

LIST OF MRSEC-SUPPORTED PUBLICATIONS

2024–2025 [159]

March 1, 2024 – February 28, 2025

IRG-1 [11]

a. Primary MRSEC Support that Acknowledge the MRSEC Award DMR-2308708 [5]

1. M. Czuczola, M.S. Hossain, D.P. Shannon, P.T. Morris, P.T. Getty, C.M. **Bates**, J. **Read de Alaniz**, C.J. **Hawker**, Telechelic dithiol copolymers as tunable building blocks for synthesizing multiblock materials, *J. Polym. Sci.* **63** (2025) 759–765. DOI: 10.1002/pol.20240876
2. C.A. D'Ambra, P.T. Getty, T. Eom, M. Czuczola, E.A. Murphy, S. Biswas, A. Abdilla, J.M. Mecca, T.D. Bekemeier, S. Swier, A. Fielitz, C.J. **Hawker**, C.M. **Bates**, Facile preparation of tunable polyborosiloxane networks via hydrosilylation, *Chem. Mater.* **36** (2024) 5935–5942. DOI: 10.1021/acs.chemmater.4c00224
3. T. Eom, P.T. Getty, M. Czuczola, C.M. **Bates**, C.J. **Hawker**, Carbosiloxane bottlebrush networks for enhanced performance and recyclability, *Macromolecules* **57** (2024) 10522–10529. DOI: 10.1021/acs.macromol.4c02147
4. K.M. Karnaukh, S. Xie, K-C. Yang, K. Komal, R.A. **Segalman**, J. **Read de Alaniz**, Photoinduced morphology change in ionic supramolecular block copolymer, *Polym. Chem.* **15** (2024) 3806–3813. DOI: 10.1039/D4PY00682H
5. E.A. Murphy, C. Zhang, C.M. **Bates**, C.J. **Hawker**, Chromatographic separation: A versatile strategy to prepare discrete and well-defined polymer libraries, *Acc. Chem. Res.* **57** (2024) 1202–1213. DOI: 10.1021/acs.accounts.4c00059

b. Partial MRSEC Support that Acknowledge the MRSEC Award DMR-2308708 [6]

6. J.T. Bamford, S.D. Jones, N.S. Schausser, B.J. Pedretti, L.W. Gordon, N.A. Lynd, R.J. Clément, R.A. **Segalman**, Improved mechanical strength without sacrificing Li-Ion transport in polymer electrolytes, *ACS Macro Lett.* **13** (2024) 638–643. DOI: 10.1021/acsmacrolett.4c00158
7. J. Chen, V. Bhat, C.J. **Hawker**, High-throughput synthesis, purification, and application of alkyne-functionalized discrete oligomers, *J. Am. Chem. Soc.* **146** (2024) 8650–8658. DOI: 10.1021/jacs.4c00751
8. M. Levin, Y. Tang, C.D. Eisenbach, M.T. **Valentine**, N. Cohen, Understanding the response of poly(ethylene glycol) diacrylate (PEGDA) hydrogel networks: A statistical mechanics-based framework, *Macromolecules* **57** (2024) 7074–7086. DOI: 10.1021/acs.macromol.3c02635

9. M. Seifrid, S. Lo, D.G. Choi, G. Tom, M.L. Le, K. Li, R. Sankar, H-T. Vuong, H. Wakidi, A. Yi, Z. Zhu, N. Schopp, A. Peng, B.R. Luginbuhl, T-Q. **Nguyen**, A. Aspuru-Guzik, Beyond molecular structure: Critically assessing machine learning for designing organic photovoltaic materials and devices, *J. Mater. Chem. A* **12** (2024) 14540–14558. DOI: 10.1039/D4TA01942C
10. Y. Tang, M. Levin, O.G. Long, C.D. Eisenbach, N. Cohen, M.T. **Valentine**, Data-driven framework for the prediction of PEGDA hydrogel mechanics, *ACS Biomater. Sci. Eng.* **11** (2025) 259–267. DOI: 10.1021/acsbiomaterials.4c01762
11. S. Yoon, B. Reyes-Suárez, S.T. Pham, H. Vezin, Y.A. Tobon, M. Lee, S. Mugiraneza, B.M. Kim, M.Y.T. Oide, S. Yoo, S. Lee, S. H. Wang, S.M. Collins, C.M. **Bates**, Y. Park, B. Kim, G.N.M. Reddy, T-Q. **Nguyen**, Molecular cross-linking enhances stability of non-Fullerene acceptor organic photovoltaics, *ACS Energy Lett.* **10** (2025) 541–551. DOI: 10.1021/acsenerylett.4c02897

IRG-2 [10]

a. Primary MRSEC Support that Acknowledge the MRSEC Award DMR-2308708 [4]

12. D.J. Atkins, J.M. Rosas, L.K. Månsson, N. Shahverdi, S.S. Dey, A.A. **Pitenis**, Survival-associated cellular response maintained in pancreatic ductal adenocarcinoma (PDAC) switched between soft and stiff 3D microgel culture, *ACS Biomater. Sci. Eng.* **10** (2024) 2177–2187. DOI: 10.1021/acsbiomaterials.3c01079
13. C.W. Barney, S. Berezvai, A.L. Chau, Y. Kwon, A.A. **Pitenis**, R.M. **McMeeking**, M.T. **Valentine**, M.E. **Helgeson**, Experimental observation of near-wall effects during the puncture of soft solids, *Soft Matter* **20** (2024) 3806. DOI: 10.1039/d3sm01216f
14. A.L. Chau, K.M. Karnaukh, I. Maskiewicz, J. **Read de Alaniz**, A.A. **Pitenis**, Photoresponsive hydrogel friction, *Soft Matter* **20** (2024) 7227. DOI: 10.1039/d4sm00677a
15. J.M. Rosas, J.P. Campanale, J.L. Harwood, L. Li, R. Bae, S. Cheng, J.M. Tsou, K.M. Kaiser, D.D. Engle, D.J. Montell, A.A. **Pitenis**, Differential effects of confinement on the dynamics of normal and tumor-derived pancreatic ductal organoids, *ACS Appl. Bio. Mater.* **7** (2024) 8489–8502. DOI: 10.1021/acsabm.4c01301

b. Partial MRSEC Support that Acknowledge the MRSEC Award DMR-2308708 [6]

16. E.C. Day, S.S. Chittari, K.C. Cunha, R.J. Zhao, J.N. Dodds, D.C. Davis, E.S. Baker, R.B. Berlow, J-E. **Shea**, R.U. Kulkarni, A.S. Knight, A high-throughput workflow to analyze sequence-conformation relationships and explore hydrophobic patterning in disordered peptoids, *Chem.* **10** (2024) 3444–3458. DOI: 10.1016/j.chempr.2024.07.025
17. E.C. Day, K.C. Cunha, R.J. Zhao, A.J. DeStefano, J.N. Dodds, M.A. Yu, J.R. Bemis, S. Han, E.S. Baker, J-E. **Shea**, R.B. Berlow, A.S. Knight, Insights into conformational ensembles of compositionally identical disordered peptidomimetics, *Polym. Chem.* **15** (2024) 2970–2980. DOI: 10.1039/D4PY00341A

18. M. Gionet-Gonzales, G. Gathman, J. Rosas, K.Y. Kunisaki, D.G.P. Inocencio, N. Hakami, G.N. Milburn, A.A. **Pitenis**, K.S. Campbell, B.L. Pruitt, R.S. **Stowers**, Stress relaxation rates of myocardium from failing and non-failing hearts, *Biomech. Model. Mechanobiol.* **24** (2024) 265–280. DOI: 10.1007/s10237-024-01909-4
19. J. Han, S. Najafi, Y. Byun, L. Geonzon, S-H. Oh, J. Park, J.M. Koo, J. Kim, T. Chung, I.K. Han, S. Chae, D.W. Cho, J. Jang, U. Jeong, G.H. **Fredrickson**, S-H. Choi, K. Mayumi, E. Lee, J-E. **Shea**, Y. S. Kim, Bridge-rich and loop-less hydrogel networks through suppressed micellization of multiblock polyelectrolytes, *Nat. Commun.* **15** (2024) Article number: 6553. DOI: 10.1038/s41467-024-50902-z
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SEED [0]

- a. Primary MRSEC Support that Acknowledge the MRSEC Award DMR-2308708 [0]
- b. Partial MRSEC Support that Acknowledge the MRSEC Award DMR-2308708 [0]

SHARED FACILITIES [138]

22. B. Ahmadikia, A.L.Beyerlein, J.M. Hestroffer, M.A. Kumar, I.J. Beyerlein, Designing Ti-6Al-4V microstructure for strain delocalization using neural networks, *J. Mater. Sci: Mater. Theory* **8** (2024) Article 4. DOI: 10.1186/s41313-024-00055-9
23. R.A. Ahmed, K.P. Koirala, G-H. Lee, T. Li, Q. Zhao, Y. Fu, L. Zhong, J.D. Daddona, M. Zuba, C. Siu, O. Kahvecioglu, V.S. Battaglia, R.J. Clément, W. Yang, C. Wang, W. Xu, Enhanced electrochemical performance of disordered rocksalt cathodes in a localized high-concentration electrolyte, *Adv. Energy Mater.* **14** (2024) 2400722. DOI: 10.1002/aenm.202400722
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