Garcia-Garibay, Using light to modulate the rotational dynamics of photoresponsive crystalline molecular rotors.

I am interested in using two-photon irradiation techniques for two-dimensional photo-assisted release of bioactive molecules from lipids bilayers media; another direction in this regard would be light driven organo-photocatalysis in aqueous media. I plan to integrate in this research undergraduate and graduate students in chemistry and biochemistry. I assisted in organic chemistry courses; I want to develop a new interdisciplinary course that will cover organic chemistry and photochemical biology or medicinal photochemistry. I want to teach and direct the research of graduate students at a research university.

ORGN, Photochemistry

**66. Matthew B. Baker**, MERLN Institute for Technology-Inspired Regenerative Medicine; Faculty of Health, Medicine and Life Sciences; Maastricht University; Universiteitssingel 40, 6299 ER Maastricht, the Netherlands. +31652584482, [m.baker@maastrichtuniversity.nl](mailto:m.baker@maastrichtuniversity.nl); Clemson University (B.S., 2006); University of Florida (Ph.D., 2012), Dr. Ronald K. Castellano (Org Chem), Molecular multifunctionalization of electronically coupled lactones; Postdoctoral studies at Eindhoven University of Technology (2012–2015), Prof. Dr. E. W. Meijer, Aqueous self-assembly of supramolecular polymers; Postdoctoral Researcher at Maastricht University (2015–present), Prof. Dr. C. A. von Blitterswijk, Dynamic materials for regenerative medicine.

I am interested in utilizing dynamic reactions and interactions to create the next generation of bioactive materials. Of particular interest is unlocking the potential of spatio-temporal reorganization within supramolecular materials as a novel mechanism of materials activation or signaling. Toward this goal, I hope to interest a wide range of students and scientists, from synthetic organic to cell biology. I have experience in both mentoring students in scientific (four master's and seven bachelor's degree students) endeavors and classroom instruction (small lecture, tutoring, problem-based learning, practical courses). I aim to create a manageable-size international and interdisciplinary group within a comprehensive institution near a major research facility, or a medium-to-large Ph.D.-granting institution.

ORGN, POLY Divisions

**68. Daniel T. Cohen**, Department of Chemistry, Massachusetts Institute of Technology, 77 Massachusetts Ave., 18-325, Cambridge, MA 02139. 917-613-7527, [dtc613@mit.edu](mailto:dtc613@mit.edu); State University of New York at New Paltz (B.A., Salutatorian, 2007); Northwestern University (Ph.D., Excellence in Graduate Research Award, 2013), Dr. Karl A. Scheidt, Annulation strategies in N-heterocyclic carbene-catalysis; NIH Postdoctoral Fellow at MIT (2013–present), Dr. Steve L. Buchwald/Bradley L. Pentelute, Palladium catalyzed cross-coupling and new bioconjugation methods.

I am interested in developing new fundamental and cutting-edge methods that are on the cusp of chemistry and biochemistry and that will have immediate application for both science and human health. I see a future for myself as a professor at a Ph.D.-granting institution. In this way alone will I be able to pursue my own research interests, while simultaneously teaching and mentoring young students on the use of different modes of catalysis and their potential high-impact applications.

ORGN, Biochem

**69. Xin Cui**, Department of Chemistry, University of South Florida, 4202 East Fowler Ave., Tampa, FL 33620. [xincui@usf.edu](mailto:xincui@usf.edu); University of Science and Technology of China (B.S., 2003; Ph.D., 2008), Dr. Qing-Xiang Guo, Phosphine-free ligands facilitated palladium-catalyzed organic reactions; Postdoctoral Researcher at University of South Florida (2008–2012), Dr. Peter Zhang, Co(II)-catalyzed stereoselective radical cyclization reactions; Research Assistant Professor at University of South Florida (2012–2015), Dr. Peter Zhang, Metalloradical catalysis. <http://chemistry.usf.edu/faculty/xcui/>.

My future research interests will focus on synthetic organic chemistry, with an emphasis on eco-friendly transition-metal catalysis and synthetically useful radical processes, as well as their applications in medicinal chemistry. I hope to interest students in organic chemistry and medicinal chemistry in this research. I taught introductory chemistry and assisted in organic and inorganic chemistry lectures and labs. I plan to teach and establish a nationally recognized research program in the field of synthetic organic chemistry at a four-year college or a university with both graduate and undergraduate programs.

ORGN Division

**70. Colin Yu-hong Lam**, University of California, Los Angeles Department of Chemistry and Biochemistry, 607 Charles E. Young Dr. E., Box 951569, Los Angeles, CA 90095-1569. [lam@chem.ucla.edu](mailto:lam@chem.ucla.edu); University of Oxford (M.Chem., 2005; Ph.D., 2009), Prof. Veronique Gouverneur, Synthetic and computational investigations into the “Cycloaddition-fluorination strategy for the synthesis of monofluorinated carbo- and heterocycles;” Postdoctoral Research Fellow (2009–present), Prof. Kendall Houk, Computational design of organic and enzyme catalysts.

<http://www.linkedin.com/in/colinyhla>

I have specialized training in both experimental and computational organic chemistry. At UCLA I have lectured five sophomore organic chemistry courses with enthusiastic review from students and faculty. I obtained a UCLA Chancellor's Award for my postdoctoral research. I am well-equipped to teach general chemistry as well as organic chemistry at both introductory and advanced undergraduate levels, but I will also be glad to use my expertise in helping to develop new courses in physical organic chemistry and computational chemistry. I am interested in directing research in the discovery of stereoselective organic reactions and catalyst design by combining insights from both experiments and computational modeling. I wish to teach in doctoral, comprehensive, or four-year undergraduate institutions.

ORGN, COMP Divisions

**71. Kai Lang**, Department of Chemistry, University of South Florida, 4202 E. Fowler Ave., CHE 205 Tampa, FL 33620. [kailang2012@gmail.com<mailto:kailang2012@gmail.com>](mailto:kailang2012@gmail.com); Xiamen University, China (M.S., 2005); University of Florida, (Ph.D., 2011), Prof. Sukwon Hong, Development of bifunctional Lewis acid catalysts for asymmetric Henry reactions; Industrial Postdoctoral Associate at Princeton University (2011–2012), Prof. David W. C. MacMillan, Library synthesis of medicinal molecules; Postdoctoral Associate at University of South Florida (2013–present), Prof. X. Peter Zhang, A: Modular construction of bridged D2-symmetric chiral amidoporphyrins for Co(II)-based metalloradical catalysis: Significant enhancement in reactivity and stereoselectivity for asymmetric radical cyclopropanation and aziridination; B: Bridged D2-symmetric chiral amidoporphyrins for Co(II)-based metalloradical catalysis: Size-tunable cavities for enantio-switchable, intramolecular 1,5-C(sp<sub>3</sub>)–H radical amination; C: Intramolecular 1,5-C(sp<sub>3</sub>)–H radical amination via Co(II)-based metalloradical catalysis for five-membered cyclic sulfamides; D (ongoing): 1-electron redox from  $\alpha$ -Co(III)-aminyl radical to aminyl radical Co(II) complex: Highly asymmetric and regio-switchable radical cyclization (5-exo-trig vs 6-endo-trig) via Co(II)-based metalloradical catalysis for the synthesis of oxazolidinone derivatives.

<http://chemistry.usf.edu/faculty/zhang/>

I'm interested in concept-directed novel and unique catalytic system development for new reactivities. I will focus on catalysis and synthesis to develop unique catalysts for unsolved challenges and will build large catalyst libraries to explore new reactions and use the tools of physical chemistry to explore different mechanisms. For most of my Ph.D., I was a teaching assistant in organic lab; my research topics generally required a lot of synthetic experience. I am capable of teaching organic chemistry, physical organic chemistry, organometallic chemistry. One goal is to train my Ph.D. students the best in synthetic chemistry. I would like to teach and direct the research for Ph.D. students in synthetic organic chemistry at a four-year national, comprehensive university, guiding them to identify and solve the important research targets and unknown challenges efficiently and creatively.

ORGN Division

**72. Matthew G. Lauer**, Department of Chemistry, The University of Alabama, Tuscaloosa, AL 35487-0336. [mglauer@bama.ua.edu](mailto:mglauer@bama.ua.edu); Northern Kentucky University (B.S., 2007); The Ohio State University (Ph.D., 2013), Dr. James P. Stambuli, I. Progress toward leiodelide A, II. Palladium-catalyzed reactions of enol ethers; Postdoctoral Research at The University of Alabama (2013–present), Dr. Kevin H. Shaughnessy, Palladium-catalyzed cross-coupling reactions utilizing electron-rich phosphine ligands, reaction development, and mechanistic insights.

I am interested in catalysis and the development of new methods for organic synthesis. Catalysis and new reaction development are crucial for the minimization of the environmental impact and cost of organic synthesis. The research would involve students learning a variety of skills including air-free synthesis techniques, multistep organic synthesis, inorganic and organometallic synthesis, and techniques for compound characterization. I would like to teach sophomore organic chemistry along with advanced organic chemistry courses including spectroscopy, organometallic chemistry, or both. I would also be willing and able to teach general or inorganic chemistry, or both, if needed. I would like to teach and conduct research at a four-year college or university with undergraduate or graduate (M.S. degree or Ph.D.) students or both.

ORGN, INOR Divisions

**73. Dan Lehnher**, 319 Baker Laboratory, Department of Chemistry and Chemical Biology, Cornell University, Ithaca, NY 14853. 617-642-3785, [lehnher@cornell.edu](mailto:lehnher@cornell.edu); University of Victoria (B.Sc., Chem and Math, 2005); University of Alberta (Ph.D., 2010), Dr. Rik R. Tykwiński (Chem) and Dr. Frank A. Hegmann (Physics), Pentacene-based oligomers and polymers: Synthesis and properties; NSERC Postdoctoral Fellow at Harvard University (2010–2014), Dr. Eric N. Jacobsen, Mechanistic studies of organocatalytic asymmetric reactions (experimental and computational); Postdoctoral Associate at Cornell University (2014–present), Dr. William R. Dichtel, Synthetic strategies to carbon-rich architectures and their polyhalogenated analogs: Ortho-arylene foldamers, non-planar aromatics, and graphene nanoribbons. [www.danlehnher.com](http://www.danlehnher.com)

My research interests are broadly described as the synergic application of supramolecular chemistry and computational chemistry toward designing, synthesizing, and studying novel architectures to solve problems related to energy conversion, charge transport, energy storage, and catalysis. I am particularly interested in studying and using noncovalent interactions as key design elements in various settings ranging from sensing to catalysis to materials for a sustainable future, and beyond. I am seeking a tenure-track faculty position where I can build an interdisciplinary research program aimed at educating and training both undergraduate and graduate students while solving important societal problems.

ORGN, PMSE, CATL Divisions

**74. Ajay Mallia**, Department of Chemistry, Georgetown University, Washington, DC. [Ajay.Mallia@georgetown.edu](mailto:Ajay.Mallia@georgetown.edu); University of Kerala, India, Photochemical phase transitions in supramolecular liquid crystals; Inoue and JSPS Research Scientist at National Institute of Advanced Industrial Science and Technology, Japan, Photoactive liquid crystals for displays and erasable full color recording; Postdoctoral Fellow at City University of New York, Preparation, assembly, and characterization of metal nanoparticles using liquid crystal as templates; Postdoctoral Fellow at Georgetown University, Characterization of self-assembled nanomaterials; Adjunct Professor at University of Maryland, College Park, MD; University of District of Columbia; Trinity University; Montgomery College (2010–2013); Research Assistant Professor at Georgetown University (2014–present).

I am pursuing professorship at a Ph.D.-granting institution or four-year undergraduate college. My research background is in the area of organic nanomaterials and soft matter. Through my research over the years, I became an expert and developed appreciation for both the theoretical side and practical aspects of nanotechnology. My diverse research interests have been featured in 34 peer-reviewed publications. For the last four years I have also been actively involved in college-level teaching at various Universities around the Washington, DC metropolitan area as an adjunct professor.

ORGN, ENVR Divisions

**75. Kathryn A. McGarry**, Department of Chemistry and Biochemistry, University of San Diego, 5998 Alcala Park, San Diego, CA, 92110. [kamcgarry@sandiego.edu](mailto:kamcgarry@sandiego.edu); University of St. Thomas (B.S., magna cum laude, 2008); University of Minnesota (M.S., 2010; Ph.D., 2013), Dr. Christopher J. Douglas, Synthesis and crystal design of rubrene derivatives for use in organic electronics; Postdoctoral Research Associate at the University of San Diego (2013–present), Dr. Timothy B. Clark, Functionalization of N,N-dimethylbenzylamines towards bioactive compounds.  
[www.linkedin.com/pub/kathryn-mcgarry/35/55b/301/](http://www.linkedin.com/pub/kathryn-mcgarry/35/55b/301/)

My passion for chemistry and teaching has led me to pursue a faculty position at a four-year college or regional comprehensive university in which I can inspire young minds to pursue chemistry through both teaching and research. In graduate school, I gained skills in assessing organic semiconductor targets based on their anticipated electronics and crystal structure. My current work in organometallic methodology has helped me develop my skills in approaching and evaluating new synthetic pathways. My research interests center on using synthetic techniques, NMR spectroscopy, and X-ray crystallography to access and characterize novel molecules with relevant applications. As a teaching assistant in graduate school, I taught organic chemistry laboratory and as a postdoc I have taught both organic chemistry lecture and laboratory. I will teach both of these courses again in fall 2015.

ORGN Division

**76. Sharon R. Neufeldt**, Department of Chemistry and Biochemistry, University of California, Los Angeles, 607 Charles E. Young Dr. East, Box 951569, Los Angeles, CA 90095-1569. [neufeldt@chem.ucla.edu](mailto:neufeldt@chem.ucla.edu); Northern Arizona University (B.S., 2006); University of Michigan (Ph.D., 2013), Dr. Melanie Sanford, Pd-catalyzed ligand-directed C–H and C=C bond functionalization; Postdoctoral Scholar at Caltech (2013), Dr. Rustom Ismagilov, Digital immunoassays and catalyst evolution; Cram Teacher-Scholar at UCLA (2013–present), Dr. Ken Houk, Computational catalyst design and selective C–H functionalization. [www.neufeldt-chemistry.com](http://www.neufeldt-chemistry.com)

My experimental and theoretical training will be combined toward the design and development of new homogeneous catalytic systems for addressing current global challenges, with a particular focus on sustainable energy and materials. I would like to work at an institution where I can train doctoral research students. In addition, I believe that public support of chemistry research will be critical in the coming decades. Consequently, I place high value on building an appreciation for chemistry in future scientists and nonscientists alike, as evidenced by my teaching record.

ORGN Division

**77. Paul W. Peterson**, 202 Pickerington Ridge Dr., Pickerington, OH 43147. 850-570-3674, [peterson.226@osu.edu](mailto:peterson.226@osu.edu); The Ohio State University (B.A., 2002), Florida State University (Ph.D., Org chem, 2013), Dr. Igor V. Alabugin, Orbital crossings: Enabling communication between orthogonal orbitals in cycloaromatization reactions; Postdoctoral Researcher (2013–present), Dr. Christopher M. Hadad, Encapsulation of organophosphonates into designed molecular baskets.

I desire to obtain a faculty position in organic chemistry at a doctoral-granting university and initiate a research laboratory and direct graduate and undergrad researchers. I also have a strong desire to teach organic chemistry. As an adjunct instructor at Florida State University for two semesters, I taught organic chemistry and found it rewarding. I'm interested in pursuing research that may slow the progression of Parkinson's disease by developing antioxidant compounds to selectively lessen the concentration of hydrogen peroxide in the brain, slowing the rate of aggregation of  $\alpha$ -synuclein. I'm skilled in physical organic techniques, such as reaction kinetics, and reaction development. To facilitate transport through the blood brain barrier (BBB), I aim to develop a drug delivery system based on biodegradable polyphosphazene polymers; I synthesized hundreds of them while in industry.

ORGN, MEDI, POLY Divisions

**78. Alfredo Picado**, Department of Chemistry, Clemson University, 310-3 Crawford Ct., Clemson SC, 29631. [apicado@g.clemson.edu](mailto:apicado@g.clemson.edu); Languages: Spanish, English; University of Costa Rica (B.S., 2001); Clemson University (Ph.D., anticipated Dec 2015), Dr. R. Karl Dieter, Studies in organic synthesis with functionalized organocuprates, organozincates, and organolithiums reagents. <https://www.linkedin.com/pub/alfredo-picado/ab/821/1b0>

My work in organic synthesis has consisted of four projects independent of each other. The first one was the regio- and stereoselective allylic substitution reactions on  $\alpha$ -halo- $\beta,\gamma$ -enoates using organocuprates and organozincates. The second project was the study of a new cyclization process leading to bis-heterocyclic spiro 3(2H)-furanones resulting from the reaction of organolithium reagents and enol triflates from  $\beta$ -keto esters. The third one consisted of the development of catalysts for the intermolecular bromoetherification and bromoesterification of alkenes. The final project is the synthesis of aryl difluorovinyl ethers using palladium (0) catalysis and aryl boronic acids. I am looking for a postdoctoral or research position in the areas of organic and inorganic synthesis, organometallics, catalysis, polymer chemistry, or nuclear magnetic resonance (NMR).

ORGN Division

**79. Fang Wang**, Department of Biochemistry, Massachusetts Institute of Technology, 77 Massachusetts Ave., BLDG 18-463, Cambridge, MA 02139. [wangfang@mit.edu](mailto:wangfang@mit.edu); Zhejiang University (B.S., 2006); University of Southern California (Ph.D., 2012), Dr. G. K. Surya Prakash and Dr. George A. Olah, Stereoselective nucleophilic fluoromethylations: From methodology to mechanistic studies; Postdoctoral Associate at University of Southern California (2012–2013), Dr. G. K. Surya Prakash and Dr. George A. Olah, Characterization of key reaction intermediates in fluoroalkylation reactions; Postdoctoral Associate at Massachusetts Institute of Technology (2013–present), Dr. Stephen J. Lippard, Synthetic modeling of catalytic diiron centers of methane monooxygenase.

Fang Wang's research involves organic and bioinorganic chemistry. He has developed a variety of synthetic methods allowing for selective introduction of fluoromethyl moieties into organic molecules. He has also performed exhaustive mechanistic studies on nucleophilic fluoromethylation reactions and on the conformational behavior of cinchona alkaloids using the trifluoromethyl group as a conformational probe. Currently, he is investigating diiron complexes that can be useful as functional models of metalloprotein active sites. He is seeking a position at a research university to conduct work at the interface of organic, inorganic, and biological chemistry.

ORGN, INOR, FLUO Divisions

**80. Rachel E. Whittaker**, Department of Chemistry, University of Texas at Austin, 100 E. 24th St., A5300, Austin, TX 78712. [rwhittaker@utexas.edu](mailto:rwhittaker@utexas.edu); Abilene Christian University (B.S., 2011); University of Texas at Austin (Ph.D., anticipated 2016), Dr. Guangbin Dong, Rhodium (I)-catalyzed decarbonylation reactions utilizing carbon–carbon bond activation. [gbdong.cm.utexas.edu](http://gbdong.cm.utexas.edu)

I would like to create, lead, and maintain a (primarily) undergraduate research group focused on my interests involving bio-inspired ligand synthesis and iron catalysis, combining my background in both organic and biochemistry. I also expect to help students better comprehend chemistry and learn proper research techniques as part of their research experience. Additionally, I am sincerely interested in teaching organic chemistry at a primarily undergraduate institution. Pedagogy is extremely important to me, and I hope to inspire and aid all my students in understanding and succeeding in my classroom. To that end, I plan to have an inclusive classroom focused on achievement and not “weeding students out.” I have assisted lecture classes and labs for seven years and have created and graded quizzes, exams, and recitations; I have also supervised and instructed students.

ORGN, CHED Divisions

**82. Michael C. Young**, Department of Chemistry, University of Texas at Austin, 105 E. 24th St. Stop A53000, Austin, TX 78712-1224. [meyoung@cm.utexas.edu](mailto:meyoung@cm.utexas.edu); Western Carolina University (B.S., 2006; M.S., 2008), Dr. Brian D. Dinkelmeyer, Study of hydrogen-bonded self-assembly for directing topochemical polymerization in the solid state; University of California, Riverside (Ph.D., 2014), Dr. Richard J. Hooley, Study of the self-assembly of metal-organic polyhedral bearing endohedral functional groups for use as biomimetic organocatalysts; Postdoctoral appointment (2014–present), Dr. Guangbin Dong, Studying dynamic covalent and noncovalent strategies for directed C–H functionalization by transition metal catalysts.

<http://scholar.google.com/citations?user=XNI5qjAAAAAJ&hl=en&oi=ao>

I have spent my entire career as a scientist studying noncovalent interactions. This has included rather fundamental research into the nature of self-assembly, as well as more applied chemistry such as designing molecular hosts for biomimetic catalysis, and more recently, applying weak or reversible bonding toward directed C–H activation of unactivated C–H bonds. I would like to establish a research program that takes my training in supramolecular chemistry and applies it toward solving synthetic challenges. I believe the best training can be given in a lab setting, and it is my goal to establish a robust lab at a university with a strong research culture where I can train both graduate (M.S. degree and possibly Ph.D.) students and undergraduates. I also hope that I can use my experience in curriculum development from both the M.S. and Ph.D. level to help strengthen an existing program.

ORGN, INOR Divisions

**83. Takuji Adachi**, Department of Chemistry, New York University, 100 Washington Square East, Room 1001, New York, NY 10003. 512-779-2816, [takuji.adachi@gmail.com](mailto:takuji.adachi@gmail.com); Osaka University (B.Eng., 2006); University of Texas at Austin (Ph.D., 2012), Dr. David. A. Vanden Bout (2010–2012) and Dr. Paul F. Barbara (2007–2010), Understanding of conjugated polymer morphology formation and the structure-property relationships from the single chain level to the bulk level; Postdoctoral Researcher at University of Regensburg (2012–2013), Dr. John M. Lupton, Time-resolved single molecule spectroscopy on conjugated polymers to studying the exciton dynamics; JSPS Postdoctoral Fellow at New York University (2014–present), Dr. Michael D. Ward, Designing new functional materials through hydrogen-bonded host frameworks, Self-assembly of active matters.

I am interested in the collective behaviors of matters. When dyes are assembled in an organized arrangement,  $\pi$  electrons strongly interact and exhibit a new unique character as collective ensembles. When active matters (e.g. self-propelling bimetallic nanorods) interact with each other, they show a unique motion that is different from an individual rod's. It is a universal theme to understand how the interaction of individuals results in a new function that cannot be achieved by individuals (including human society!). I hope to motivate students in chemistry in this research and help them learn how to approach and solve problems. I have mentored undergraduate and high school students through the NSF-REU program and the Catalyst Program sponsored by The Camille and Henry Dreyfus Foundation. I want to teach and direct the research of undergraduate and graduate students at graduate schools.

PHYS Division

**84. Shanadeen C. Begay**, Department of Chemistry, Boston University, 590 Commonwealth Ave., Boston, MA 02215-2521. [sbegay@bu.edu](mailto:sbegay@bu.edu); Northern Arizona University (B.S., B.S.C.S, 2006); Boston University (Ph.D., 2015), Prof. Thomas Keyes, Thermodynamics and structure of methionine enkephalin using the statistical temperature molecular dynamics algorithm; Interphase EDGE Instructor, Massachusetts Institute of Technology (present).

My research interest is to incorporate interdisciplinary approaches in computer science, chemistry, physics, and biology to create new simulation techniques for biologically relevant systems. A career goal is elucidating the cultural and scientific diversity of Native American scientists by incorporating western and indigenous American scientific inquiry using culturally based measures. I aspire to teach and direct the research of undergraduate and graduate students at a research university.

PHYS, COMP Divisions

**85. Beni B. Dangi**, Department of Chemistry, University of Hawaii, 2545 McCarthy Mall, Honolulu, HI 96822. [bdangi@hawaii.edu](mailto:bdangi@hawaii.edu); Tribhuvan University (B.S., 2000; M.S. 2003); University of Nevada, Reno (Ph.D., 2011), Dr. Kent M. Ervin, Development of a quadrupole ion trap / time-of-flight mass spectrometer for mass resolution and ion photophysics; Dr. Dong-Sheng Yang, Photoelectron spectroscopy of lanthanide clusters (2011–2012); Dr. Ralf I. Kaiser, Formations of polycyclic aromatic hydrocarbons and organosilicon compounds (2012–present). <https://www.linkedin.com/pub/beni-dangi/42/955/2a9>

I propose future research plans primarily intended for bachelor's and master's degree-granting institutions. They include building a surface and bulk-free acoustic levitator reaction chamber with spectroscopic probes for surface-gas reactions relevant to planetary and exoplanetary atmospheres and mass spectrometric characterization of medicinal plants. My extensive teaching history includes a wide variety of class settings, student groups, and subject materials ranging from third-grade mathematics to master's degree chemistry and from a private school in Nepal to a public university in the United States. My primary field of teaching has been in chemistry. More specifically, I have taught and mentored students in general, inorganic, physical and analytical chemistry theory and laboratory classes and am looking forward to instructing and developing courses in one or more of these areas.

PHYS, ANYL Divisions

**86. Aram Davtyan**, Department of Chemistry, The University of Chicago, 5735 S. Ellis Ave., SCL 131, Chicago, IL 60637. [adavtyan@uchicago.edu](mailto:adavtyan@uchicago.edu), [davtyan.aram@gmail.com](mailto:davtyan.aram@gmail.com); Yerevan State University (B.A., Physics, 2007); University of North Carolina (M.S., 2010); University of Maryland (Ph.D., 2013), Dr. Gargein A. Papoian, Computer simulation of protein folding; Postdoctoral Research Fellowship at University of Maryland (2013), Dr. Gargein A. Papoian, Protein-DNA interactions; Postdoctoral Research Fellowship at the University of Chicago (2013–present), Dr. Gregory A. Voth, Multi-scale molecular modeling. [www.adavtyan.com](http://www.adavtyan.com)

I am interested in novel methods development for computational molecular modeling and application of those methods to a wide variety of problems from condense phase systems to macromolecular complexes and assemblies. One particular problem I got recently interested in is the function of disintegrins, which are small proteins found in viper venom and are potent inhibitors of plate aggregation and cell adhesion. Learning more about these small but functionally complex molecules may help in developing new treatments for some types of cancer. My goal is to find a faculty position at a major research institution where I will have the opportunity to interest students and as well as my colleagues in research I will be doing. I am planning to collaborate with various experimental, theoretical, and computational groups both inside and outside of my institution.

PHYS, COMP Divisions

**87. Puja Goyal**, Department of Chemistry, University of Illinois at Urbana–Champaign, A412 Chemical and Life Sciences Laboratory, 600 South Mathews Ave., Urbana, IL 61801-3364. 217-778-4050, [goyalp@illinois.edu](mailto:goyalp@illinois.edu); Presidency College, Calcutta, India (B.S., Honors, 2006); Indian Institute of Technology, Kharagpur, India (M.S., 2008); University of Wisconsin-Madison (Ph.D., 2013), Dr. Qiang Cui, Hybrid quantum mechanical/molecular mechanical (QM/MM) studies of biomolecular proton pumps; Postdoctoral Researcher at the University of Illinois at Urbana–Champaign (2013–present), Dr. Sharon Hammes-Schiffer, Hybrid quantum mechanical/molecular mechanical (QM/MM) nonadiabatic dynamics studies of photoinduced proton-coupled electron transfer in solution.

I am interested in theoretical studies of energy conversion, both in biological systems and in inorganic materials. Crucial life processes like photosynthesis and aerobic respiration depend on sunlight and molecular oxygen as sources of energy for synthesizing carbohydrates as food and producing energy for metabolic processes, respectively. With the looming energy crisis, mechanistic studies of energy conversion are becoming indispensable, since they can guide the design of more efficient artificial solar energy conversion devices. I hope to teach graduate students at a Ph.D.-granting institution to use the tools of theoretical chemistry, including quantum mechanics, molecular mechanics, and quantum dynamics, to carry out research in this area. I currently mentor a first-year graduate student in our group; this experience will equip me with the skills needed to train graduate students.

PHYS Division

**88. Camiel H. C. Janssen**, Dept. of Phys. Chem., National Autonomous University of Mexico, Mexico City. [engineerjanssen@gmail.com](mailto:engineerjanssen@gmail.com); University of Groningen (M.S., 2008), Dr. F. Picchioni (Chem Eng), Optimization of thermoplastic vulcanizates properties; Delft University of Technology (Ph.D., 2013), Dr. M. Kobrak (Phys Chem) and Dr. G. J. Witkamp (Chem Eng), The use of ionic liquids for sea mining and waste water purification; Postdoctoral Researcher at National Autonomous University of Mexico, Mexico City (2014–present),

My interests lie in using ionic liquids for various water applications. I propose to develop a continuous process to purify various types of water streams using ionic liquids. I hope to interest students in chem eng and phys chem in this research. I was a teaching assistant in various chem eng courses. My portfolio of courses currently holds transport phenomena, thermodynamics, separation processes, polymer processing, and products and product engineering.

PHYS Division

**89. Dr. Dong Li**, Department of Physics, Carnegie Mellon University, 5000 Forbes Ave., Pittsburgh, PA, 15213. [dongli@andrew.cmu.edu](mailto:dongli@andrew.cmu.edu); Shandong University (B.S., 2006); Lehigh University (M.S., 2009; Ph.D., 2012), Dr. Tianbo Liu, Self-assembly behaviors of macroions in dilute solution; Postdoctoral Research Associate at Carnegie Mellon University (2012–present), Dr. Alex Evilevitch, Physical mechanisms that regulate viral replication.

My research interests lie at the intersection of biophysical chemistry and chemical biology. I strive to understand how physical molecular interactions (electrostatic interactions, hydration forces, van der Waals forces, etc.) work together in harmony to regulate biological molecules and their assemblies to achieve complex functions. Specifically, a human herpes simplex virus-1 (HSV-1) will be chosen as the primary model system. My ultimate research goal is to understand the functions of HSV-1 tegument/lipid proteins in viral replication steps and their potential involvement in human neuron degeneration diseases, such as Alzheimer’s disease. I am capable to teach both undergraduate (physical chemistry and biochemistry) and graduate (physical virology) level courses. I prefer to teach and do research in a research-oriented university.

BIOL, PHYS, ANYL Divisions

**90. Jessica W. Lu**, Laboratory of Physical Chemistry, ETH Zürich, Vladimir-Prelog-Weg 2, CH-8093, Zurich, Switzerland. [JessicaWLu@gmail.com](mailto:JessicaWLu@gmail.com); University of California, Berkeley (B.S., 2004); Virginia Tech (Ph.D., 2011), Dr. John Morris, Dynamics of atmospherically important triatomics in collisions with model organic surfaces; UBC Department of Chemistry (2012–2013); Marie Curie Fellow at ETH Zürich (2013–present), Dr. Ruth Signorell, Characterizing the phase transitions of single organic aerosols in an optical trap. <https://aerosolopticaltrap.wordpress.com/>

My research goal is to build an understanding of the environmental fate and transformation of organic substances and biological materials using both a surface chemistry and an aerosol science approach. I hope to interest students in physical and analytical chemistry, and relevant environmental applications, in my research. I assisted in general, analytical, and physical chemistry lab and lecture courses at both Virginia Tech and ETH Zürich, including a special investigative lab course on single molecule spectroscopy at ETH Zürich. I want to teach and direct the research of undergraduate and master's degree students at a four-year college or regional comprehensive university.

ANYL, PHYS, ENVR Divisons

**91. Tomoyasu Mani**, Chemistry Department, Brookhaven National Laboratory, Bldg. 555, Upton, NY 11973. [tmani@bnl.gov](mailto:tmani@bnl.gov); University of Texas at Dallas (B.S., 2009), Dr. A. Dean Sherry; University of Pennsylvania (Ph.D., 2013), Dr. Sergei A. Vinogradov, Magnetic field effects on molecular emissivity in solutions; Goldhaber Distinguished Fellow at Brookhaven National Laboratory (2014–present), Dr. John R. Miller, Energy and charge transport in conjugated molecules. [www.tomoyasumani.com](http://www.tomoyasumani.com)

Control of spin, charge, and electronic excited state dynamics in molecules is crucial for using these states in applications such as biomedical imaging and alternative energy. Significant advancement in understanding these dynamics can come from carefully designed molecules. Leveraging my expertise in synthetic chemistry and spectroscopies, my program aims to make contributions to understanding how we can control electronic states and spin dynamics, with a special focus on radical pairs and triplet excited states. My research groups' approach is a seamless transition between synthetic and physical chemistry, which provides us insights into structure–function relationships that will advance the development of new technologies. I would like to teach and direct a research program at a graduate-level research institution.

PHYS, ANYL Divisions

**93. Adam William Pelzer**, 1108 E. 53rd St. #3, Chicago, IL 60615. 773-209-5501, [adam.pelzer@northwestern.edu](mailto:adam.pelzer@northwestern.edu); Lawrence University, Appleton, WI (B.A., Physics, Math, 2002); Northwestern University (Ph.D., NSF IGERT Fellowship, 2009), Professor Tamar Seideman, Optimal control theory applied to rotational control in dissipative media and torsional control with polarization shaped pulses; Postdoctoral Fellow at Argonne National Laboratory, (2010–2012), Professor Koblar Alan Jackson (Physics, Central Michigan University) and Dr. Julius Jellinek, (Chem Sci and Eng, Argonne National Laboratory), Understanding the role of palladium clusters as catalysts for the formation of hydrogen peroxide from hydrogen and oxygen using density functional theory; NSF SEES Postdoctoral Fellow at Northwestern University, (June 2012–present), Professor Linda Broadbelt (Chem Eng), Application of quantum chemistry and microkinetic modeling to lignin acidolysis reactions in order understand depolymerization mechanisms and optimize process conditions.

My primary research interests are in kinetic modeling of complex reactions, nanoparticle properties and catalysis, and quantum chemistry, particularly as applied to green chemistry and sustainable technology. My other research interests include quantum dynamics in dissipative media and life-cycle assessment of biomass treatment processes. I have worked with a number of undergraduate researchers and would very much like to continue this sort of teaching/research interaction in the future. I have practical laboratory experience from two years in the chemical industry as well as laboratory teaching experience as an adjunct professor. My teaching interests beyond physical chemistry are biofuel and fossil fuel chemistry and the philosophy of science. My goal is a tenure-track position at a liberal arts college where I can teach courses for nonmajors in addition to standard chemistry courses.

PHYS, COMP, ENVR Divisions

**95. Rebecca Quardokus**, 325 Broadway, MS 647, Boulder, CO 80305. 303-497-5991, 269-449-2024, [rebecca.guardokus@nist.gov](mailto:rebecca.guardokus@nist.gov), [rquardokus@gmail.com](mailto:rquardokus@gmail.com); Grand Valley State University, (B.S., Honors College, 2007); University of Notre Dame (Ph.D., 2013), Prof. S. Alex Kandel, Scanning tunneling microscopy observations of neutral and mixed-valence organometallic complexes; National Research Council Postdoctoral Fellowship at National Institute of Standards and Technology (2014–present), Dr. Frank DelRio (Mechanical Eng), Scanning probe microscopy studies of low-dimensional materials for use in next-generation electronics. [rebecca.guardokus.com](http://rebecca.guardokus.com)

My research will focus on developing hierarchical designs of self-assembled molecules on one- and two-dimensional materials for use in next-generation motors and electronics. Scanning tunneling microscopy will be the primary tool used to characterize these materials. Supporting characterization techniques include AFM, XPS, and FTIR. I would be excited to collaborate with theoretical, organic, and inorganic chemists. Chemistry and physics students interested in fundamental molecular properties with an application in molecularly based devices would be a great fit for my group. I have experience mentoring both students and teachers on independent research projects as well as developing and implementing K–12 outreach programs. I want to start a research group at a university with terminal doctoral degrees, a focus on undergraduate teaching, and an emphasis on community outreach.

PHYS, COLL Divisions

**96. Dr. Casey M. Schwarz**, 4111 Libra Dr., Physical Sciences Bld. Rm. 255, Orlando, FL 32816-2366. 561-213-8850, [casey\\_schwarz@knights.ucf.edu](mailto:casey_schwarz@knights.ucf.edu); University of Central Florida (B.S., Physics, 2006; M.S., Physics, 2009; Ph.D., Physics, 2012), Dr. Chernyak and Dr. Flitsiyan, Radiation effects in wide band gap semiconductor transport properties; Postdoctoral Researcher at University of Central Florida Chemistry Department (2013–present), Dr. Stephen Kuebler and Dr. Kathleen Richardson, Processing and properties of novel chalcogenide glasses for optical applications. [Npm.creol.ucf.edu](http://Npm.creol.ucf.edu)

My goals are teaching, mentoring, and maintaining an active chemistry/material science research lab at a four-year college or university. I will use spectroscopic methods to develop fundamental understanding of how bonding and structure in chalcogenide glasses is affected by stoichiometry, thermal processing, photo-patterning, and post-exposure chemical etching, and of how these may be used to control the resulting optical, thermal, and mechanical properties. Characterization techniques will include optical spectroscopy, electron microscopy, cathodoluminescence, Raman spectroscopy, and surface analytical techniques. My lab would include students from various disciplines and prepare them for academia or industry. I have teaching experience in physics and chemistry and research experience in the fields of physics, chemistry, material science, and optics as well as an outreach background.

PHYS, INOR Divisions

**97. Liang Shi**, Department of Chemistry, Massachusetts Institute of Technology, 77 Massachusetts Ave., Cambridge, MA 02139. [lshi22@mit.edu](mailto:lshi22@mit.edu); University of Science and Technology of China (B.S., 2009); University of Wisconsin-Madison (Ph.D., 2014), Dr. James L. Skinner, Theoretical vibrational spectroscopy of ice; Postdoctoral Scholar at Massachusetts Institute of Technology (2014–present), Dr. Adam P. Willard, Exciton dynamics in disordered molecular assemblies.

I am seeking a position at a Ph.D.-granting institution, where I plan to develop and apply theoretical and computational methods to understand the structure and dynamics of condensed phase systems, with the emphasis on heterogeneous systems for potential energy applications (e.g., bulk-heterojunction organic solar cells). The intrinsic complexity of these systems calls for multi-scale and multi-level modeling techniques to facilitate the understanding and further development of experimental works (e.g., spectroscopic characterization), so advancing such techniques will be my research focus. Regarding teaching, I hope I will have a chance to improve chemistry learning experiences for nonscience majors with the help of computers (e.g., modeling, visualization).

PHYS, COMP, ENFL Divisions

**98. Pooja Tyagi**, Department of Chemistry, University of Illinois at Urbana–Champaign, 600 S. Matthews Ave., Urbana, IL 61801. [tyagi@illinois.edu](mailto:tyagi@illinois.edu); University of Delhi (B.S., Physics, Hons., 2005); Jawaharlal Nehru University (M.S., Physics, 2007); McGill University (Ph.D., Chemical Physics, 2013), Dr. Patanjali Kambhampati, Surface effects on charge carrier dynamics in semiconductor quantum dots; Massachusetts Institute of Technology (2013–2014), Dr. William Tisdale and Dr. Keith Nelson; Postdoctoral studies at University of Illinois at Urbana–Champaign (2014–present), Dr. Prashant Jain, Electronic and transport properties of perovskite nano- and microstructures.

<https://www.linkedin.com/pub/pooja-tyagi/1b/4a8/765>

I want to use low-temperature ultrafast microscopy and spectroscopy to investigate and control charge carrier dynamics in nanoscale and bulk semiconductor systems. My Ph.D. work involved using ultrafast spectroscopy to study exciton-exciton and exciton-phonon interactions in CdSe quantum dots. I also built a two-color, 2-D spectroscopy setup to study multiexcitonic interactions in nanoscale systems. In my postdoctoral research, I have been investigating the transport and electronic properties of organohalide perovskites using low-temperature spectroscopy and fluorescence and electron microscopy, among other techniques. As a postdoc, I have also mentored graduate and undergraduate students. I intend to combine my Ph.D. and postdoctoral experience, both in terms of techniques and materials, to set up a lab at a research-intensive university.

PHYS Division

**100. Manos Gkikas**, Department of Chemical Engineering, Massachusetts Institute of Technology, 77 Massachusetts St., Cambridge, MA 02135. [gkikas@mit.edu](mailto:gkikas@mit.edu); University of Athens (B.S., 2006; M.S., 2008; Ph.D., 2012), Dr. Nikos Hadjichristidis and Dr. Hermis Iatrou, Amphiphilic polypeptides: Synthesis, characterization and self-assembly in aqueous solutions; Visiting Researcher at University at Buffalo (2010), Dr. Alexandridis (ChemE) and Helsinki University of Technology (2011), Drs. Ruokolainen and Ikkala (Phys); Research Scholar at Massachusetts Institute of Technology (2012–present), Dr. Bradley D. Olsen (ChemE), Biorelated polymers and applications.

I am interested in the synthesis and design of materials for targeted hemostasis, tissue adhesion, chemical sensors and responsive materials against warfare agents, metal and graphene nanocomposites and polypeptide gels for bioapplications. I hope to interest students in chemistry, chemical engineering, and material science in this research. I assisted in organic, polymer chemistry, and chemical engineering courses and led collaborative projects between MIT and MGH as well as MIT and DTRA (army), designing targeted responsive materials. I want to teach and direct the research of undergraduate and graduate students at a four-year college.

PMSE, POLY, COLL Divisions

**101. Peng He**, Peng He, Ph.D., University of Michigan, Ann Arbor, MI 48109, USA, 919-744-1464, [sjtuhepeng@hotmail.com](mailto:sjtuhepeng@hotmail.com); Shanghai

Jiao Tong University (B.E., 2002); The University of Southern Mississippi (M.S., 2005); North Carolina State University (Ph.D., 2009), Dr. Lin He, RAFT polymerization in amplification-by-polymerization for DNA biosensing; Postdoctoral Researcher at Cornell University (2009–2011), Dr. Antje J. Baeumner and Dr. David Erickson, Electrochemical biosensors in multi-channel microfluidics and autonomous microfluidics.

I am interested in polymerization and electrochemistry in biosensing, DNA-polymer bioconjugates and phospholipid-nanomaterial bioconjugates, and polymer conformation. I have teaching experience in general, analytical, and organic chemistry labs and have supervised undergraduates in NSF AGEP and REU programs. I want to teach and direct research in a Tier 1 University.

PMSE, ANYL, COLL, POLY Divisions

**102. Robert J. Hickey**, Department of Chemistry, University of Minnesota, 139 Smith Hall, N-11, 207 Pleasant St. SE, Minneapolis, MN 55455. [rjhickey@umn.com](mailto:rjhickey@umn.com); Widener University (B.S., 2007); University of Pennsylvania (Ph.D., 2013); Prof. So-Jung Park, Solution-phase assembly of nanoparticles and block copolymers: Controlling the morphology from micelles to vesicles; Prof. Tim Lodge (Chem & CEMS) and Prof. Frank Bates (CEMS) (2013–present), Researching the phase behavior of polymer blended systems containing block polymers and salts.

My proposed independent research as a prospective faculty member focuses on the synthesis and characterization of ordered hybrid inorganic/polymeric materials with properties relevant to optical, magnetic, electronic, and catalytic technologies. The underlying theme of this research proposal is to use a combination of inorganic, materials, and polymer chemistry to create hierarchical, supramolecular structures by controlling the bottom-up assembly of nanocrystals and polymers. I am looking for an R-1 academic research institution where I will be able to start a research laboratory, mentor graduate students, and teach chemistry.

PMSE, POLY Divisions

**103. Lauren D. Zarzar**, MIT, 500 Technology Sq., Bldg. NE-47 Rm. 485, Cambridge, MA 02139. [zarzar@mit.edu](mailto:zarzar@mit.edu); University of Pennsylvania (B.A., Chem from the College; B.S., Econ, Wharton, 2008); Harvard University (Ph.D., 2013), Prof. Joanna Aizenberg, Dynamic hybrid materials: Hydrogel actuators and catalytic microsystems; Postdoctoral associate at MIT (2013–present), Prof. Timothy Swager, Dynamically reconfigurable complex emulsions. <http://www.mit.edu/~zarzar/>

I am interested in researching: 1) chemo-mechanical pathways useful for the development of dynamically responsive materials, including reconfigurable complex emulsions and designer hydrogels with programmable nucleic acid and peptide assemblies; 2) direct-write laser lithography strategies applicable to a broad range of inorganic materials facilitated by application of solvothermal voxels. I have experience as a teaching assistant for introductory and advanced physical chemistry and materials chemistry. I would like to direct a laboratory and teach at a doctorate-granting research university within either a chemistry department or a materials science and engineering department. Notable awards include the NSF Graduate Research Fellowship, NDSEG Fellowship, ACS AkzoNobel Student Award in Applied Polymer Science, and the NSF East Asia and Pacific Summer Institute Fellowship.

PMSE, COLL Divisions

**105. James S. Baker**, 5301 Stone Ridge Cir., Berea, OH, 44017.

[jsb39@zips.uakron.edu](mailto:jsb39@zips.uakron.edu); University of Wisconsin–Stevens Point (B.S., 2004); The University of Akron (Ph.D., Polymer Sci, Ticona excellence in engineering plastics award–2007, Eastman Chemical Company fellowship–2007, Maurice Morton award–2005, 2011), Dr. Coleen Pugh, Synthesis of functional vinylbenzocyclobutenes for use as cross-linkers in the preparation of amphiphilic nanoparticles; NASA Postdoctoral Program Fellowship at Glenn Research Center (2012–2015), Dr. Michael Meador, Covalent cross-linking of carbon nanotube materials for improved tensile properties.

My research interests include monomer and polymer synthesis and the preparation of high-performance materials for engineering applications. I am seeking opportunities at institutions where I would teach courses in polymer science and general or organic chemistry at the undergraduate level or above. In addition, I would like to be at an institution where I would direct students in independent research. My experience in both government and academic settings means I can offer a unique perspective both to a research program and when advising students on their possible career paths. Given the ubiquity of polymeric materials today, I believe the option of courses in polymer science is beneficial for chemistry students beginning at the undergraduate level.

POLY, PMSE Divisions

**106. Jonathan C. Barnes**, Howard Hughes Medical Institute Postdoctoral Fellow (LSRF), Dept. of Chemistry, Massachusetts Institute of Technology, 77 Mass. Ave., Cambridge, MA 02139. [jc@mit.edu](mailto:jc@mit.edu); University of Kentucky (B.S., 2004; M.S., 2006); Synedgen Chemist (2007–2010); Northwestern University (Ph.D., 2014), Professor Fraser Stoddart, Investigated molecular recognition processes of nanometer-scale organic molecules.

I am interested in research at the interface among chemistry, materials science, and biology, building from the concepts of self-assembly and supramolecular chemistry. As synthetic chemists, we can prepare nanometer-sized building blocks that self-assemble into a library of higher-ordered architectures that can be used in medicine, artificial biological systems, and energy storage. I have lectured graduate-level physical organic chemistry courses at MIT, and my overall goal is to obtain a faculty position at an R-1 institution so I can carry out cutting-edge research while mentoring and preparing the next generation of scientific thinkers.

POLY, ORGN Divisions

**108. Elizabeth Elacqua**, Molecular Design Institute and Department of Chemistry, New York University, New York, NY, 10003. [elizabeth.elacqua@nuyu.edu](mailto:elizabeth.elacqua@nuyu.edu); LeMoyne College (B.S., Bio and Chem, 2006); University of Iowa (Ph.D., 2012), Dr. Leonard R. MacGillivray, Supramolecular chemistry of molecular concepts: Tautomers, chirality, protecting groups, trisubstituted olefins, cyclophanes, and their impact on the organic solid state; Postdoctoral Research Associate at New York University (2013–present), Dr. Marcus Weck, Directional self-assembly of semiconductor polymers and foldamers; Self-assembly of colloidal particles; Dendrimers as modules for biomedical scaffolds.

<https://www.linkedin.com/pub/elizabeth-elacqua/28/847/21a>

I am interested in directional self-assembly using small molecules, polymers, and/or colloids as building blocks. While multiple applications rely on engineering molecules to adopt a precise location or assume particular folded conformation within an architecture, the use of orthogonal supramolecular interactions (e.g., hydrogen bonding, metal coordination) to attain such materials remains largely underdeveloped. Such interactions can be exploited to achieve dynamic and responsive materials that function in areas from catalysis and photonics to drug delivery and biomedicine. As the complexity of ‘desired’ materials rises, using directional self-assembly to prepare materials from relatively simple building blocks can lead to materials with novel properties. I would like to teach and supervise research of graduate students at either the doctoral or comprehensive university level.

POLY, COLL Divisions

**110. Mohiuddin Quadir**, Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA. [maquadir@mit.edu](mailto:maquadir@mit.edu); Freie University of Berlin, Germany (Ph.D., 2010), Dr. Rainer Haag (Org Polymer Chem), Dendritic polymers for nanoscale delivery of metal ion and drugs; Postdoctoral Training at MIT (2011–present), Dr. Paula Hammond, with Misrock Fellowship (Cancer Nanotechnology) 2015 and Novartis Postdoctoral Grant.

The overarching goal of my research is to design high-performance materials using supramolecular, synthetic, and polymer chemistry protocol. These systems will be engineered to demonstrate programmed self-assembly, conformational dynamics, and biomimetic functional properties. I have undergone the MIT certified teachers' training program, and I hope to attract students toward learning chemistry. I am interested in operating at the interface of research and teaching.

POLY, PMSE, COLL Divisions

**AEI Recruiters' Evaluation Survey**  
**AEI Poster Session, ACS National Meeting, Boston, MA, August 2015**

*Please take a few moments to complete the survey below. Your answers will help us evaluate the Academic Employment Initiative (AEI) program and improve it for future participants. NOTE: This information will be treated with confidentiality.*

1. Please indicate the highest degree your institution offers in chemistry.

PhD       MS/MA       BS/BA       AS

2a. Please indicate the primary area in which you are recruiting?

teaching       research       teaching & research       other

2b. Regarding research needs, in which specific research area were you recruiting?

3. Did you identify any candidates of interest?

Yes       No

If yes, how many?

4. How many candidates did you meet?

5. Did you ask any candidate for a CV, or invite further contact?

Yes       No

6. Is SciMix a good forum for AEI posters?

Yes       No

7. Did you find the AEI poster session to be a useful way of bringing candidates together with faculty from recruiting departments?

Yes       No

8. Overall, how would you rate the AEI-SciMix poster session?

Excellent     Very Good     Good     Fair     Poor

9. Was the information in the AEI booklet (poster number, name of candidate/presenter; title of paper; brief bio of candidate) useful?

10. What other information would you find useful that could be included in this booklet?

11. Please rate your interactions with the candidates.

Excellent     Very Good     Good     Fair     Poor

12a. Please rate the adequacy and timeliness of communication from ACS concerning logistics and arrangements for the poster session.

Excellent     Very Good     Good     Fair     Poor

12b. Please tell us where you heard about the AEI.

12c. Where could ACS advertise the AEI to reach more recruiters and candidates?

13. Would you recommend the AEI poster session be repeated regularly as an annual recruitment event?

Yes  No

If yes, how could this program be improved to make it more effective and useful?

14. We appreciate any additional thoughts or suggestion you wish to share. (Please use the back of the page if you require more space)

Name (optional)

May we contact you? If so, please give us your e-mail address.

