

Dr. Sean McCarthy completed his Ph.D. studies at Penn State University in 2016. His dissertation research, completed under the direction of Prof. Alex Radosevich, focused on the design of geometrically constrained phosphorus (III) compounds capable of activating strong polar bonds via oxidative addition. Prior to his time at Penn State, Sean obtained a B.S. degree in chemistry from Providence College in 2011. While at Providence, Sean performed research on the synthesis and electrochemical characterization of ruthenium sandwich complexes with Prof. Paul Czech and completed a fluorescence spectroscopy study on the interactions of phospholipid bilayers with proteins with Prof. Jack Breen. Sean joined Nalas in May 2017.

Selected publications:

1. **McCarthy, S.M.**; Lin, Y-C.; Devarajan, D. ; Chang, J.W.; Yennawar, H.P. ; Rioux, R.M. ; Ess, D.H. ; Radosevich, A.T. "Intermolecular N-H Oxidative Addition of Ammonia, Alkylamines, and Arylamines to a Planar σ^3 -Phosphorus Compound via an Entropy-Controlled Electrophilic Mechanism." *J. Am. Chem. Soc.* **2014**, *136*, 4640.
2. Zhao, W.; **McCarthy, S.M.**; Lai, T.Y.; Yennawar, H.P.; Radosevich, A.T. "Reversible Intermolecular E-H Oxidative Addition to a Geometrically Deformed and Structurally Dynamic Phosphorous Triamide." *J. Am. Chem. Soc.* **2014**, *136*, 17634.
3. Mohn, E.S.; Lee, J-M.; Beaver, C.; Tobbe, G.; **McCarthy, S.M.**; O'Neil, E.; Smith, B.D.; Breen, J.J. "Interactions of Cytochrome c with *N*-Acylated Phosphatidylethanolamine Lipids." *J. Phys. Chem. A* **2014**, *118*, 8287.
4. Lin, Y-C.; Hatzakis, E.; **McCarthy, S.M.**; Reichl, K.D.; Lai, T-Y.; Yennawar, H.P.; Radosevich, A.T. "P-N Cooperative Borane Activation and Catalytic Hydroboration by a Distorted Phosphorous Triamide Platform." *J. Am. Chem. Soc.* **2017**, *139*, 6008.