

ANNE J. MCNEIL

PROFESSIONAL EXPERIENCE

Carol A. Fierke Collegiate Professor 2020–present
Department of Chemistry
Macromolecular Science and Engineering Program
University of Michigan, Ann Arbor, MI

Arthur F. Thurnau Professor 2016–present
Department of Chemistry
Macromolecular Science and Engineering Program
University of Michigan, Ann Arbor, MI

Arthur F. Thurnau Associate Professor 2013–2016
Department of Chemistry
Macromolecular Science and Engineering Program
University of Michigan, Ann Arbor, MI

Seyhan N. Ege Assistant Professor 2007–2013
Department of Chemistry
Macromolecular Science and Engineering Program
University of Michigan, Ann Arbor, MI

EDUCATION

L'Oreal Postdoctoral Fellow 2005–2007
Massachusetts Institute of Technology, Cambridge, MA
Advisor: Professor Timothy M. Swager

Ph.D. in Chemistry 1999–2005
Cornell University, Ithaca, NY
Advisor: Professor David B. Collum

B.S. in Chemistry, *summa cum laude* 1995–1999
College of William and Mary, Williamsburg, VA
Advisor: Professor Robert J. Hinkle

AWARDS

Akron Award 2021
Harold R. Johnson Diversity Service Award 2020
Claudia Joan Alexander Trailblazer Award 2019
Guggenheim Fellow 2019
AAAS Fellow 2017
Faculty Recognition Award 2016
Howard Hughes Medical Institute Professor 2014
Provost's Teaching Innovation Prize 2014
Arthur F. Thurnau Professorship 2014
Class of 1923 Memorial Teaching Award 2013
Camille and Henry Dreyfus Foundation Teacher-Scholar Award 2012

Alfred P. Sloan Research Fellow	2011
LSA Excellence in Education Award	2011
Army Research Office – Presidential Early Career Award in Science and Engineering	2010
NSF CAREER Award	2010
Office of Naval Research – Young Investigator Award	2009
Arnold and Mabel Beckman Young Investigator Award	2009
Thieme Journal Award, <i>Synthesis</i> and <i>Synlett</i>	2009
3M Nontenured Faculty Research Award	2009
Seyhan N. Ege Junior Faculty Award	2009

RESEARCH PUBLICATIONS (AT MICHIGAN)

74. Milne, S.; Ramkumar, M.; Rieland, J.; Thurber, H. E.; Love, B. J.; McNeil, A. J. Informing the Public about Microplastics through a University and Museum Partnership. *submitted*
73. Modak, S.; Pert, D.; Tami, J.; Shen, W.; Huan, X.; McNeil, A. J., Goldsmith, B.; Kwabi, D. Substituent Impact on Quinoxaline Performance and Degradation in Redox Flow Batteries. *submitted*
72. Fagnani, D. E.; Kim, D.; Camarero, S. I.; Alfaro, J. F.; McNeil, A. J. Using Waste Poly(vinyl chloride) to Synthesize Chloroarenes by Plasticizer-mediated Electro(de)chlorination. *Nature Chem.* **2023**, *15*, 222–229. DOI: [10.1038/s41557-022-01078-w](https://doi.org/10.1038/s41557-022-01078-w)
71. Vaid, T. P.; Cook, M. E.; Scott, J. D.; Carazo, M. B.; Ruchti, J.; Minter, S. D.; Sigman, M. S.; McNeil, A. J.; Sanford, M. S. Theoretical and Experimental Investigation of Functionalized Cyanopyridines Yield an Anolyte with an Extremely Low Reduction Potential for Nonaqueous Redox Flow Batteries. *Chem. Eur. J.* **2022**, *28*, e202202147. DOI: [10.1002/chem.202202147](https://doi.org/10.1002/chem.202202147)
70. Hannigan, M. D.; Zimmerman, P. M.; McNeil, A. J. Rethinking Catalyst Trapping in Ni-catalyzed Thienothiophene Polymerization. *Macromolecules* **2022**, *55*, 10821–10830. DOI: [10.1021/acs.macromol.2c01521](https://doi.org/10.1021/acs.macromol.2c01521)
69. Coates, G. W.; Korley, L. T. J.; McNeil, A. J. Challenges and Opportunities in Sustainable Polymers. *Acc. Chem. Res.* **2022**, *55*, 2543–2544. (editorial) DOI: [10.1021/acs.accounts.2c00534](https://doi.org/10.1021/acs.accounts.2c00534)
68. Lei, Z.; Zhang, J.; Mueller, E. A.; Xiao, Y.; Kolozsvari, K. R.; McNeil, A. J.; Banaszak Holl, M. M.; Ault, A. P. Glass Transition Temperatures of Individual Submicrometer Atmospheric Particles: Direct Measurement via Heated Atomic Force Microscopy Probe. *Anal. Chem.* **2022**, *94*, 11973–11977. DOI: [10.1021/acs.analchem.2c01979](https://doi.org/10.1021/acs.analchem.2c01979)
67. De La Garza, G. D.; Kaur, A. P.; Shkrob, I. A.; Robertson, L. A.; Odom, S. A.; McNeil, A. J. Balancing high energy density and chemical stability in redox flow batteries with symmetric tetrazines. *J. Mater. Chem. A* **2022**, *10*, 18745–18752. DOI: [10.1039/d2ta04515j](https://doi.org/10.1039/d2ta04515j) (ChemRxiv: [10.26434/chemrxiv-2021-tjb1v](https://doi.org/10.26434/chemrxiv-2021-tjb1v))
66. Fagnani, D. E.; Jehanno, C.; Sardon, H.; McNeil, A. J. Sustainable Green Polymerizations and End-of-Life Treatment of Polymers. *Macro. Rapid Commun.* **2022**, *43*, 2200446. (editorial) DOI: [10.1002/marc.202200446](https://doi.org/10.1002/marc.202200446)
65. Kim, D.; Sanford, M. S.; Vaid, T. P.; McNeil, A. J. A Nonaqueous Redox-Matched Flow Battery with Charge Storage in Insoluble Polymer Beads. *Chem. Eur. J.* **2022**, *28*, e202200149. DOI: [10.1002/chem.202200149](https://doi.org/10.1002/chem.202200149)
64. Harris, J. T.; Devlin, A. M.; McNeil, A. J. Rapid Removal of Poly- and Perfluoroalkyl Substances with Quarternized Wood Pulp. *ACS EST Water* **2022**, *2*, 349–356. DOI: [10.1021/acsestwater.1c00396](https://doi.org/10.1021/acsestwater.1c00396)
63. Chazovachii, P. T.; Rieland, J. M.; Sheffey, V. V.; Jugovic, T. M. E.; Zimmerman, P. M.; Eniola-Adefeso, O.; Love, B. J.; McNeil, A. J. Using Adhesives to Capture Microplastics from Water. *ACS ES&T Engg.* **2021**, *12*, 1698–1704. DOI: [10.1021/acsestengg.1c00272](https://doi.org/10.1021/acsestengg.1c00272)
62. Hannigan, M. D.; McNeil, A. J.; Zimmerman, P. M. Using JPP to Identify Ni Bidentate Phosphine Complexes in Situ. *Inorg. Chem.* **2021**, *60*, 13400–13408. DOI: [10.1021/acs.inorgchem.1c01720](https://doi.org/10.1021/acs.inorgchem.1c01720)
61. Kim, D.; Mueller, E. A.; Yang, D. S.; Fagnani, D. E.; Kim, J.; McNeil, A. J. A Fullerene-functionalized Poly(3-hexylthiophene) Additive Stabilizes Conjugated Polymer-fullerene Blend Morphologies. *ACS Appl. Polym. Mater.* **2021**, *3*, 4861–4868. DOI: [10.1021/acsapm.1c00566](https://doi.org/10.1021/acsapm.1c00566)
60. Chazovachii, P. T.; Somers, M.; Robo, M. T.; Collias, D. I.; James, M. I.; Marsh, E. N. G.; Zimmerman, P. M.; Alfaro, J.; McNeil, A. J. Giving Superabsorbent Polymers a Second Life as Pressure-sensitive Adhesives. *Nature Commun.* **2021**, *12*, 4524. DOI: [10.1038/s41467-021-24488-9](https://doi.org/10.1038/s41467-021-24488-9)

- Highlighted by Bordon & Leibfarth in [Nature Chem.](#)
 - Highlighted by Zeitler, Hodges & Golder in [Trends in Chemistry.](#)
59. Fagnani, D. E.; Tami, J. L.; Copley, G.; Clemons, M. N.; Getzler, Y. D. Y. L.; McNeil, A. J. 100th Anniversary of Macromolecular Science Viewpoint: Redefining Sustainable Polymers. *ACS Macro Lett.* **2021**, *10*, 41–53. DOI: [10.1021/acsmacrolett.0c00789](https://doi.org/10.1021/acsmacrolett.0c00789).
 58. Kubo, T.; Young, M. S.; Souther, K. D.; Hannigan, M. D.; McNeil, A. J. Air-Tolerant Poly(3-hexylthiophene) Synthesis via Catalyst-Transfer Polymerization. *J. Polym. Sci.* **2021**, *59*, 268–273. DOI: [10.1002/pol.20200788](https://doi.org/10.1002/pol.20200788)
 57. Fagnani, D. E.; Hall, A. O.; Zurcher, D. M.; Sekoni, K. N.; Barbu, B. N.; McNeil, A. J. Short Course on Sustainable Polymers for High School Students. *J. Chem. Educ.* **2020**, *97*, 2160–2168. DOI: [10.1021/acs.jchemed.0c00507](https://doi.org/10.1021/acs.jchemed.0c00507)
 56. Harris, J. T.; McNeil, A. J. Localized Hydrogels based on Cellulose Nanofibers and Wood Pulp for Rapid Removal of Methylene Blue. *J. Polym. Sci.* **2020**, *58*, 3042–3049. DOI: [10.1002/pol.20200590](https://doi.org/10.1002/pol.20200590) (First appeared on ChemRxiv DOI: [10.26434/chemrxiv.11774757.v1](https://doi.org/10.26434/chemrxiv.11774757.v1))
 55. Kumar, V.; Harris, J. T.; Ribbe, A.; Franc, M.; Bae, Y.; McNeil, A. J.; Thayumanavan, S. Construction from Destruction: Hydrogel Formation from Triggered Depolymerization-based Release of an Enzymatic Catalyst. *ACS Macro Lett.* **2020**, *9*, 377–381. DOI: [10.1021/acsmacrolett.0c00023](https://doi.org/10.1021/acsmacrolett.0c00023)
 54. Wu, N.; Kubo, T.; Hall, A. O.; Zurcher, D. M.; Phadke, S.; Wallace, R. L.; McNeil, A. J. Adapting Meaningful Learning Strategies to Teach Liquid-Liquid Extractions. *J. Chem. Educ.* **2020**, *97*, 80–86. DOI: [10.1021/acs.jchemed.9b00717](https://doi.org/10.1021/acs.jchemed.9b00717)
 53. Kothari, D. B.; Hall, A. O.; Castaneda, C. A.; McNeil, A. J. Connecting Organic Chemistry Concepts with Real-World Contexts by Creating Infographics. *J. Chem. Educ.* **2019**, *96*, 2524–2527. DOI: [10.1021/acs.jchemed.9b00605](https://doi.org/10.1021/acs.jchemed.9b00605)
 52. Wu, N.; Kubo, T.; Sekoni, K. N.; Hall, A. O.; Phadke, S.; Zurcher, D. M.; Wallace, R. L.; Kothari, D. B.; McNeil, A. J. Student-Designed Green Chemistry Experiment for a Large-Enrollment, Introductory Organic Chemistry Course. *J. Chem. Educ.* **2019**, *96*, 2420–2425. DOI: [10.1021/acs.jchemed.9b00375](https://doi.org/10.1021/acs.jchemed.9b00375)
 51. Lutz, J. P.; Davydovich, O.; Hannigan, M. D.; Moore, J. S.; Zimmerman, P. M.; McNeil, A. J. Functionalized and Degradable Polyphthalaldehyde Derivatives. *J. Am. Chem. Soc.* **2019**, *141*, 14544–14548. DOI: [10.1021/jacs.9b07508](https://doi.org/10.1021/jacs.9b07508) (First appeared on ChemRxiv DOI: [0.26434/chemrxiv.8870324.v2](https://doi.org/10.26434/chemrxiv.8870324.v2).)
 50. Wu, N.; Hall, A. O.; Phadke, S.; Zurcher, D. M.; Wallace, R. L.; Castaneda, C. A.; McNeil, A. J. Adapting Meaningful Learning Strategies for an Introductory Laboratory Course: Using Thin-Layer Chromatography to Monitor Reaction Progress. *J. Chem. Educ.* **2019**, *96*, 1873–1880. DOI: [10.1021/acs.jchemed.9b00256](https://doi.org/10.1021/acs.jchemed.9b00256)
 49. Leone, A. K.; Dewyer, A. D.; Kubo, T.; Zimmerman, P. M.; McNeil, A. J. Toward One-pot Olefin/Thiophene Block Copolymer Synthesis using an In Situ Ligand Exchange. *J. Polym. Sci., Part A: Polym. Chem.* **2019**, *57*, 1061–1065. DOI: [10.1002/pola.29426](https://doi.org/10.1002/pola.29426)
 48. Kong, C.; Song, B.; Mueller, E. A.; Kim, J.; McNeil, A. J. Random Copolymers Outperform Gradient and Block Copolymers in Stabilizing Organic Photovoltaics. *Adv. Funct. Mater.* **2019**, *29*, 1900467. DOI: [10.1002/adfm.201900467](https://doi.org/10.1002/adfm.201900467)
 47. Leone, A. K.; Mueller, E. A.; McNeil, A. J. The History of Palladium-Catalyzed Cross-Couplings Should Inspire the Future of Catalyst-Transfer Polymerization. *J. Am. Chem. Soc.* **2018**, *140*, 15126–15139. DOI: [10.1021/jacs.8b09103](https://doi.org/10.1021/jacs.8b09103) (invited)
 46. Lutz, J. P.; Hannigan, M. D.; McNeil, A. J. Polymers Synthesized via Catalyst-Transfer Polymerization and their Applications. *Coord. Chem. Rev.* **2018**, *376*, 225–247. DOI: [10.1016/j.ccr.2018.07.015](https://doi.org/10.1016/j.ccr.2018.07.015) (invited)
 45. Leone, A. K.; Goldberg, P. K.; McNeil, A. J. Ring-walking in Catalyst-Transfer Polymerization. *J. Am. Chem. Soc.* **2018**, *140*, 7846–7850. DOI: [10.1021/jacs.8b02469](https://doi.org/10.1021/jacs.8b02469)
 44. Vitek, A. K.; Leone, A. K.; McNeil, A. J.; Zimmerman, P. M. Spin-switching transmetalation at Ni diimine catalysts. *ACS Catal.* **2018**, *8*, 3655–3666. DOI: [10.1021/acscatal.7b03974](https://doi.org/10.1021/acscatal.7b03974)
 43. Dong, B.X.; Smith, M. L.; Strzalka, J.; Li, H.; McNeil, A. J.; Stein, G. E.; Green, P. F. Molecular weight dependent structure and charge transport in MAPLE-deposited poly(3-hexylthiophene) thin films. *J. Polym. Sci. Part B.: Polym. Phys.* **2018**, *56*, 652–663. DOI: [10.1002/polb.24588](https://doi.org/10.1002/polb.24588)
 42. Souther, K. D.; Leone, A. K.; Vitek, A. K.; Palermo, E. F.; LaPointe, A. M.; Coates, G. W.; Zimmerman, P. M.; McNeil, A. J. Trials and tribulations of designing multitasking catalysts for olefin/thiophene block copolymerizations. *J. Polym. Sci., Part A: Polym. Chem.* **2018**, *56*, 132–137. DOI: [10.1002/pola.28885](https://doi.org/10.1002/pola.28885)

41. Hall, A. O.; Lee, S. R.; Bloom, J. W. G.; Bootsma, A. N.; Wheeler, S. E.; McNeil, A. J. Reactive Ligand Influence on Initiation in Phenylene Catalyst-Transfer Polymerization. *J. Polym. Sci., Part A: Polym. Chem.* **2018**, *55*, 1530–1535. DOI: [10.1002/pola.28519](https://doi.org/10.1002/pola.28519)
40. Leone, A. K.; Souther, K. D.; Vitek, A. K.; LaPointe, A. M.; Coates, G. W.; Zimmerman, P. M.; McNeil, A. J. Mechanistic Insight into Thiophene Catalyst-Transfer Polymerization Mediated by Nickel Diimine Catalysts. *Macromolecules* **2017**, *50*, 9121–9127. DOI: [10.1021/acs.macromol.7b02271](https://doi.org/10.1021/acs.macromol.7b02271)
39. Leone, A. K.; McNeil, A. J. Matchmaking in Catalyst-Transfer Polycondensation: Optimizing Catalysts based on Mechanistic Insight. *Acc. Chem. Res.* **2016**, *49*, 2822–2831. DOI: [10.1021/acs.accounts.6b00488](https://doi.org/10.1021/acs.accounts.6b00488)
38. Smith, M. L.; Leone, A. K.; Zimmerman, P. M.; McNeil, A. J. Impact of Preferential π -Binding in Catalyst-Transfer Polycondensation of Thiazole Derivatives. *ACS Macro Lett.* **2016**, *5*, 1411–1415. DOI: [10.1021/acsmacrolett.6b00886](https://doi.org/10.1021/acsmacrolett.6b00886)
37. Li, Y.; Flener Lovitt, C.; McNeil, A. J.; Shuyler, K. Improving Information Literacy through Wikipedia Editing in the Chemistry Classroom: Lessons Learned. In *Integrating Information Literacy into the Chemistry Curriculum*; Flener Lovitt, C., Shuyler, K., Li, Y., Eds.; ACS Symposium Series 1232; American Chemical Society: Washington, DC, 2016; pp 247–264.
36. Zhao, Y.; Nett, A. J.; McNeil, A. J.; Zimmerman, P. M. Computational Mechanism for Initiation and Growth of Poly(3-hexylthiophene) Using Palladium N-Heterocyclic Carbene Precatalysts. *Macromolecules* **2016**, *49*, 7632–7641. DOI: [10.1021/acs.macromol.6b01648](https://doi.org/10.1021/acs.macromol.6b01648)
35. Zurcher, D. M.; Phadke, S.; Coppola, B. P.; McNeil, A. J. Using Student-Generated Instructional Materials to Customize an Online e-Homework Platform. *J. Chem. Educ.* **2016**, *93*, 1871–1878. DOI: [10.1021/acs.jchemed.6b00384](https://doi.org/10.1021/acs.jchemed.6b00384)
34. Veits, G. K.; Carter, K. K.; Cox, S. J. (undergraduate); McNeil, A. J. Developing a gel-based sensor using crystal morphology prediction. *J. Am. Chem. Soc.* **2016**, *138*, 12228–12233. DOI: [10.1021/jacs.6b06269](https://doi.org/10.1021/jacs.6b06269)
33. McNeil, A. J. My Maize and Blue Brick Road to Physical Organic Chemistry. *Beilstein J. Org. Chem.* **2016**, *12*, 229–238. DOI: [10.3762/bjoc.12.24](https://doi.org/10.3762/bjoc.12.24)
32. Bryan, Z. J.; Hall, A. O.; Zhao, C. T. (undergraduate); Chen, J.; McNeil, A. J. Limitations of Using Small Molecules to Identify Catalyst-transfer Polycondensation Reactions. *ACS Macro Lett.* **2016**, *5*, 69–72. DOI: [10.1021/acsmacrolett.5b00746](https://doi.org/10.1021/acsmacrolett.5b00746)
31. Amonoo, J. A.; Li, A.; Purdum, G. E.; Sykes, M. E.; Huang, B.; Palermo, E. F.; McNeil, A. J.; Shtein, M.; Loo, Y.-L.; Green, P. F. An All-Conjugated Gradient Copolymer Approach for Morphological Control of Polymer Solar Cells. *J. Mater. Chem. A* **2015**, *3*, 20174–20184. DOI: [10.1039/C5TA04752H](https://doi.org/10.1039/C5TA04752H)
30. Xiao, M.; Zhang, X.; Bryan, Z. J.; Jasensky, J.; McNeil, A. J.; Chen, Z. Effect of Solvent on Surface Ordering of Poly(3-hexylthiophene) Thin Films. *Langmuir* **2015**, *31*, 5050–5056. DOI: [10.1021/la5048722](https://doi.org/10.1021/la5048722)
29. Zurcher, D. M.; McNeil, A. J. Tools for Identifying New Gelator Scaffolds and Solvents. *J. Org. Chem.* **2015**, *80*, 2473–2478. (invited) DOI: [10.1021/jo502915w](https://doi.org/10.1021/jo502915w)
28. Palermo, E. F.; McNeil, A. J. Gradient Sequence π -Conjugated Copolymers. In *Sequence-Controlled Polymers: Synthesis, Self-Assembly, and Properties*; Lutz, J.-F., Meyer, T. Y., Ouchi, M., Sawamoto, M., Eds.; ACS Symposium Series 1170; American Chemical Society: Washington, DC, 2014; pp 287–299.
27. Zurcher, D. M.; Adhia, Y. J.; Díaz Romero, J. (undergraduate); McNeil, A. J. Modifying a Known Gelator Scaffold for Nitrite Detection. *Chem. Commun.* **2014**, *50*, 7813–7816. DOI: [10.1039/C4CC02504K](https://doi.org/10.1039/C4CC02504K)
26. Li, A.; Amonoo, J.; Huang, B.; Goldberg, P. K.; McNeil, A. J.; Green, P. F. Enhancing photovoltaic performance using an all-conjugated random copolymer to tailor bulk and interfacial morphology of the P3HT:ICBA active layer. *Adv. Funct. Mater.* **2014**, *24*, 5594–5602. DOI: [10.1002/adfm.201401058](https://doi.org/10.1002/adfm.201401058)
25. Berto, T.; Xu, N.; Lee, S. R.; McNeil, A. J.; Alp, E.; Zhao, J.; Richter-Addo, G.; Lehnert, N. Characterization of the Bridged Hyponitrite Complex $\{[\text{Fe}(\text{OEP})_2(\mu\text{-N}_2\text{O}_2)]\}$: Reactivity of Hyponitrite Complexes and Biological Relevance. *Inorg. Chem.* **2014**, *53*, 6398–6414. DOI: [10.1021/ic5002573](https://doi.org/10.1021/ic5002573)
24. Carter, K. K.; Rycenga, H. B. (undergraduate); McNeil, A. J. Improving Hg-triggered Gelation via Structural Modifications. *Langmuir* **2014**, *30*, 3522–3527. DOI: [10.1021/la404567b](https://doi.org/10.1021/la404567b)
23. Palermo, E. F.; Darling, S. B.; McNeil, A. J. π -Conjugated Gradient Copolymers Suppress Phase Separation and Improve Stability in Bulk Heterojunction Solar Cells. *J. Mater. Chem. C* **2014**, *2*, 3401–3406. DOI: [10.1039/C3TC32512A](https://doi.org/10.1039/C3TC32512A)

22. Bremmer, S. C.; McNeil, A. J.; Soellner, M. B. Enzyme-triggered Gelation: Targeting Proteases with Internal Cleavage Sites. *Chem. Commun.* **2014**, *50*, 1691–1693. DOI: [10.1039/C3CC48132H](https://doi.org/10.1039/C3CC48132H)
21. Bryan, Z. J.; McNeil, A. J. Conjugated Polymer Synthesis via Catalyst-transfer Polycondensation (CTP): Mechanism, Scope and Applications. *Macromolecules* **2013**, *46*, 8395–8405. (Invited Perspective) DOI: [10.1021/ma401314x](https://doi.org/10.1021/ma401314x)
20. Palermo, E. F.; van der Laan, H. L. (undergraduate); McNeil, A. J. Impact of π -Conjugated Gradient Sequence Copolymers on Polymer Blend Morphology. *Polym. Chem.* **2013**, *4*, 4606–4611. DOI: [10.1039/C3PY00601H](https://doi.org/10.1039/C3PY00601H)
19. Bryan, Z. J.; McNeil, A. J. Evidence for a Preferential Intramolecular Oxidative Addition in Ni-catalyzed Cross-coupling Reactions and their Impact on Chain-growth Polymerizations. *Chem. Sci.* **2013**, *4*, 1620–1624. DOI: [10.1039/C3SC00090G](https://doi.org/10.1039/C3SC00090G)
18. Lee, S. R.; McNeil, A. J. Accelerating Ni(II) Precatalyst Initiation using Reactive Ligands and its Impact on Chain-growth Polymerizations. *Dalton Trans.* **2013**, *42*, 4218–4222. DOI: [10.1039/C2DT32735J](https://doi.org/10.1039/C2DT32735J)
17. Palermo, E. F.; McNeil, A. J. Impact of Copolymer Sequence on Solid-state Properties for Random, Gradient, and Block Copolymers containing Thiophene and Selenophene. *Macromolecules* **2012**, *45*, 5948–5955. DOI: [10.1021/ma301135n](https://doi.org/10.1021/ma301135n)
16. Chen, J.; Wu, W. (undergraduate); McNeil, A. J. Detecting a Peroxide-based Explosive via Molecular Gelation. *Chem. Commun.* **2012**, *48*, 7310–7312. DOI: [10.1039/C2CC33486K](https://doi.org/10.1039/C2CC33486K)
15. Bremmer, S. C.; Chen, J.; McNeil, A. J.; Soellner, M. B. A General Method for Detecting Protease Activity via Gelation and its Application to Artificial Clotting. *Chem. Commun.* **2012**, *48*, 5482–5484. DOI: [10.1039/C2CC31537H](https://doi.org/10.1039/C2CC31537H)
14. Bryan, Z. J.; Smith, M. L.; McNeil, A. J. Chain-growth Polymerization of Aryl Grignards Initiated by a Stabilized NHC-Pd Precatalyst. *Macromol. Rapid Commun.* **2012**, *33*, 842–847. DOI: [10.1002/marc.201200096](https://doi.org/10.1002/marc.201200096)
13. Lee, S. R.; Bryan, Z. J.; Wagner, A. M.; McNeil, A. J. Effect of Ligand Electronic Properties on Precatalyst Initiation and Propagation in Ni-catalyzed Cross-coupling Polymerizations. *Chem. Sci.* **2012**, *3*, 1562–1566. DOI: [10.1039/C2SC00005A](https://doi.org/10.1039/C2SC00005A)
12. McNeil, A. J.; Lanni, E. L. New Conjugated Polymers and Synthetic Methods. In *Synthesis of Polymers*; Schlüter, D. A., Hawker, C. J., Sakamoto, J., Eds; Wiley-VCH: Germany, 2012; Vol 1, pp 475–486.
11. Adhia, Y. J.; Schloemer, T. H. (undergraduate); Perez, M. T. (undergraduate); McNeil, A. J. Using Polymeric Additives to Enhance Molecular Gelation: Impact of Poly(acrylic acid) on Pyridine-based Gelators. *Soft Matter* **2012**, *8*, 430–434. DOI: [10.1039/C1SM06580G](https://doi.org/10.1039/C1SM06580G)
10. Muro-Small, M. L.; Chen, J.; McNeil, A. J. Dissolution Parameters Reveal Role of Structure and Solvent in Molecular Gelation. *Langmuir* **2011**, *27*, 13248–13253. DOI: [10.1021/la202702r](https://doi.org/10.1021/la202702r)
9. Moy, C. L.; Kaliappan, R.; McNeil, A. J. Aryl Trihydroxyborate Salts: Thermally Unstable Species with Unusual Gelation Abilities. *J. Org. Chem.* **2011**, *76*, 8501–8507. DOI: [10.1021/jo201353j](https://doi.org/10.1021/jo201353j)
8. Lanni, E. L.; Locke, J. R.; Gleave, C. M. (undergraduate); McNeil, A. J. Ligand-based Steric Effects in Ni-catalyzed Chain-growth Polymerizations using Bis(dialkylphosphino)ethanes. *Macromolecules* **2011**, *44*, 5136–5145. DOI: [10.1021/ma200976f](https://doi.org/10.1021/ma200976f)
7. Locke, J. R.; McNeil, A. J. Syntheses of Gradient π -Conjugated Copolymers of Thiophene. *Macromolecules* **2010**, *43*, 8709–8710. DOI: [10.1021/ma102218y](https://doi.org/10.1021/ma102218y)
6. Lanni, E. L.; McNeil, A. J. Evidence for Ligand-Dependent Mechanistic Changes in Ni-catalyzed Chain-growth Polymerizations. *Macromolecules* **2010**, *43*, 8039–8044. DOI: [10.1021/ma101565u](https://doi.org/10.1021/ma101565u)
5. Moy, C. L.; Locke, J. R.; Coppola, B. P.; McNeil, A. J. Improving Science Education and Understanding through Editing Wikipedia. *J. Chem. Educ.* **2010**, *87*, 1159–1162. DOI: [10.1021/ed100367v](https://doi.org/10.1021/ed100367v)
 • Highlighted in *Science* **2010**, *330*, 891.
4. Chen, J.; Kampf, J. W.; McNeil, A. J. Comparing Molecular Gelators and Nongelators based on Solubilities and Solid-state Interactions. *Langmuir* **2010**, *26*, 13076–13080. DOI: [10.1021/la102500u](https://doi.org/10.1021/la102500u)
3. King, K. N.; McNeil, A. J. Streamlined Approach to a New Gelator: Inspiration from Solid-state Interactions for a Mercury-Induced Gelation. *Chem. Commun.* **2010**, *46*, 3511–3513. DOI: [10.1039/C002081H](https://doi.org/10.1039/C002081H)
2. Lanni, E. L.; McNeil, A. J. Mechanistic Studies on Ni(dppe)Cl₂-catalyzed Chain-growth Polymerizations: Evidence for Rate-Determining Reductive Elimination. *J. Am. Chem. Soc.* **2009**, *131*, 16573–16579. DOI: [10.1021/ja904197q](https://doi.org/10.1021/ja904197q)

1. Chen, J.; McNeil, A. J. Analyte-Triggered Gelation: Initiating Self-Assembly via Oxidation-Induced Planarization. *J. Am. Chem. Soc.* **2008**, *130*, 16496–16497. DOI: [10.1021/ja807651a](https://doi.org/10.1021/ja807651a)
• Highlighted in [Chemical and Engineering News](#).

RESEARCH PUBLICATIONS (BEFORE MICHIGAN)

11. Wheeler, S. E.; McNeil, A. J.; Müller, P.; Swager, T. M.; Houk, K. N. Probing Substituent Effects in Aryl-Aryl Interactions Using Stereoselective Diels-Alder Cycloadditions. *J. Am. Chem. Soc.* **2010**, *132*, 3304–3311.
10. Liou, L. R.; McNeil, A. J.; Toombes, G. E. S.; Collum, D. B. Structures of β -Amino Ester Enolates: New Strategies using the Method of Continuous Variation. *J. Am. Chem. Soc.* **2008**, *130*, 17334–17341.
9. Gruver, J. M.; Liou, L. R.; McNeil, A. J.; Ramírez, A.; Collum, D. B. Solution Structures of Lithium Enolates, Phenolates, Carboxylates, and Alkoxides in the Presence of *N,N,N',N'*-Tetramethylethylenediamine: A Prevalence of Cyclic Dimers. *J. Org. Chem.* **2008**, *73*, 7743–7747.
8. Liou, L. R.; McNeil, A. J.; Ramírez, A.; Toombes, G. E. S.; Gruver, J. M.; Collum, D. B. Lithium Enolates of Simple Ketones: Structure Determination Using the Method of Continuous Variation. *J. Am. Chem. Soc.* **2008**, *130*, 4859–4868.
7. Collum, D. B.; McNeil, A. J.; Ramírez, A. Lithium Diisopropylamide: Solution Kinetics and Implications for Organic Synthesis. *Angew. Chem. Int. Ed.* **2007**, *46*, 3002–3017.
6. McNeil, A. J.; Müller, P.; Whitten, J. E.; Swager, T. M. Conjugated Polymers in an Arene Sandwich. *J. Am. Chem. Soc.* **2006**, *128*, 12426–12427.
5. McNeil, A. J.; Collum, D. B. Reversible Enolization of β -Amino Carboxamides by Lithium Hexamethyldisilazide. *J. Am. Chem. Soc.* **2005**, *127*, 5655–5661.
4. McNeil, A. J.; Toombes, G. E. S.; Gruner, S. M.; Lobkovsky, E.; Collum, D. B.; Chandramouli, S. V.; Vanasse, B. J.; Ayers, T. A. Diastereoselective Alkylation of β -Amino Esters: Structural and Rate Studies Reveal Alkylations of Hexameric Lithium Enolates. *J. Am. Chem. Soc.* **2004**, *126*, 16559–16568.
3. McNeil, A. J.; Toombes, G. E. S.; Chandramouli, S. V.; Vanasse, B. J.; Ayers, T. A.; O'Brien, M. K.; Lobkovsky, E.; Gruner, S. M.; Marohn, J. A.; Collum, D. B. Characterization of β -Amino Ester Enolates as Hexamers via ^6Li NMR Spectroscopy. *J. Am. Chem. Soc.* **2004**, *126*, 5938–5939.
2. McNeil, A. J.; Hinkle, R. J.; Rouse, E. A.; Thomas, Q. A.; Thomas, D. B. Vinyl Carbocations: Solution Studies of Alkenyl(aryl)iodonium Triflate Fragmentations. *J. Org. Chem.* **2001**, *66*, 5556–5565.
1. Hinkle, R. J.; McNeil, A. J.; Thomas, Q. A.; Andrews, M. N. Primary Vinyl Cations in Solution: Kinetics and Products of β,β -Disubstituted Alkenyl(aryl)iodonium Triflate Fragmentations. *J. Am. Chem. Soc.* **1999**, *121*, 7437–7438.

PATENTS & PROVISIONAL PATENT APPLICATIONS

6. McNeil, A. J.; Fagnani, D. Methods of Treating of Halogen-containing Waste Plastic to Produce Halogenated Products. US Provisional Patent Application 63/486,955, filed Feb 24, 2023.
5. Chazovachii, P. T.; Somers, M.; Alfaro, J.; McNeil, A. J. Preparation of Pressure-Sensitive Adhesives from Post-Consumer Superabsorbent Polymers. US Patent Application US2022/0403217 A1. (Pending)
4. Harris, J. T.; McNeil, A. J. Ionic-Functionalized Wood Pulp and Related Methods for Water Treatment. US Patent Application 17/749,276. US Patent Application US2022/0370982 A1 (Pending)
3. Chazovachii, P. T.; Collias, D. I.; Ji, W.; McNeil, A. J. Microplastic Removal using Adhesives. PCT Patent Application US2023/0234028 A1. (Pending)
2. Collias, D. I.; Zimmerman, P.; Chazovachii, P. T.; Robo, M.; McNeil, A.; Marsh, N.; James, M. I. Super Absorbent Polymer Recycling to Pressure Sensitive Adhesives. US Patent 11,781,045 B2.
1. McNeil, A. J.; Carter, K. N. Method and Kit for Detecting Lead in a Solid Sample. US Patent 10,551,368.