Dillon R. McCarthy

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Google Scholar
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EDUCATION

2016 – 2022 **The University of Vermont (PhD Chemistry)**, Burlington, VT
Precision in Macro and Supramolecular Design
Advisors: Prof. Jianing Li and Prof. Severin T. Schneebeli

2012 – 2016 **The University of Connecticut (BS Chemistry)**, Storrs, CT

RESEARCH AND PROFESSIONAL EXPERIENCE

2022 – present **Postdoctoral Research Fellow**
The Janssen Pharmaceutical Companies of Johnson and Johnson, Springhouse, PA

2016 – 2022 **Graduate Research Assistant**
The Schneebeli and Li Laboratories, The University of Vermont, Burlington, VT

5/2016 – 8/2016 **Summer Research Intern**
Nalas Engineering, Centerbrook, CT

2014 – 2016 **Undergraduate Research Assistant**
The Suib Laboratory, The University of Connecticut, Storrs, CT

2013 – 2015 **Summer Intern**
Rhodes Technologies, Coventry, RI

PUBLICATIONS (†First Author)

[9] **McCarthy, D. R.**†, Remington, J. R., Schneebeli, S. T., Li, J. "Understanding the Structure–Function Relationships between Ampiphilic Dendrimers and Serum Proteins." *manuscript in preparation*.

[8] **McCarthy, D. R.**†, Huiming, L., Bellino, S. A., Balegamire, N., Li, J., Schneebeli, S. T. "Efficient Synthesis of Doubly Directional Asymmetric [2]Rotaxanes", *Angew. Chem. Int. Ed.* **submitted**.

[7] Taft, J. R., **McCarthy, D. R.**, Li, J., Landry, C. C. "VO(dtpa) Immobilized on Mesoporous Silica: Structural Characterization and Sulfide Oxidation", *manuscript in preparation*.

[6] **McCarthy, D. R.**†, Remington, J. R., Ferrell J. B., Zorman, M., Schneebeli, S. T., Li, J. "Molecular Basis of Functionalized DNA Nanocages Complexed with Human Serum Albumin", *ACS Nano*, **under review**.

[5] Rajappan, S. C., **McCarthy, D. R.**†, Campbell, J. P., Ferrell, J. B., Sharafi, M., Li, J., Schneebeli, S. T. "Selective Monofunctionalization Enabled by Reaction-History-Dependent Communication in Catalytic Rotaxanes", *Angew. Chem. Int. Ed.* **2020**, *59*(38), 16668– 16674.

[4] Sharafi, M., McKay, K.T., Ivancic, M., **McCarthy, D. R.**, Dudkina, N., Murphy, K. E., Rajappan, S. C., Campbell, J. P., Shen, Y., Badireddy, A. R., Li, J., Schneebeli, S. T. "Size-Selective Catalytic Polymer Acylation with a Molecular Tetrahedron", *Chem (Cell Press)* **2020**, *6*, 1469–1494.

[3] Ferrell, J. B., Campbell, J. P., **McCarthy, D. R.**, McKay, K. T., Hensinger, M., Srinivasan, R., Zhao, X., Wurthmann, A., Li, J., Schneebeli, S. T. "Chemical Exploration with Virtual Reality in Organic Teaching Laboratories", *J. Chem. Ed.* **2019**, *96*(9), 1961–1966.

[2] Chidchob, P., Offenbartl-Stiegert, D., **McCarthy, D. R.**, Li, J., Howorka, S., Sleiman, H. "Spatial presentation of cholesterol units on a DNA cube as a determinant of membrane protein-mimicking functions", *J. Am. Chem. Soc.* **2019**, *141*(2), 1100–1108.

[1] Chan, S., **McCarthy, D. R.**, Li, J., Palczewski, K., Yuan, S. "Designing Safer Analgesics via μ-Opioid Receptor Pathways", *Trends in Pharma. Sci.* **2017**, 38, 1016.

PRESENTATIONS

10/2020	Champlain Chemistry Symposium, Burlington, VT (Virtual) Title: "Selective Monofunctionalization Enabled by Reaction-History-Dependent Communication in Catalytic Rotaxanes."
11/2019	Deep Green Student Lightning Talks, Burlington, VT Title: "The Li Group: DNA Nanostructures as Versatile Materials."
4/2018	UVM Student Research Conference, Burlington, VT Title: "Towards Precise Molecular Shape Control." (Poster) Copresenters: Dr. Jessica L. Bocanegra and Dr. Kyle T. McKay
11/2017	Sleiman/Li Group Collaborator Meeting, Montréal, QC Title: "All-Atom Molecular Dynamics for the Study of DNA Cage Behavior."

LEADERSHIP AND PROFESSIONAL AFFILIATIONS

2012 – present	American Chemical Society
2013 – present	Tau Kappa Epsilon
2016 – 2022	Young Chemists Committee, Green Mountain
2018 – 2019	Chapter Science Policy Club
2018 – 2019	Science Policy Club Communications Director

VOLUNTEERING AND OUTREACH

2018, 2022 – present	Skype-a-Scientist Presenter
2017 – 2018	Chemistry Camp Volunteer Instructor
2017 – 2018	Chamberlin School in South Burlington Science Night Volunteer Demonstrator