

# Severin T. Schneebeli, PhD

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## PROFESSIONAL EXPERIENCE

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### The University of Vermont, Burlington VT

- Director, Materials Science Graduate Program (June 2021 – Present)
- Associate Professor of Chemistry, Materials Science, Cellular/Molecular Biology (Aug 2020 – Present)
- Creating protein-mimetic nanocages for biomedical and environmental sensing, and artificial enzymes as selective catalysts for precision polymer synthesis and functionalization.
- Assistant Professor of Chemistry (July 2014 – Aug 2020)
- Invented (i) [chirality-assisted synthesis](#) for precise molecular shape control, (ii) the first [enantioselective electrophilic aromatic nitration](#) process with a chiral auxiliary, and (iii) a [catalytic method to size-selectively functionalize polymers with a molecular tetrahedron](#).

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## EDUCATION

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### Northwestern University, Evanston, IL (Sept 2011 – June 2014)

- International Institute for Nanotechnology (IIN) Postdoctoral Fellow working on the synthesis and computer-aided design of hierarchical functional nanomaterials
- Advisor: Professor Sir Fraser Stoddart (2016 Nobel Laureate in Chemistry)

### Columbia University, New York, NY (Aug 2006 – Aug 2011)

PhD in Chemistry with Distinction (Oct 2011) / MPhil (May 2010) / MA (Oct 2007)

- Guthikonda and Upjohn Predoctoral Fellow focused on interdisciplinary research of organic synthesis as well as theoretical and computational chemistry
- Joint Advisors: Professors Ronald Breslow and Richard A. Friesner
- Doctoral Thesis: “Computers for Chemistry and Chemistry for Computers: From Computational Prediction of Reaction Selectivities to Novel Molecular Wires for Electrical Devices”
- Cumulative GPA: 4.0/4.0

### University of Zurich, Zurich, Switzerland (Aug 2003 – Aug 2006)

BA in Chemistry (Aug 2006)

- Cumulative GPA: 5.7/6.0
- Summer Research in Computational Chemistry with Professor Kim Baldrige

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## RESEARCH EXPERIENCE

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### Postdoctoral Research, Stoddart Laboratory, Northwestern University (Sept 2011 – June 2014)

- Assembled shape-persistent macrocycles into functional nanotubes for chemical sensing.

- Discovered two new families of macrocycles as building blocks for synthetic nanotubes (i) the asararenes, and (ii) homochiral molecular prisms with through-space electron sharing and anion-induced  $\pi$ - $\pi$  stacking.
- Performed quantum mechanical (QM) calculations and molecular dynamics (MD) simulations to predict the operation mechanisms of molecular machines.

**Doctoral Research**, Breslow and Friesner Laboratories, Columbia University (Sept 2006 – Aug 2011)

- Bridged computation and experiment for the design and synthesis of single-molecule electronic devices and the prediction of selectivities for organic and enzymatic reactions.
- Investigated the conductance of molecular wires at the single molecule level in order to build smaller and faster electronic devices, in collaboration with the Venkataraman research group.
- Key findings include (i) two novel methodologies for creating highly conductive electrical contacts between gold electrodes and carbon atoms of single molecules, (ii) the first single molecular, partially antiaromatic wire and (iii) charge transport mechanisms through molecular wires with parallel paths.
- Developed accurate structure-based computational methods to predict sites of P450-enzyme mediated drug metabolism and enantioselectivities of organocatalyzed reactions. Improved the accuracy of Density Functional Theory (DFT) for non-covalent bonding interactions with empirical corrections, which have been implemented in the commercial software package Jaguar from Schrödinger Inc.

#### **SCIENTIFIC AWARDS / DISTINCTIONS**

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| • Thieme Chemistry Journals Award  | 2020          |
| • Nominated by the University of Vermont for an NSF Alan T. Waterman Award   | 2019          |
| • Nominated Twice for a Kroepsch-Maurice Excellence in Teaching Award, the Top Teaching Award at the University of Vermont   | 2018 and 2019 |
| • NSF CAREER Award   | 2019          |
| • Nominated Twice for an Outstanding Faculty Advisor of the Year Award   | 2017 and 2019 |
| • U.S. Army Research Office Young Investigator Award   | 2018          |
| • Invited to Submit a Full Proposal to the Beckman Young Investigators Program   | 2017          |
| • Invited to Submit a Full Proposal to the Cottrell Scholars Program   | 2017          |
| • International Institute for Nanotechnology (IIN) Postdoctoral Fellowship, Awarded for Demonstrated Innovation & Outstanding Achievement during the Doctoral Research | 2011–2013     |
| • ACS Postdoc to Faculty Workshop Travel Award, Indianapolis, IN   | 2013          |
| • Selected Participant, NSF Future Faculty Workshop “Leaders of Tomorrow”, Atlanta, GA   | 2013          |
| • DOE Travel Fellowship to attend the ISMSC-8 Conference in Arlington, VA  | 2013          |
| • Hammett Award in Chemistry for Excellence in Studies and Research toward the PhD, Columbia University, awarded to the top Fifth-year Chemistry Graduate Student      | 2011          |
| • Arun Guthikonda Memorial Fellowship in Chemistry, Columbia University, awarded to the top Fourth Year Chemistry Graduate Student                                     | 2010–2011     |
| • Best Scientific Poster Award, Columbia University Nanoscale Science and Engineering Center Retreat, Short Hills, NJ  | 2009          |
| • Upjohn Fellowship for Academic Excellence, Columbia University   | 2007–2008     |

- Appointed Young Researcher Participant, 18th Meeting of Nobel Prize Winners in Chemistry, Lindau, Germany 2006
- Scholarships from the Alfred Werner Legate at the University of Zurich, Switzerland, awarded for Academic Excellence 2005/2006
- Appointed Member of the Swiss National Team at the 34th International Chemistry Olympiad, Groningen, the Netherlands for High School Researchers 2002

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#### MANUSCRIPTS IN PREPARATION/UNDER REVIEW/UNDER REVISION

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\* = STS as Corresponding Author

1. D. R. McCarthy, H. Liang, **S. T. Schneebeli**\* “Selective Desymmetrization of Rotaxanes with Tethered Catalysts”. *Angew. Chem. Int. Ed.* **2021**, *In Preparation*.
2. M. Sharafi, T. J. Woods, D. L. Gray, **S. T. Schneebeli**\* “Transfer of Facial to Regiochemical Selectivity during Exponential Macrocycle Replication”. *Org. Chem. Front.* **2021**, *In Preparation*, Invited Special Issue.
3. N. Hamilton, M. Sharafi, O. Vestrheim, **S. T. Schneebeli**\* “Convenient Synthesis of Fully Sequence-defined Peptide Dendrimers with up to 18 Unique Branches”. *J. Am. Chem. Soc.* **2021**, *In Preparation*.
4. K. E. Murphy, K. T. McKay, A. E. Schuelke-Sanchez, M. Sharafi, M. Ivancic, J. Li, **S. T. Schneebeli**\* “Spring-like Helical Ladder Polymers Created with Chirality-Assisted Synthesis”. *Angew. Chem. Int. Ed.* **2021**, *In Preparation*.
5. D. R. McCarthy, J. M. Remington, J. B. Ferrell, **S. T. Schneebeli**, J. Li. “Molecular Basis of Functionalized DNA Nanocages Complexed with Human Serum Albumin” *ACS Nano* **2021**, *In Preparation*.
6. J. B. Ferrell, J. M. Remington, C. van Oort, M. Sharafi, R. Aboushousha, Y. Janssen-Heininger, **S. T. Schneebeli**, M. J. Wargo, J. Li “A Generative Approach toward Precision Antimicrobial Peptide Design” *Chem. Sci.* **2021**, *Under Revision*, [bioRxiv](#)
7. V. May, J. M. Remington, C. Liao, R. L. Parsons, **S. T. Schneebeli**, M. Brewer, K. M. Braas, J. Li “Molecular Basis for Long-Term Maladaptive Stress Effects: GPCR Intracellular Loops Regulate ERK Signaling Dynamics” *Commun. Biol.* **2021**, *Under Revision*.
8. N. Hamilton, J. M. Remington, **S. T. Schneebeli**, J. Li. “Outcome-Based Redesign of Physical Chemistry Laboratories During the COVID-19 Pandemic” *J. Chem. Ed.* **2021**, *Under Revision*.
9. E. M. Corteselli, M. Sharafi, M. MacPherson, M. C. White, A. van der Vliet, V. Anathy, **S. T. Schneebeli**, J. Li, Y. Janssen-Heininger. “Structural and Functional Fine Mapping of Cysteines in Mammalian Glutaredoxin Reveal a Hierarchy of Susceptibility to Oxidative Inactivation” *Nat. Comm.* **2021**, *Under Review*.
10. K. T. McKay, J. Remington, **S. T. Schneebeli**, M. Brewer, V. May, J. Li. “Ensemble Docking to Target Chemically Relevant Receptor States: An Application to GPCR Drug Discovery”, *J. Med. Chem.* **2021**, *Submitted*.
11. A. Ghalehbolabbehbahani, O. Vestrheim, M. Skinner, J. Li, **S. T. Schneebeli**\* “Effect of Drying Temperature Regimes on the Quality of Vermont Grown Saffron (*Crocus sativus*)” *J. Agric. Food Chem.* **2021**, *Submitted*.

## PUBLICATIONS (INDEPENDENT CAREER)

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\* = STS as Corresponding Author

1. S. C. Rajappan, O. Vestrheim, M. Sharafi, J. Li, **S. T. Schneebeli**\* “Carbonyl-to-Alkyne Electron Donation Effects in up to 10-nm-Long, Unimolecular Oligo(*p*-phenylene ethynyls) (OPEs)” *Org. Materials* **2021**, *3*, 337–345. Special Issue, Emerging Stars in Organic Materials.
2. T. J. Jaynes, M. Sharafi, J. P. Campbell, J. Bocanegra, K. T. McKay, K. Little, R. O. Brown, D. L. Gray, T. J. Woods., J. Li, **S. T. Schneebeli**\* “Iterative Exponential Growth of Oxygen-linked Aromatic Polymers Driven by Nucleophilic Aromatic Substitution Reactions” *Front. Chem.* **2021**, DOI: 0.3389/fchem.2021.620017. Special Issue, Rising Stars 2020.
3. X. Zhao, J. M. Remington, **S. T. Schneebeli**, S. T. Arold, J. Li. “Molecular Basis of a Nucleoid-Structured Bacterial Protein Filament for Environment Sensing” *J. Phys. Chem. Lett.* **2021**, *12*, 7878–7884. **Supplemental Cover**.
4. J. Li, K. T. McKay, J. M. Remington, **S. T. Schneebeli**. “A Computational Study of Cooperative Binding to Multiple SARS-CoV-2 Proteins”. *Sci. Rep.* **2021**, *11*, 16307.
5. J. M. Remington, K. T. McKay, J. B. Ferrell, **S. T. Schneebeli**, J. Li. “Enhanced Sampling Protocol to Elucidate Fusion Peptide Opening of SARS-CoV-2 Spike Protein”. *Biophys. J.* **2021**, *120*, 2848–2858.
6. J. M. Remington, C. Liao, M. Sharafi, E. Ste.Marie, J. B. Ferrell, R. Hondal, M. J. Wargo, **S. T. Schneebeli**, J. Li. “Aggregation State of Synergistic Antimicrobial Peptides” *J. Phys. Chem. Lett.* **2020**, *11*, 9501–9506.
7. S. C. Rajappan, D. R. McCarthy, J. P. Campbell, J. B. Ferrell, M. Sharafi, O. Ambrozaite, J. Li, **S. T. Schneebeli**\* “Selective Monofunctionalization Enabled by Reaction History-Dependent Communication in Catalytic Rotaxanes” *Angew. Chem. Int. Ed.* **2020**, *59*, 16668–16674.
8. M. Sharafi, K. T. McKay, M. Ivancic, D. R. McCarthy, N. Dudkina, K. E. Murphy, S. C. Rajappan, J. P. Campbell, Y. Shen, A. R. Badireddy, J. Li, **S. T. Schneebeli**\* “Size-selective Catalytic Polymer Acylation with a Molecular Tetrahedron” *Chem (Cell Press)* **2020**, *6*, 1469–1494. Highlighted in [Science Daily](#) and >20 other News Channels.
9. M. Sharafi, J. P. Campbell, K. E. Murphy, R. O. Brown, **S. T. Schneebeli**\* “Chiral Auxiliaries for Stereoselective Electrophilic Aromatic Substitutions” *Synlett* **2020**, DOI: 10.1055/s-0040-1707296.
10. J. M. Remington, J. B. Ferrell, M. Zorman, A. Petrucci, **S. T. Schneebeli**, J. Li. “Machine Learning in a Molecular Modeling Course for Chemistry, Biochemistry, and Biophysics Students” *The Biophysicist* **2020**, *1*, 1–11.
11. J. P. Campbell, S. C. Rajappan, T. J. Jaynes, M. Sharafi, Y.-T. Ma, J. Li, **S. T. Schneebeli**\* “Enantioselective Electrophilic Aromatic Nitration — A Chiral Auxiliary Approach” *Angew. Chem. Int. Ed.* **2019**, *58*, 1035–1040, **Inside Back Cover**.
12. X. Zhao, C. Liao, J. B. Ferrell, Y. Ma, **S. T. Schneebeli**, J. Li. “A Top-Down Multiscale Approach to Simulate Peptide Assembly” *J. Chem. Theory Comput.* **2019**, *15*, 1514–1522, **Front Cover**.
13. J. P. Campbell, M. Sharafi, K. E. Murphy, J. L. Bocanegra, **S. T. Schneebeli**\* “Precise Molecular Shape Control of Linear and Branched Strips with Chirality-Assisted Synthesis” *Supramol. Chem.* **2019**, *31*, 565–574, Invited Special Issue, Emerging Supramolecular Chemists in North America.
14. C. Liao, M. Poujol de Moliens, **S. T. Schneebeli**, M. Brewer, G. Song, D. Chatenet, K. M. Braas, V. May, J. Li “Targeting the PAC1 Receptor for Neurological and Metabolic Disorders” *Curr. Top. Med. Chem.* **2019**, *19*, 1399–1417.
15. J. B. Ferrell, J. P. Campbell, D. R. McCarthy, K. T. McKay, M. Hensinger, R. Srinivasan, X. Zhao, A.

- Wurthmann, J. Li, **S. T. Schneebeli**.\* “Chemical Exploration with Virtual Reality (CEVR) in Organic Teaching Laboratories” *J. Chem. Ed.* **2019**, *96*, 382–386. **Supplemental Cover**.
16. M. V. Sheridan, P. Gamm, **S. T. Schneebeli**, R. Breuer, M. Schmittl, W. E. Geiger. “The Effect of Large Electrolyte Anions on the Sequential Oxidations of Bis(fulvalene)diiron Attached to Glassy Carbon by an Ethynyl Linkage” *Langmuir* **2018**, *34*, 1327–1339.
  17. M. Sharafi, J. P. Campbell, S. C. Rajappan, N. Dudkina, D. L. Gray, T. J. Woods, J. Li, **S. T. Schneebeli**.\* “Crystal-Packing-Driven Enrichment of Atropoisomers” *Angew. Chem. Int. Ed.* **2017**, *56*, 7097–7081. Highlighted in [UVM CAS News](#).
  18. K. E. Murphy, J. L. Bocanegra, X. Liu, H.-Y. K. Chau, P. C. Lee, J. Li, **S. T. Schneebeli**.\* “Precise Through Space Control of an Abiotic Electrophilic Aromatic Substitution Reaction” *Nature Commun.* **2017**, *8*, 14840.
  19. C. Liao, X. Zhao, J. Liu, **S. T. Schneebeli**, J. C. Shelley, J. Li. “Capturing the Multiscale Dynamics of Membrane Protein Complexes with All-Atom, Mixed-Resolution, and Coarse-Grained Models” *Phys. Chem. Chem. Phys.* **2017**, *19*, 9181–9188.
  20. M. Sharafi, Z. J. Weinert, I. M. Cohen, C. Liao, M. Ivancic, J. Li, **S. T. Schneebeli**.\* “Controlled Self-Assembly Inside C-Shaped Polyaromatic Strips” *Synlett* **2016**, *27*, 2145–2149. Invited Special Issue on the “Synthesis of Non-planar Polyaromatic Compounds”.
  21. M. V. Sheridan, K. Lam, M. Sharafi, **S. T. Schneebeli**,\* W. E. Geiger. “Anodic Methods for Covalent Attachment of Ethynylferrocenes to Electrode Surfaces: Comparison of Ethynyl Activation Processes” *Langmuir* **2016**, *32*, 1645–1657.
  22. X. Liu, Z. J. Weinert, M. Sharafi, C. Liao, J. Li, **S. T. Schneebeli**.\* “Regulating Molecular Recognition with C-Shaped Strips Attained by Chirality-Assisted Synthesis” *Angew. Chem. Int. Ed.* **2015**, *54*, 12772–12776. **VIP, Inside Cover**, Highlighted in [Angew. Chem. Int. Ed.](#), [Popular Mechanics](#), and [io9](#).
  23. C. Liao, M. E. Selvan, J. Zhao, J. Slimovitch, **S. T. Schneebeli**, M. Shelley, J. Shelley, J. Li. “Melittin Aggregation in Aqueous Solutions: Insight from Molecular Dynamics Simulations” *J. Phys. Chem. B* **2015**, *119*, 10390–10398.
  24. R. W. Miller, A. K. Duncan, **S. T. Schneebeli**, D. L. Gray, A. C. Whalley. “Synthesis and Structural Data of Tetrabenzo[8]circulene.” *Chem. Eur. J.* **2014**, *20*, 3705–3711.

#### PUBLICATIONS (PRE- AND POSTDOCTORAL)

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25. E. J. Dale, D. P. Ferris, N. A. Vermeulen, J. J. Henkels, I. Popovs, M. Juriček, J. C. Barnes, **S. T. Schneebeli**,\* and J. F. Stoddart. “Cooperative Reactivity in an Extended-Viologen-Based Cyclophane.” *J. Am. Chem. Soc.* **2016**, *138*, 3667–3670.
26. Y. Wu, R. M. Young, M. Frascioni, **S. T. Schneebeli**, P. Spent, D. M. Gardner, K. E. Brown, F. Würthner, J. F. Stoddart, M. R. Wasielewski. “Ultrafast Photoinduced Symmetry-Breaking Charge Separation and Electron Sharing in Perylenediimide Molecular Triangles.” *J. Am. Chem. Soc.* **2015**, *137*, 13236–13239.
27. C. Cheng, P. R. McGonigal, **S. T. Schneebeli**, H. Li, N. A. Vermeulen, C. Ke, J. F. Stoddart. “An Artificial Molecular Pump.” *Nature Nanotech.* **2015**, *10*, 547–553.
28. P. R. McGonigal, H. Li, C. Cheng, **S. T. Schneebeli**, M. Frascioni, L. S. Witus, J. F. Stoddart. “Controlling Association Kinetics in the Formation of Donor-Acceptor Pseudorotaxanes.” *Tetrahedron Lett.* **2015**, *56*, 3591–3594.

29. Y. Wu, M. Frasconi, D. M. Gardner, P. A. McGonigal, **S. T. Schneebeli**, M. R. Wasielewski, J. F. Stoddart. “Electron Delocalization in a Rigid Cofacial Naphthalene-1,8:4,5-bis(dicarboximide) Dimer” *Angew. Chem. Int. Ed.* **2014**, *53*, 9476–9481.
30. N. L. Strutt, H. Zhang, **S. T. Schneebeli**, J. F. Stoddart. “Amino-functionalized Pillar[5]arene.” *Chem. Eur. J.* **2014**, *20*, 10996–11004.
31. Z. Liu, J. Lei, M. Frasconi, X. Li, D. Cao, Z. Zhu, **S. T. Schneebeli**, G. C. Schatz, J. F. Stoddart. “A Square-Planar Tetracoordinate Oxygen-Containing Ti<sub>4</sub>O<sub>17</sub> Cluster Stabilized by Two 1,1'-Ferrocenedicarboxylato Ligands” *Angew. Chem. Int. Ed.* **2014**, *53*, 9193–9197.
32. C. J. Bruns, M. Frasconi, J. Iehl, K. J. Hartlieb, **S. T. Schneebeli**, C. Cheng, S. I. Stupp, J. F. Stoddart. “Redox Switchable Daisy Chain Rotaxanes Driven by Radical–Radical Interactions.” *J. Am. Chem. Soc.* **2014**, *136*, 4714–4723.
33. A. J. Avestro, D. M. Gardner, N. A. Vermeulen, E. A. Wilson, **S. T. Schneebeli**, A. C. Whalley, M. E. Belowich, R. Carmieli, M. R. Wasielewski, J. F. Stoddart. “Gated Electron Sharing within Naphthalene Diimide-based Oligorotaxanes.” *Angew. Chem. Int. Ed.* **2014**, *53*, 4442–4449.
34. Z. Liu, G. Liu, Y. Wu, D. Cao, J. Sun, **S. T. Schneebeli**, M. S. Nassar, C. A. Mirkin, J. F. Stoddart. “Assembly of Supramolecular Nanotubes from Molecular Triangles and 1,2-Dihalohydrocarbons.” *J. Am. Chem. Soc.* **2014**, *136*, 16651–16660.
35. C. J. Bruns, J. Li, M. Frasconi, **S. T. Schneebeli**, J. Iehl, H.-P. J. de Rouville, S. I. Stupp, G. A. Voth, J. F. Stoddart. “An Electrochemically and Thermally Switchable Donor-Acceptor [c2]Daisy Chain Rotaxane.” *Angew. Chem. Int. Ed.* **2014**, *53*, 1953–1958.
36. N. L. Strutt, H. Zhang, **S. T. Schneebeli**, J. F. Stoddart. “Functionalizing Pillar[n]arenes.” *Acc. Chem. Res.* **2014**, *47*, 2631–2642.
37. K. J. Hartlieb, A. K. Blackburn, **S. T. Schneebeli**, R. S. Forgan, A. A. Sarjeant, C. L. Stern, D. Cao, J. F. Stoddart. “Topological Isomerism in a Chiral Handcuff Catenane.” *Chem. Sci.* **2014**, *5*, 90–100.
38. Z. Liu, **S. T. Schneebeli**, J. F. Stoddart.\* “Second-Sphere Coordination Revisited.” *Chimia* **2014**, *68*, 315–320.
39. R. S. Forgan, A. K. Blackburn, M. M. Boyle, **S. T. Schneebeli**, J. F. Stoddart. “The Topological and Chemical Implications of Introducing Oriented Rings to [3]Catenanes.” *Supramol. Chem.* **2014**, *26*, 192–201, Invited Special Issue.
40. **S. T. Schneebeli**, M. Frasconi, Z. Liu, Y. Wu, D. M. Gardner, N. L. Strutt, C. Cheng, R. Carmieli, M. R. Wasielewski, J. F. Stoddart. “Electron Sharing and Anion- $\pi$  Recognition in Molecular Triangular Prisms.” *Angew. Chem. Int. Ed.* **2013**, *52*, 13100–13104, **VIP, Back Cover**.
41. N. L. Strutt, **S. T. Schneebeli**, J. F. Stoddart. “Stereochemical Inversion in Difunctionalised Pillar[5]arenes.” *Supramol. Chem.* **2013**, *25*, 596–608, Invited Special Issue.
42. **S. T. Schneebeli**, C. Cheng, K. J. Hartlieb, N. L. Strutt, A. A. Sarjeant, C. L. Stern, J. F. Stoddart. “Asararenes – A Family of Large Aromatic Macrocycles.” *Chem. Eur. J.* **2013**, *19*, 3860–3868. **Front Cover, VIP, Highlight** in *Chem. Views* (Feb 2013) and *Angew. Chem. Int. Ed.* (Mar 2013).
43. H. Vazquez, R. Skouta, **S. T. Schneebeli**, M. Kamenetska, R. Breslow, L. Venkataraman, M. S. Hybertsen. “Probing the Conductance Superposition Law in Single-Molecule Circuits with Parallel Paths.” *Nature Nanotech.* **2012**, *7*, 663–667. See also the News & Views article in *Nature Nanotech.* (Oct 2012). **Highlight** in *Pro-Physik* and *Brookhaven National Laboratory News* (Sept 2012).
44. A. N. Basuray, H.-P. J. de Rouville, K. J. Hartlieb, T. Kikuchi, N. L. Strutt, C. J. Bruns, M. W. Ambrogio, A. J. Avestro, **S. T. Schneebeli**, A. C. Fahrenbach, J. F. Stoddart. “The Chameleonic Nature of Diazaperopyrenium Recognition Processes.” *Angew. Chem. Int. Ed.* **2012**, *51*, 11872–11877.

45. M. Tagliazucchi, V. A. Amin, **S. T. Schneebeli**, J. F. Stoddart, E. A. Weiss. “High-Contrast Photopatterning of Photoluminescence within Quantum Dot Films through Degradation of a Charge-Transfer Quencher.” *Adv. Mater.* **2012**, *24*, 3617–3621. **Front Cover**.
46. J. C. Heckel, A. L. Weisman, **S. T. Schneebeli**, M. L. Hall, L. J. Sherry, S. M. Stranahan, K. H. Dubay, R. A. Friesner, K. A. Willets. “Polarized Raman Spectroscopy of Oligothiophene Crystals To Determine Unit Cell Orientation.” *J. Phys. Chem. A* **2012**, *116*, 6804–6816.
47. W. Chen, J. Widawsky, H. Vazquez, **S. T. Schneebeli**, M. Hybertsen, R. Breslow, L. Venkataraman. “Highly Conducting  $\pi$ -Conjugated Molecular Junctions Covalently Bonded to Gold Electrodes.” *J. Am. Chem. Soc.* **2011**, *133*, 17160–17163. **Highlight** in *C&E News* (Oct 2011).
48. J. Li, **S. T. Schneebeli**, J. Bylund, R. Farid, R. A. Friesner. “IDSite: An Accurate Approach to Predict P450-Mediated Drug Metabolism.” *J. Chem. Theory Comput.* **2011**, *7*, 3829–3845.
49. Z. Cheng, R. Skouta, H. Vazquez, J. R. Widawsky, **S. T. Schneebeli**, W. Chen, M. S. Hybertsen, R. Breslow, L. Venkataraman. “*In situ* Formation of Highly Conducting Covalent Au–C Contacts for Single-Molecule Junctions.” *Nature Nanotech.* **2011**, *6*, 353–357. **Highlight** in *C&E News* (Oct 2011).
50. **S. T. Schneebeli**, A. D. Bochevarov, R. A. Friesner. “Parameterization of a B3LYP specific Correction for Dispersion Interactions on a Gigantic Dataset of CCSD(T) Quality Non-Covalent Interaction Energies.” *J. Chem. Theory Comput.* **2011**, *7*, 658–668.
51. R. Breslow, **S. T. Schneebeli**. “Structure-Property Relationships in Molecular Wires.” *Tetrahedron* **2011**, *67*, 10171–10178.
52. **S. T. Schneebeli**, M. Kamenetska, Z. Cheng, R. Skouta, R. A. Friesner, L. Venkataraman, R. Breslow. “Single-Molecule Conductance through Multiple  $\pi$ – $\pi$ -Stacked Benzene Rings Determined with Direct Electrode-to-Benzene Ring Connections.” *J. Am. Chem. Soc.* **2011**, *133*, 2136–2139. **Front Cover**. **Highlight** in *Nature Materials* (Mar 2011).
53. **S. T. Schneebeli**, M. Kamenetska, F. W. Foss Jr., H. Vazquez, R. Skouta, M. Hybertsen, L. Venkataraman, R. Breslow. “The Electrical Properties of Biphenylenes.” *Org. Lett.* **2010**, *12*, 4114–4117.
54. **S. T. Schneebeli**, M. L. Hall, R. Breslow, R. A. Friesner. “Quantitative DFT Modeling of the Enantiomeric Excess for Dioxirane-Catalyzed Epoxidations.” *J. Am. Chem. Soc.* **2009**, *131*, 3965–3973.

#### BOOK CHAPTERS

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1. **S. T. Schneebeli**, N. L. Strutt, C. Cheng, J. F. Stoddart. “Pillararene-related Macrocycles.” In *Monographs in Supramolecular Chemistry*, Vol. 18 (Pillararenes), Royal Society of Chemistry, Cambridge, U.K., **2016**, 278–307.

#### PATENTS

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1. **S. T. Schneebeli**, J. Li, M. Sharafi. “Molecular Tetrahedron Nanocage, Its Preparation, and Uses Thereof.” U.S. Provisional patent application filed on 6/2/2020. U.S. Provisional patent application serial number 63/337,764. PCT application filed on May 28, 2021.
2. J. F. Stoddart, **S. T. Schneebeli**, M. Frasconi, Z. Liu. “Redox Active Triangular Organic Materials” U.S. Provisional patent application filed on 9/3/2014. U.S. Patent application filed on 9/3/2015. U.S. Patent number 20160130271.

## INVITED SEMINARS / PRESENTATIONS

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1. Stoddart Group Virtual Seminar Series, Department of Chemistry, Northwestern University, IL (April 2021). "Precision Placement of Functional Groups with Increasing Complexity for Selective Recognition and Catalysis."
2. "Saffron: From Start to Finish Planting to Selling" Workshop, Virtual Presentation, VT (March 2021). "Nanotechnology for Saffron Testing with Picrocrocin-Selective Molecular Nanocages."
3. Rowan University Virtual Seminar, Rowan University, NJ (March 2021). "Bending Synthetic Polymers into Well-defined Shapes with Increasing Complexity."
4. Penn State Erie Virtual Seminar, Penn State Erie, PA (December 2020). "Bending Synthetic Polymers into Well-defined Shapes with Increasing Complexity."
5. UVM Cancer Center Virtual Seminar, University of Vermont, VT (April 2020). "Designing Artificial Antibodies to Recognize Noncoding RNAs."
6. SUNY Plattsburgh, Department of Chemistry, Plattsburgh, NY (March 2020). "Post-synthetic Catalytic Polymer Functionalization for Macromolecular Synthesis."
7. Next Generation Smart Materials Conference, Savannah, GA (December 2019). "Post-synthetic Catalytic Polymer Functionalization for Macromolecular Synthesis."
8. University of Rhode Island, Department of Chemistry, Kingston, RI (September 2019). "Bending Synthetic Polymers into Well-defined Shapes with Increasing Complexity."
9. U.S. Army Research Office PI Meeting, Durham, NC (June 2019). "An Exponential Amplification Strategy for Precision Polymers."
10. University of Würzburg, Nanoscience Institute Young Investigator Symposium, Würzburg, Germany (May 2019). "Biomimetic Synthesis of Macromolecules with Controlled Shapes and Sequences."
11. University of New Hampshire, Department of Chemistry, Durham, NH (April 2019). "Biomimetic Synthesis of Macromolecules with Controlled Shapes and Sequences."
12. Wesleyan University, Department of Chemistry, Middletown, CT (April 2019). "Bending Synthetic Polymers into Well-defined Shapes with Increasing Complexity."
13. Dartmouth College, Department of Chemistry, Hanover, NH (April 2019). "Bending Synthetic Polymers into Well-defined Shapes with Increasing Complexity."
14. University of Connecticut, Department of Chemistry, Storrs, CT (December 2018). "Bending Synthetic Polymers into Well-defined Shapes with Increasing Complexity."
15. University of Zurich, Department of Chemistry, Zurich, Switzerland (December 2018). "Bending Synthetic Polymers into Well-defined Shapes with Increasing Complexity."
16. University of Houston, Department of Chemistry, Houston, TX (November 2018). "From Chirality-Assisted Synthesis to Polymer Replication and Translation with Increasing Complexity."
17. Georgetown University, Department of Chemistry, Washington, DC (March 2018). "From Chirality-Assisted Synthesis to Polymer Replication and Translation with Increasing Complexity."
18. University of Maryland — College Park, Department of Chemistry and Biochemistry, College Park, MD (March 2018). "From Chirality-Assisted Synthesis to Polymer Replication and Translation with Increasing Complexity."
19. Worcester Polytechnic Institute, Department of Chemistry and Biochemistry, Worcester, MA (Feb. 2018). "Directing Electrophilic Aromatic Substitution Reactions from Above and Underneath Aromatic Rings."
20. Sun Yat-Sen University, School of Chemistry, Guangzhou, P. R. China (Jan 2018). "Directing Electrophilic Aromatic Substitution Reactions from Above and Underneath Aromatic Rings."



21. The University of Vermont, Advanced Materials for Energy and Bioengineering Applications (AMEBA) Symposium, Burlington, VT (Dec 2017). "Extending Chirality-Assisted Synthesis with Novel Building Blocks Created with Through-space-directed SEAr Reactions."
22. University of Heidelberg, Institute of Organic Chemistry, Heidelberg, Germany (Aug 2017). "From Chirality-Assisted Synthesis to Polymer Replication and Translation."
23. University of Basel, Department of Chemistry, Basel, Switzerland (June 2017). "From Precise Molecular to Macromolecular Shape Control."
24. University of Fribourg, Department of Chemistry, Fribourg, Switzerland (June 2017). "From Precise Molecular to Macromolecular Shape Control."
25. Carnegie Mellon University, Department of Chemistry, Pittsburgh, PA (Feb 2017). "*En Route* to Shape-Defined Precision Polymers."
26. Saint Michael's College, Department of Chemistry, Colchester, VT (Feb 2017). "From Molecular Wrenches to Well-defined Polymers."
27. The University of Vermont, Advanced Next Generation Energy Leadership (ANGEL) Symposium, Burlington, VT (Oct 2016). "Toward Precise Molecular Shape Control."
28. The 252nd ACS National Meeting, Philadelphia, PA (Aug 2016). "Toward Precise Molecular Shape Control."
29. The 251st ACS National Meeting, San Diego, CA (March 2016). "Freeform Light-Responsive Spirals."
30. The University of Vermont, Advanced Materials for Energy and Bioengineering Applications (AMEBA) Symposium, Burlington, VT (Dec 2015). "Bioinspired Functional Nanomaterials Built with Chirality-Assisted Synthesis."
31. The 250th ACS National Meeting, Boston, MA (Aug 2015). "Complex Nanoscale Shapes Created with Chirality-Assisted Synthesis."
32. The University of Vermont, Department of Chemistry, Burlington, VT (March 2014, Special Seminar). "Molecular Engineering of One-Dimensional Conductive Materials."
33. South University of Science and Technology of China, Department of Chemistry, Shenzhen, P. R. China (Feb 2014, Special Seminar). "Molecular Engineering of One-Dimensional Conductive Materials."
34. Nanyang Technological University, School of Materials Science and Engineering, Singapore (Feb 2014, Special Seminar). "Molecular Engineering of One-Dimensional Conductive Materials."
35. Institute of Science and Technology Austria, Klosterneuburg, Austria (Feb 2014, Special Seminar). "Molecular Engineering of One-Dimensional Conductive Materials."
36. ETH Zurich, Department of Chemistry and Applied Biosciences, Zurich, Switzerland (Feb 2014, Special Seminar). "Molecular Engineering of One-Dimensional Conductive Materials."
37. Cornell University, Department of Chemistry and Chemical Biology, Ithaca, NY (Jan 2014, Special Seminar). "Molecular Engineering of One-Dimensional Conductive Materials."
38. University of British Columbia, Department of Chemistry, Vancouver, BC, Canada (Jan 2014, Special Seminar). "Molecular Engineering of One-Dimensional Conductive Materials."
39. Princeton University, Department of Chemistry, Princeton, NJ (Jan 2014, Special Seminar). "Molecular Engineering of One-Dimensional Conductive Materials."
40. The University of Chicago, Department of Chemistry, Chicago, IL (Jan 2014, Special Seminar). "Molecular Engineering of One-Dimensional Conductive Materials."
41. Carnegie Mellon University, Department of Chemistry, Pittsburgh, PA (Dec 2013, Special Seminar). "Molecular Engineering of One-Dimensional Conductive Materials."

42. Massachusetts Institute of Technology, Department of Chemistry, Cambridge, MA (Nov 2013, Special Seminar). “Molecular Engineering of One-Dimensional Conductive Materials.”
43. The 246th ACS National Meeting, Indianapolis, IN (Sept 2013). Functional Nanomaterials by Design. “Assembly of Rigid Macrocycles into Functional Covalent Nanotubes.”
44. Physical Organic Chemistry Gordon Research Seminar, Holderness, NH (June 2013, Discussion Leader). “Novel Functional Materials and Supramolecular Chemistry.”
45. Self-Assembly and Supramolecular Chemistry Gordon Research Seminar, Les Diablerets, Switzerland (May 2013, Discussion Leader). “Small Molecule & Macromolecular Self-Assembly.”
46. Columbia University, Department of Chemistry, New York, NY (Jan 2013, Special Seminar). “Towards NanoScale Devices.”
47. University of Basel, Basel, Switzerland (Oct 2012, Host: E. Constable). “Asararenes – Large Aromatic Macrocycles as Building Blocks for Covalently Bonded Nanotubes.”
48. Università della Svizzera Italiana (USI), Lugano, Switzerland (Oct 2012, Host: M. Parrinello). “Single-Molecule Conductance of Molecular Wires with Parallel Paths.”
49. University of Zurich, Zurich, Switzerland (Oct 2012, Host: K. Baldrige). “Towards Covalently Bonded, Self-Assembled Macrocyclic Nanotubes.”
50. Schrödinger, Inc., New York, NY (May 2011). “IDSite — Accurate Prediction of P450 mediated Sites of Metabolism.”
51. The 241st ACS National Meeting, Anaheim, CA (Mar 2011). Recent Progress in Catalytic and Biomimetic Chemistry. “Progress towards Highly Conducting Molecular Wires.”
52. Chemical Synthesis Research Symposium, Columbia University, New York, NY (Jan 2011). “Synthesis and Single-Molecule Conductance of New Molecular Wires.”
53. Columbia University Nanocenter Symposium, New York, NY (Oct 2010). “Boosting Single Molecule Conductance with New Gold-to-Molecule Contacts.”
54. Columbia University Nanocenter Symposium, New York, NY (Dec 2009). “Molecular Nanowires.”

#### SELECTED POSTER PRESENTATIONS

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1. Artificial Molecular Switches and Motors Gordon Research Conference, Holderness, NH (June 2019). Sinu C. Rajappan, Dillon R. McCarthy, Beijun Cheng, Kyle T. McKay, Mona Sharafi, Joseph P. Campbell, **Severin T. Schneebeli**. “Biomimetic Synthesis of Precision Polymers with Artificial Molecular Machines.”
2. Self-Assembly and Supramolecular Chemistry Gordon Research Conference, Les Diablerets, Switzerland (May 2019). Sinu C. Rajappan, Dillon R. McCarthy, Beijun Cheng, Kyle T. McKay, Mona Sharafi, Joseph P. Campbell, **Severin T. Schneebeli**. “Biomimetic Synthesis of Precision Polymers.”
3. Self-Assembly and Supramolecular Chemistry Gordon Research Conference, Les Diablerets, Switzerland (May 2017). Kyle T. McKay, Mona Sharafi, Kyle E. Murphy, Dillon R. McCarthy, Joseph P. Campbell, **Severin T. Schneebeli**. “*En Route* to Shape-defined Precision Polymers.”
4. RSC Macrocyclic and Supramolecular Chemistry Meeting, Glasgow, UK (Dec 2013). **Severin T. Schneebeli**, Marco Frasconi, Zhichang Liu, Yilei Wu, Chuyang Cheng, Nathan L. Strutt, J. Fraser Stoddart. “Electron Sharing in Molecular Nanotubes.”
5. 8th International Symposium on Macrocyclic and Supramolecular Chemistry, Arlington, VA (July 2013). **Severin T. Schneebeli**, Marco Frasconi, Zhichang Liu, Yilei Wu, Chuyang Cheng, Nathan L. Strutt, J. Fraser Stoddart. “Macrocycles as Building Blocks for Functional Nanostructures.”

- Physical Organic Chemistry Gordon Research Conference and Seminar, Holderness, NH (June 2013). **Severin T. Schneebeli**, Marco Frascioni, Zhichang Liu, Yilei Wu, Chuyang Cheng, Nathan L. Strutt, J. Fraser Stoddart. “Rigid Triangular Macrocycles with Delocalized Radical Anions.”
- Self-Assembly and Supramolecular Chemistry Gordon Research Seminar and Conference, Les Diablerets, Switzerland (May 2013). **Severin T. Schneebeli**, Marco Frascioni, Zhichang Liu, Yilei Wu, Chuyang Cheng, Nathan L. Strutt, Karel J. Hartlieb, J. Fraser Stoddart. “Nanotubes and Wires from Rigid Macrocycles.”
- Northwestern CCIS Symposium, Evanston, IL (May 2012). **Severin T. Schneebeli**, Chuyang Cheng, Nathan L. Strutt, Karel, J. Hartlieb, Julien Iehl, J. Fraser Stoddart. “Pillararenes and Asararenes: Novel Macrocycles for the 21<sup>st</sup> Century.”
- Columbia Nanocenter Symposium, New York, NY (June 2011). **Severin T. Schneebeli**, Rachid Skouta, Maria Kamenetska, Latha Venkataraman, Ronald Breslow. “Progress towards Highly Conducting Molecular Nanowires.”
- The 241st ACS National Meeting, Anaheim, CA (March 2011). **Severin T. Schneebeli**, Maria Kamenetska, Zhanling Cheng, Rachid Skouta, Latha Venkataraman, Ronald Breslow. “Molecular Electronics with Multiple  $\pi$ - $\pi$ -Stacked Aromatic Layers and with Partially Antiaromatic Biphenylene Cores.”
- ACS Younger Chemists Committee Research Symposium, New York, NY (March 2011). **Severin T. Schneebeli**, Maria Kamenetska, Zhanling Cheng, Rachid Skouta, Latha Venkataraman, Ronald Breslow. “Synthesis of Molecular Wires with Antiaromatic Character and Single-Molecule Conductance through Multiple Stacked  $\pi$ -Systems.”

#### LECTURE COURSES TAUGHT

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- Chemistry 242: Advanced Organic Chemistry II, The University of Vermont (Spring 2018 and 19)
- Chemistry 141: Organic Chemistry I, The University of Vermont (Fall 2017, 18, 19, and 20)
- Chemistry 241: Advanced Organic Chemistry I, The University of Vermont (Fall 2014, 15, 16, and 21)
- Chemistry 251: Physical Organic Chemistry, The University of Vermont (Spring 2015 and 16)
- Chemistry 214: Polymer Chemistry, The University of Vermont (Spring 2017 and 20)

#### EXTERNAL GRANT SUPPORT

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- National Science Foundation — CAREER Award (CHE-1848444), July 2019 – June 2024.  
“CAREER: Ribosome-inspired Synthesis of Precision Polymers.”  
Role: PI
- National Science Foundation — Planning Grant (2026431), Sept 2020 – Aug 2024.  
“FW-HTF-RL: Testing a responsible innovation approach for integrating precision agriculture (PA) technologies with future farm workers and work”  
Role: Key Personnel, creating advanced chemical sensors based on artificial antibody technology developed in the Schneebeli lab, PI: Maaz Gardezi (South Dakota State University)
- USDA NIFA Program — SEED Grant (2018-07583), May 2019 – May 2022.  
“Nanocages for Assessing Saffron Quality: Advanced Tools for an Emerging High-value Crop”  
Role: PI
- National Science Foundation — IRES Grant (1827020), Sept. 2018 – Aug. 2022.  
“IRES Track I: US-Japan Collaboration on Organic Electronics Research and Education”  
Role: Co-PI; PI: Matthew White (UVM Physics); Former PI: Madalina Furis (UVM Physics)

- U.S. Army Research Office — Young Investigator Proposal (71015-CH-YIP), Feb 2018 – Feb 2022. “An Exponential Amplification Strategy for Precision Polymeric Materials.”  
Role: PI
- National Science Foundation — Continuing Grant (CHE-1609137), July 2016 – June 2020. “Programmable Catalysts Designed to Replicate Flexible Polymers.”  
Role: PI

### **INTERNAL GRANT SUPPORT**

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- UVM Office of the VP for Research — Pre-Spark Grant, July 2020 – June 2021. “An Accessible Nano-Sensing Platform to Enhance Vermont Quality Food Production and Distribution.”  
Role: PI
- UVM Office of the VP for Research — FISAR Seed Grant, Jan 2016 – Feb 2018. “Triggered Release of Active Catalyst from Polymer Capsules.”  
Role: Co-PI; PI: Patrick C. Lee (UVM Engineering)
- UVM Office of the VP for Research — REACH Seed Grant, May 2015 – Aug 2016. “Freeform Molecular Helices: Tiny Springs for Strong and Flexible Materials.”  
Role: PI

### **PROFESSIONAL ACTIVITIES**

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#### **Manuscript Reviewer**

- Chem (Cell Press)
- Science Advances
- Nature Communications
- Journal of the American Chemical Society
- Angewandte Chemie International Edition
- Nano Letters
- Chemical Communications
- Macromolecules
- Organic Letters
- Journal of Organic Chemistry
- Organic Chemistry Frontiers
- Chemistry — A European Journal
- Supramolecular Chemistry
- RSC Advances
- Current Opinion in Structural Biology
- Particle & Particle Systems Characterization
- Physical Chemistry Chemical Physics
- Journal of Chemical Education
- Scientific Reports
- Chemical Physics
- ChemPhotoChem
- Chemistry Open
- Research on Chemical Intermediates
- Journal of Nanoelectronics and Optoelectronics

### Grant Reviewer

- Repeat NSF Panel Member and Ad-hoc Reviewer
- Ad-hoc Reviewer for the U.S. Army Research Office
- Ad-hoc Reviewer for the Department of Energy
- Repeat Ad-hoc Reviewer for the American Chemical Society Petroleum Research Fund
- Ad-hoc Reviewer for the Branco-Weiss Foundation, ETH Zurich, Switzerland
- Ad-hoc Reviewer for the Foundation for Frontier Research in Chemistry, France

### Textbook Reviewer

- Organic Chemistry Textbook Reviewer for Pearson Education, *Inc.*

### Service at the University of Vermont

- Member, Graduate Standards Committee, Department of Chemistry (Aug 2014 – Aug 2017)
- Member, Safety Committee, Department of Chemistry (Aug 2014 – Aug 2017)
- Member, Academic Planning Committee, Department of Chemistry (Sept 2016 – Nov 2016)
- Member, Graduate Admissions Committee, Department of Chemistry (Jan 2017 – Aug 2017)
- Chair, Publicity Committee, Department of Chemistry (Sept 2017 – Aug 2019)
- Member, Undergraduate Affairs Committee, Department of Chemistry (Sept 2019 – Aug 2021)
- Member, Graduate Affairs Committee, Department of Chemistry (Sept 2017 – Present)
- Member, Instrumentation, Safety, & Space Committee, Department of Chemistry (Sept 2021 – Present)
- Elected Faculty Senator for the Department of Chemistry (Sept 2017 – Present)
- Director, Materials Science Graduate Program (June 2021 – Present)

### Scientific Outreach

- Mentored Two Local High School Students in Computational Research (Oct. 2020 – April 2021)
- Organizer & Presenter, From Polymers to a Coronavirus, Essex High School, Essex, VT (Mar 2020)
- Organizer & Presenter, Chemistry Fun, ECHO Center, Burlington, VT (Aug 2019)
- Organizer & Presenter, Chemistry Fun, ECHO Center, Burlington, VT (April 2018)
- Organizer & Presenter, Chemistry Fun, ECHO Center, Burlington, VT (Oct 2016), Shown [on NBC5 Presented](#) the Group's Findings to the Brazilian Internet TV Channel Nano Alerta (Jan 2016)
- Mentored a Team of Local High School Students to Investigate Bioplastics (Nov 2015 – Mar 2016)
- Organizer & Presenter, ACS National Chemistry Week, ECHO Center, Burlington, VT (Oct 2015)
- Lecturer, French American Science Festival, Chicago, IL (Oct 2011 and Oct 2012)
- Peer Advisor, Columbia University International Office, New York, NY (Summer 2008)
- Lecturer, Columbia University Girls Science Day, New York, NY (Nov 2007)

### Panelist

- DEPSCoR DoD Day, Northeastern Regional Meeting, Kingston, RI (Sept. 2019)

### LANGUAGES

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- German (native)
- English (fluent in reading, writing and speaking)
- French (fluent in reading, writing and speaking)
- Mandarin (basic speaking)
- Latin (reading)

## PROFESSIONAL AFFILIATIONS

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- Appointed Member, University of Vermont Cancer Center (2019–Present)
- Appointed Member, Northern New England Clinical & Translational Res. Network (2019–Present)
- Appointed Member, Cellular and Molecular Biology Program, University of Vermont (2019–Present)
- Appointed Affiliate, Gund Institute for the Environment, University of Vermont (2019–Present)
- Member, American Chemical Society (2010–Present)
- Member, Chicago Council on Science and Technology (2011–2014)
- Member, New York Academy of Sciences (2006–2011)
- Appointed Member of the Swiss Study Foundation (2003–2011)

## MENTORED STUDENTS AND POSTDOCTORAL FELLOWS

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### Postdoctoral Fellows

Dr. Xiaoxi Liu <i>Placement: Research Fellow at Harvard's Dana-Farber Cancer Institute, Boston, MA</i>	2014 – 2015
Dr. Sinu C. Rajappan <i>Placement: Postdoctoral Fellow at USM, Hattiesburg, MS</i>	2018 – 2020
Dr. Beijun Cheng <i>Placement: Assistant Professor at Qilu University of Technology, People's Republic of China</i>	2018 – 2020
Dr. Mona Sharafi (joint with the Li research group) <i>Placement: NIH T32 Postdoctoral Fellow at Harvard's Dana-Farber Cancer Institute, Boston, MA</i>	2019 – 2021

### Graduate Research Advisees

Dr. Joseph P. Campbell (Graduate Teaching Award Recipient) <i>Placement: Scientist at Integrity Industrial Ink Jet Integration, LLC, Lebanon, NH</i>	2014 – 2019 / PhD
Dr. Mona Sharafi (Graduate Research Award and Best Thesis of the Year Recipient) <i>Placement: NIH T32 Postdoctoral Fellow at Harvard's Dana-Farber Cancer Institute, Boston, MA</i>	2014 – 2019 / PhD
Dr. Kyle E. Murphy (Chemistry Graduate Teaching Award Recipient) <i>Placement: Research and Teaching Fellow, UNC Asheville, Asheville, NC</i>	2014 – 2019 / PhD
Dr. Jessica L. Bocanegra (President's Outstanding Teaching Award Recipient) <i>Placement: Lecturer, Emmanuel College, Boston, MA</i>	2015 – 2020 / PhD
Lizhen Chen <i>Placement: Researcher working on Belt &amp; Road Projects, People's Republic of China</i>	2015 – 2016 / MS
Dr. Kyle T. McKay (joint PhD student with the Li research group) <i>Placement: Research Scientist at Johnson &amp; Johnson, Inc., Philadelphia, PA</i>	2016 – 2021 / PhD
Dillon R. McCarthy (joint PhD student with the Li research group)	2016 – Present
Regina Visconti (Rotation PhD Student, CMB Program)	Fall 2019
Olav Vestrheim (Chemistry PhD Student)	2019 – Present
Nick Hamilton (Chemistry PhD Student, joint with the Li research group)	2019 – Present

### Post Baccalaureate Research Advisees

Shea Bellino Spring & Summer 2019  
*Placement: Medical Student, Robert Larner, M.D. College of Medicine, University of Vermont*

### Undergraduate Research Advisees

Zackariah E. Weinert (UVM Mini-Grant Recipient) 2014 – 2016 / BS  
*Placement: Chemist at Arkema Chemical Company, Exton, PA*

Alexander Olson (UVM SURF Award Recipient) 2015 – 2017 / BS  
*Placement: Research Technician at the Scripps Research Institute, La Jolla, CA*

Ian M. Cohen 2015 – 2017 / BS  
*Placement: QC Specialist at Haemtech Biopharma Services, Essex Junction, VT*

Tyler J. Jaynes (Summer Research Fellowship Recipient) 2015 – 2018 / BS (Hons)  
*Placement: Chemistry PhD Student at Northwestern University, Evanston, IL*

Katharine Hoi-Yan Chau 2016 – 2019 / B.S.  
*Placement: Lab Technician at the UVM Medical Center, Burlington, VT*

Natavan Dudkina (Public Impact Award Recipient) 2017 – 2018 / BS (Hons)  
*Placement: Chemistry PhD Student at Yale University, New Haven, CT*

Reilly Osadchey Brown (SURF Award Recipient) 2018 – 2020 / BS (Hons)  
*Placement: Chemistry PhD Student at Boston University, Boston, MA*

Kassondra Little (Biochemistry Research Fellowship Recipient) 2018 – 2020 / BS (Hons)  
*Placement: Medical Student, Robert Larner, M.D. College of Medicine, University of Vermont*

Ona Ambrozaite (Woodworth and Thanassi Award Recipient) 2019 – 2020 / BS  
*Placement: Chemistry PhD Student at Johns Hopkins University, Baltimore, MD*

Richard Abbott (Chem Scholar and Chemistry Summer Research Fellowship Recipient) 2019 – Present

Qingsheng Dai (Chemistry Summer Research Fellowship Recipient) 2020 – Present

Mirabella Vulikh (UVM Summer Research Fellowship Award Recipient) 2021 – Present

Nils Balegamire (UVM Chemistry Summer Research Fellowship Recipient) 2021 – Present

Jingyuan Zhang (Honors Thesis Student) 2021 – Present

Huiming Liang (Visiting Summer Researcher from Middlebury College) Summer 2021

### High School Research Advisees

Finley Killeen (Science Fair Research Project on Bioplastics) 2015 – 2016  
*Placement: Undergraduate Student in Product Design, Drexel University, Philadelphia, PA*

Brandon Lee (Science Fair Research Project on Bioplastics) 2015 – 2016  
*Placement: Undergraduate Student in Electrical Engineering, University of Vermont, Burlington, VT*

Jason A. Hanna (Computational Research due to COVID-19 Restrictions) Summer & Fall 2020

Mason Cutler (Computational Research due to COVID-19 Restrictions) 2020 – 2021