

14. MRSEC-Supported Publications and Patents

†Denotes Publications with International Co-Authors
 **Denotes 100% MRSEC Supported

IRG-1 Publications resulting from PRIMARY MRSEC Support

1. Yun, H.; Prakash, A.; Birol, T.; Jalan, B.; Mkhoyan, K.A. *Dopant Segregation Inside and Outside Dislocation Cores in Perovskite BaSnO₃ and Reconstruction of the Local Atomic and Electronic Structures*. Nano Lett., **2021**, 21 (10), 4357-4364.
 DOI: [10.1021/acs.nanolett.1c00966](https://doi.org/10.1021/acs.nanolett.1c00966) DMR-1420013**, DMR-2011401
2. Zhang, Y.; Su, Q.; Zhu, J.; Koirala, S.; Koester, S.J.; Wang, X. *Thickness-dependent thermal conductivity of mechanically exfoliated β -Ga₂O₃ thin films*. Appl. Phys. Lett., **2020**, 116, 202101.
 DOI: [10.1063/5.0004984](https://doi.org/10.1063/5.0004984) Collaboration with IRG-2. DMR-1420013**
3. Day-Roberts, E.; Birol, T.; Fernandes, R.M. *Contrasting Ferromagnetism in Pyrite FeS₂ Induced by Chemical Doping versus Electrostatic Gating*. Phys. Rev. Materials, **2020**, 4 (5), 054405. DOI: [10.1103/PhysRevMaterials.4.054405](https://doi.org/10.1103/PhysRevMaterials.4.054405) DMR-1420013**
4. Yu, B.; Yu, G.; Walter, J.; Chaturvedi, V.; Gotchnik, J.; Freeland, J.W.; Leighton, C.; Greven, M. *Soft x-ray absorption spectroscopy and magnetic circular dichroism as operando probes of complex oxide electrolyte gate transistors*. Appl. Phys. Lett., **2020**, 116 (20), 201905.
 DOI: [10.1063/1.5138645](https://doi.org/10.1063/1.5138645) DMR-1420013**
5. Wang, H.; Prakash, A.; Reich, K.; Ganguly, K.; Jalan, B.; Leighton, C. *Scattering mechanisms and mobility enhancement in epitaxial BaSnO₃ thin films probed via electrolyte gating*. APL Materials, **2020**, 8 (7), 071113.
 DOI: [10.1063/5.0017227](https://doi.org/10.1063/5.0017227) DMR-1420013**
6. Walter, J.; Voigt, B.; Day-Roberts, E.; Heltemes, K.; Fernandes, R.M.; Birol, T.; Leighton, C. *Voltage-induced ferromagnetism in a diamagnet*. Science Advances, **2020**, 6 (31), eabb7721.
 DOI: [10.1126/sciadv.abb7721](https://doi.org/10.1126/sciadv.abb7721) DMR-1420013**
7. Day-Roberts, E.; Fernandes, R.M.; Kamenev, A. *Nature of protected zero-energy states in Penrose quasicrystals*. Physical Review B, **2020**, 102 (6), e064210.
 DOI: [10.1103/PhysRevB.102.064210](https://doi.org/10.1103/PhysRevB.102.064210) DMR-1420013
8. Ayino, Y.Z.; Yue, J.; Wang, T.; Jalan, B.; Pribyl, V. *Effects of paramagnetic pair-breaking and spin-orbital coupling on multi-band superconductivity*. J. Phys.: Condens. Matter, **2020**, 32 (38), 38LT02. DOI: [10.1088/1361-648X/ab940c](https://doi.org/10.1088/1361-648X/ab940c) Collaboration with SEED. DMR-1420013

IRG-1 Publications resulting from PARTIAL MRSEC Support

9. Majkic, G.; Jeong J.S.; Yun, H.; Robles, Hernandez F.C.; Galstyan, E.; Pratap, R.; Cheng, H.; Stokes, A.; Mkhoyan, K.A.; Selvamanickam, V. *New insight into strain and composition of BaZrO₃ nanorods in REBCO superconductor*. Supercond Sci Technol., **2021**, 34.
 DOI: [10.1088/1361-6668/ac23ba](https://doi.org/10.1088/1361-6668/ac23ba)
10. Postiglione, W.M.; Ganguly, K.; Yun, H.; Jeong, J.S.; Jacobson, A.; Borgeson, L.; Jalan, B.; Leighton, C.; Mkhoyan, A. *Structure-property relationships and mobility optimization in sputtered La-doped BaSnO₃ films: Toward 100cm²V⁻¹s⁻¹ mobility*. Phys. Rev. Materials, **2021**, 5 (4), 044604. DOI: [10.1103/physrevmaterials.5.044604](https://doi.org/10.1103/physrevmaterials.5.044604) Collaboration with IRG-2. DMR-2011401, DMR-1420013

11. Voigt, B.; Moore, W.; Maiti, M.; Walter, J.; Das, B.; Manno, M.; **Leighton, C.**; **Aydil, E.S.** *Observation of an Internal p-n Junction in Pyrite FeS₂ Single Crystals: Potential Origin of the Low Open Circuit Voltage in Pyrite Solar Cells*. ACS Materials Letters, **2020**, 2 (7), 861-868. DOI: [10.1021/acsmaterialslett.0c00207](https://doi.org/10.1021/acsmaterialslett.0c00207) **Collaboration with IRG-2. DMR-1420013**
12. Golani, P.; Yun, H.; Ghosh, S.; Wen, J.; Mkhoyan, K.A.; **Koester, S.J.** *Ambipolar transport in van der Waals black arsenic field effect transistors*. Nanotechnology, **2020**, 31 (40), 405203. DOI: [10.1088/1361-6528/ab9d40](https://doi.org/10.1088/1361-6528/ab9d40) **Collaboration with IRG-2. DMR-1420013**
13. Yun, H.; Topsakal, M.; Prakash, A.; **Jalan, B.**; Jeong, J.S.; **Birol, T.**; **Mkhoyan, K.A.** *Metallic line defect in wide-bandgap transparent perovskite BaSnO₃*. Science Advances, **2021**, 7 (3), eabd4449. DOI: [10.1126/sciadv.abd4449](https://doi.org/10.1126/sciadv.abd4449) **Collaboration with IRG-2. DMR-2011401, DMR-1420013**
14. Prakash, A.; **Jalan, B.** *Molecular beam epitaxy for oxide electronics*. Wiley Series in Materials for Electronic & Optoelectronic Applications, **2019**, 423-452. DOI: [10.1002/9781119354987.ch26](https://doi.org/10.1002/9781119354987.ch26) **DMR-1420013**

IRG-1 Publications resulting from the USE OF SHARED FACILITIES

15. Izquierdo, N.; Myers, J.C.; Golani, P.; De Los Santos, A.; Seaton, N.; **Koester, S.J.**; **Campbell, S.A.** *Growth of black arsenic phosphorus thin films and its application for field-effect transistors*. Nanotechnology, **2021**, 32 (32), 325601. DOI: [10.1088/1361-6528/abfc09](https://doi.org/10.1088/1361-6528/abfc09) **DMR-1420013**
16. †Walter, J.; Bose, S.; Cabero, M.; Varela, M.; **Leighton, C.** *Giant anisotropic magnetoresistance in oxygen-vacancy-ordered epitaxial La_{0.5}Sr_{0.5}CoO_{3-δ} films*. Phys. Rev. Materials, **2020**, 4 (9), 091401. DOI: [10.1103/PhysRevMaterials.4.091401](https://doi.org/10.1103/PhysRevMaterials.4.091401) **MRSEC Program**
17. Mason, S.J.; Wesenberg, D.J.; Hojem, A.; Manno, M.; **Leighton, C.**; Zink, B.L. *Violation of the Wiedemann-Franz law through reduction of thermal conductivity in gold thin films*. Phys. Rev. Materials, **2020**, 4 (6), 065003. DOI: [10.1103/PhysRevMaterials.4.065003](https://doi.org/10.1103/PhysRevMaterials.4.065003) **MRSEC Program**
18. Batley, J.; Nguyen, M.; Kamboj, I.; Korostynski, C.; Aydil, E.S.; **Leighton, C.** *Quantitative Understanding of Superparamagnetic Blocking in Thoroughly Characterized Ni Nanoparticle Assemblies*. Chem. Mater., **2020**, 32 (15), 6494-6506. DOI: [10.1021/acs.chemmater.0c01758](https://doi.org/10.1021/acs.chemmater.0c01758) **MRSEC Program**
19. Zhang, Z.; Yu, G.; Garcia-Barriocanal, J.; Xie, Z.; **Frisbie, C.D.** *Strain-Work Function Relationship in Single-Crystal Tetracene*. ACS Appl. Mater. Interfaces, **2020**, 12 (36), 40607-40612. DOI: [10.1021/acsami.0c11566](https://doi.org/10.1021/acsami.0c11566) **DMR-1420013**
20. †Yue, J.; Quackenbush, N.F.; Laraib, I.; Carfagno, H.; Hameed, S.; Prakash, A.; Thoutam, L.R.; Ablett, J.M.; Lee, T.L.; **Greven, M.**; Doty, M.F.; Janotti, A.; **Jalan, B.** *Electronic structure and small-hole polarons in YTiO₃*. Phys. Rev. Materials, **2020**, 4 (11), 112001. DOI: [10.1103/PhysRevMaterials.4.112001](https://doi.org/10.1103/PhysRevMaterials.4.112001) **MRSEC Program**
21. Jochem, K.S.; Kolliopoulos, P.; Bidoky, F.Z.; Wang, Y.; Kumar, S.; **Frisbie, C.D.**; **Francis, L.F.**; *Self-aligned capillarity-assisted printing of high aspect ratio flexible metal conductors: Optimizing ink flow, plating, and mechanical adhesion*. Ind. Eng. Chem. Res., **2020**, 59 (51), 22107-22122. DOI: [10.1021/acs.iecr.0c03081](https://doi.org/10.1021/acs.iecr.0c03081) **Collaboration with IRG-2. MRSEC Program**

IRG-2 Publications resulting from PRIMARY MRSEC Support

22. Wu, X.; Greenberg, B.L.; **Zhang, Y.**; Held, J.T.; Huang, D.; Barriocanal, J.G.; **Mkhoyan, K.A.**; **Aydil, E.S.**; **Kortshagen, U.**; **Wang, X.** *Thermal transport in ZnO nanocrystal networks synthesized by nonthermal plasma*. Phys. Rev. Materials, **2020**, 4 (8), 086001. DOI: [10.1103/PhysRevMaterials.4.086001](https://doi.org/10.1103/PhysRevMaterials.4.086001) **DMR-2011401, DMR-1420013**

23. Ghosh, S.; Yun, H.; Kumar, P.; Conrad, S.; Tsapatsis, M.; **Mkhoyan, K.A.** *Two Distinct Stages of Structural Modification of ZIF-L MOF under Electron-Beam Irradiation*. Chemistry of Materials, **2021**, 33 (14), 5681-5689.
DOI: [10.1021/acs.chemmater.1c01332](https://doi.org/10.1021/acs.chemmater.1c01332) DMR-1420013**, DMR-2011401**
24. Song, G.; Adamczyk, J.; Park, Y.; Toberer, E.S.; **Hogan, C.J.** *Spray Pyrolysis-Aerosol Deposition for the Production of Thick Yttria-Stabilized Zirconia Coatings*. Advanced Engineering Materials, **2021**, 23 (8), 2100255. DOI: [10.1002/adem.202100255](https://doi.org/10.1002/adem.202100255) DMR-1420013
25. Huang, Y.; **Shklovskii, B.I.** *Spectral rigidity of non-Hermitian symmetric random matrices near the Anderson transition*. Phys. Rev. B, **2020**, 102 (6), 064212.
DOI: [10.1103/PhysRevB.102.064212](https://doi.org/10.1103/PhysRevB.102.064212) DMR-1420013**, DMR-2011401**
26. Beaudette, C.A.; Held, J.T.; Greenberg, B.L.; Nguyen, P.H.; Concannon, N.M.; Holmes, R.J.; **Mkhoyan, K.A.**; Aydil, E.S.; **Kortshagen, U.R.** *Plasmonic nanocomposites of zinc oxide and titanium nitride*. Journal of Vacuum Science and Technology A, **2020**, 38 (4), 042404.
DOI: [10.1116/1.5142858](https://doi.org/10.1116/1.5142858) DMR-1420013**, DMR-1852044**
27. Beaudette, C.A.; Held, J.T.; **Mkhoyan, K.A.**; **Kortshagen, U.R.** *Nonthermal Plasma-Enhanced Chemical Vapor Deposition of Two-Dimensional Molybdenum Disulfide*. ACS Omega, **2020**, 5 (34), 21853-21861. DOI: [10.1021/acsomega.0c02947](https://doi.org/10.1021/acsomega.0c02947) DMR-1420013**, DMR-1852044**
28. Chen, X.; **Hogan, C.J.** *Nanoparticle dynamics in the spatial afterglows of nonthermal plasma synthesis reactors*. Chemical Engineering Journal, **2021**, 411, 128383.
DOI: [10.1016/j.ccej.2020.128383](https://doi.org/10.1016/j.ccej.2020.128383) DMR-1420013
29. †Chen, X.; Seto, T.; **Kortshagen, U.R.**; **Hogan, C.J.** *Size and structural characterization of Si nanocrystal aggregates from a low pressure nonthermal plasma reactor*. Powder Technology, **2020**, 373, 164-173. DOI: [10.1016/j.powtec.2020.06.026](https://doi.org/10.1016/j.powtec.2020.06.026) DMR-1420013

IRG-2 Publications resulting from PARTIAL MRSEC Support

30. Hunter, K.I.; Andaraarachchi, H.P.; **Kortshagen, U.R.** *Nonthermal plasma synthesized silicon-silicon nitride core-shell nanocrystals with enhanced photoluminescence*. Journal of Physics D: Applied Physics, **2021**, 54 (50), 504005, 504005. DOI: [10.1088/1361-6463/ac2695](https://doi.org/10.1088/1361-6463/ac2695) DMR-1420013
31. Hang, X.; Matsuda, M.; Held, J.T.; Wang, J.P.; **Mkhoyan, A.** *Magnetic structure of Fe16 N2 determined by polarized neutron diffraction on thin-film samples*. Phys. Rev. B, **2020**, 102 (10), 104402. DOI: [10.1103/PhysRevB.102.104402](https://doi.org/10.1103/PhysRevB.102.104402) DMR-1420013
32. Fu, X.; Huang, Y.; Shi, Q.; **Shklovskii, B.**; Zudov, M.; Gardner, G.; Manfra, M. *Hidden Quantum Hall Stripes in $Al_xGa_{1-x}As/Al_{0.24}Ga_{0.76}As$ Quantum Wells*. Phys. Rev. Lett., **2020**, 125 (23). DOI: [10.1103/PhysRevLett.125.236803](https://doi.org/10.1103/PhysRevLett.125.236803) DMR-1420013, DMR-2011401

IRG-2 Publications resulting from the USE OF SHARED FACILITIES

33. De Leo, C.T.; Dannangoda, G.; Hobosyan, M.; Held, J.; Samghabadi, F.S.; Khodadadi, M.; Litvinov, D.; **Mkhoyan, A.**; Martirosyan, K. *Carbon combustion synthesis of Janus-like particles of magnetoelectric cobalt ferrite and barium titanate*. Ceramics International, **2021**, 47 (4), 5415-5422. DOI: [10.1016/j.ceramint.2020.10.123](https://doi.org/10.1016/j.ceramint.2020.10.123) DMR-1420013, DMR-2011401
34. Chen, H.; Xu, H.; Wang, C.; Kang, H.; **Haynes, C.L.**; **Mahanthappa, M.K.**; Sun, C.C. *Novel Quasi-Emulsion Solvent Diffusion-Based Spherical Cocrystallization Strategy for Simultaneously Improving the Manufacturability and Dissolution of Indomethacin*. Crystal Growth and Design, **2020**, 20 (10), 6752-6762. DOI: [10.1021/acs.cgd.0c00876](https://doi.org/10.1021/acs.cgd.0c00876) DMR-1420013

35. Li, Z.; Wray, P.R.; Su, M.P.; Tu, Q.; Andaraarachchi, H.; Jeong, Y.J.; Atwater, H.A.; **Kortshagen, U.R.** *Aluminum Oxide Nanoparticle Films Deposited from a Nonthermal Plasma: Synthesis, Characterization, and Crystallization*. ACS Omega, **2020**, 5 (38), 24754-24761.
DOI: [10.1021/acsomega.0c03353](https://doi.org/10.1021/acsomega.0c03353) **DMR-1420013**
36. Zhang, D.; Huang, D.; Wu, R.J.; Lattery, D.; Liu, J.; Wang, X.; Gopman, D.B.; **Mkhoyan, K.A.**; Wang, J.P.; **Wang, X.** *Erratum: Low Gilbert damping and high thermal stability of Ru-seeded L1₀-phase FePd perpendicular magnetic thin films at elevated temperatures (Appl. Phys. Lett. (2020) 117 (082405) DOI: 10.1063/5.0016100)*. Appl. Phys. Lett., **2020**, 117 (15), 159901.
DOI: [10.1063/5.0030925](https://doi.org/10.1063/5.0030925) **DMR-1420013**
37. Fan, B.; Zhao, W.; Ghosh, S.; **Mkhoyan, K.A.**; Tsapatsis, M.; **Stein, A.** *Diffusive Formation of Hollow Mesoporous Silica Shells from Core-Shell Composites: Insights from the Hydrogen Sulfide Capture Cycle of CuO@mSiO₂ Nanoparticles*. Langmuir, **2020**, 36 (23), 6540-6549.
DOI: [10.1021/acs.langmuir.0c00958](https://doi.org/10.1021/acs.langmuir.0c00958) **Collaboration with SEED**.
38. Frank, B.P.; Sigmon, L.R.; Deline, A.R.; Lankone, R.S.; Gallagher, M.J.; Zhi, B.; **Haynes, C.L.**; Fairbrother, D.H. *Photochemical Transformations of Carbon Dots in Aqueous Environments*. Environmental Science and Technology, **2020**, 54 (7), 4160-4170.
DOI: [10.1021/acs.est.9b07437](https://doi.org/10.1021/acs.est.9b07437) **DMR-1420013**
39. Zhang, Y.; Hudson-Smith, N.V.; Frand, S.D.; Cahill, M.S.; Davis, L.S.; Feng, Z.V.; **Haynes, C.L.**; Hamers, R.J. *Influence of the Spatial Distribution of Cationic Functional Groups at Nanoparticle Surfaces on Bacterial Viability and Membrane Interactions*. J. Am. Chem. Soc., **2020**, 142 (24), 10814-10823. DOI: [10.1021/jacs.0c02737](https://doi.org/10.1021/jacs.0c02737)
40. Buchman, J.T.; Bennett, E.A.; Wang, C.; Tamijani, A.A.; Bennett, J.W.; Hudson, B.G.; Green, C.M.; Clement, P.L.; Zhi, B.; Henke, A.H.; Laudadio, E.D.; Mason, S.E.; Hamers, R.J.; Klaper, R.D.; **Haynes, C.L.** *Nickel enrichment of next-generation NMC nanomaterials alters material stability, causing unexpected dissolution behavior and observed toxicity to S. oneidensis MR-1 and D. magna*. International Journal of Pharmaceutics, **2020**, 7, 571-587.
DOI: [10.1039/C9EN01074B](https://doi.org/10.1039/C9EN01074B) **MRSEC Program**
41. Chen, H.; Wang, C.; Kang, H.; Zhi, B.; **Haynes, C.L.**; Aburub, A.; Sun, C.C. *Microstructures and pharmaceutical properties of ferulic acid agglomerates prepared by different spherical crystallization methods*. International Journal of Pharmaceutics, **2020**, 574, 118914.
DOI: [10.1016/j.ijpharm.2019.118914](https://doi.org/10.1016/j.ijpharm.2019.118914)
42. Du, Y.; Jochem, K.S.; Thakral, N.; McCormick, A.V.; **Francis, L.F.** *Roll-to-roll micromolding of UV curable coatings*. Journal of Coatings Technology and Research, **2021**, 18 (3), 627-639.
DOI: [10.1007/s11998-021-00467-z](https://doi.org/10.1007/s11998-021-00467-z) **MRSEC PROGRAM**

IRG-3 Publications resulting from PRIMARY MRSEC Support

43. †Lieberman, L.; Schmidt, P.W.; Coughlin, M.L.; Ya'Akobi, A.M.; Davidovich, I.; Edmund, J.; Ertem, S.P.; Morozova, S.; Talmon, Y.; **Bates, F.S.**; **Lodge, T.P.**; *Salt-Dependent Structure in Methylcellulose Fibrillar Gels*. Macromolecules, **2021**, 54 (5), 2090-2100.
DOI: [10.1021/acs.macromol.0c02429](https://doi.org/10.1021/acs.macromol.0c02429) **DMR-1420013****, **DMR-2011401****

44. Lopez, J.; Gonzalez, R.; Ayala, J.; Cantu, J.; Castillo, A.; Parsons, J.; Myers, J.; **Lodge, T.P.**; Alcoutlabi, M. *Centrifugally spun TiO₂/C composite fibers prepared from TiS₂/PAN precursor fibers as binder-free anodes for LIBS*. Journal of Physics and Chemistry of Solids, **2021**, *149*, 109795. DOI: [10.1016/j.jpcs.2020.109795](https://doi.org/10.1016/j.jpcs.2020.109795) DMR-1420013**, DMR-1523577**
45. Metaxas, A.E.; Panwar, V.; Olson, R.L.; **Dutcher, C.S.** *Ionic strength and polyelectrolyte molecular weight effects on floc formation and growth in Taylor-Couette flows*. Soft Matter, **2020**, *17* (5), 1246-1257. DOI: [10.1039/d0sm01517b](https://doi.org/10.1039/d0sm01517b) DMR-1420013**, DMR-2011401**
46. Coughlin, M.L.; Liberman, L.; Ertem, S.P.; Edmund, J.; **Bates, F.S.**; **Lodge, T.P.** *Methyl cellulose solutions and gels: fibril formation and gelation properties*. Progress in Polymer Science, **2021**, *112*, 101324.
DOI: [10.1016/j.progpolymsci.2020.101324](https://doi.org/10.1016/j.progpolymsci.2020.101324) DMR-1420013**, DMR-2011401**
47. Micklavzina, B.; Metaxas, A.E.; **Dutcher, C.S.** *Microfluidic rheology of methylcellulose solutions in hyperbolic contractions and the effect of salt in shear and extensional flows*. Soft Matter, **2020**, *16* (22), 5273-5281. DOI: [10.1039/d0sm00371a](https://doi.org/10.1039/d0sm00371a) DMR-1420013**
48. Metaxas, A.E.; Coughlin, M.L.; Hansen, C.K.; **Bates, F.S.**; **Lodge, T.P.**; **Dutcher, C.S.** *Microfluidic filament thinning of aqueous, fibrillar methylcellulose solutions*. Phys. Rev. Fluids, **2020**, *5* (11), 113302. DOI: [10.1103/PhysRevFluids.5.113302](https://doi.org/10.1103/PhysRevFluids.5.113302) DMR-1420013**, DMR-2011401**
49. Sethuraman, V.; **Dorfman, K.D.** *Origins of the suppression of fibril formation in grafted methylcellulose solutions*. Phys. Rev. Materials, **2020**, *4* (8), 085601.
DOI: [10.1103/PhysRevMaterials.4.085601](https://doi.org/10.1103/PhysRevMaterials.4.085601) DMR-1420013**, DMR-2011401**

IRG-3 Publications resulting from PARTIAL MRSEC Support

50. Panwar, V.; Metaxas, A.E.; **Dutcher, C.S.** *Polyelectrolyte solutions in Taylor-Couette flows*. Journal of Non-Newtonian Fluid Mechanics, **2021**, *295*, 104617.
DOI: [10.1016/j.jnnfm.2021.104617](https://doi.org/10.1016/j.jnnfm.2021.104617) DMR-1420013, DMR-2011401
51. Styles, M.J.; Rodriguez, R.S.; Szlag, V.M.; Bryson, S.; Gao, Z.; Jung, S.; **Reineke, T.M.**; **Haynes, C.L.** *Optimization of film over nanosphere substrate fabrication for SERS sensing of the allergen soybean agglutinin*. Journal of Raman Spectroscopy, **2020**, *52* (2), 482-490.
DOI: [10.1002/jrs.6019](https://doi.org/10.1002/jrs.6019) DMR-2011401, DMR-1420013
52. Narayan, S.; Metaxas, A.E.; Bachnak, R.; Neumiller, T.; **Dutcher, C.S.** *Zooming in on the role of surfactants in droplet coalescence at the macroscale and microscale*. Current Opinion in Colloid and Interface Science, **2020**, *50*, 101385.
DOI: [10.1016/j.cocis.2020.08.010](https://doi.org/10.1016/j.cocis.2020.08.010) DMR-2011401, DMR-1420013

IRG-3 Publications resulting from the USE OF SHARED FACILITIES

53. Lindsay, A.P.; Lewis, R.M.; Lee, B.; Peterson, A.J.; **Lodge, T.P.**; **Bates, F.S.** *A15, If, and a Quasicrystal: Access to Complex Particle Packings via Bidisperse Diblock Copolymer Blends*. ACS Macro Letters, **2020**, 197-203. DOI: [10.1021/acsmacrolett.9b01026](https://doi.org/10.1021/acsmacrolett.9b01026) DMR-1420013
54. Mueller, A.J.; Lindsay, A.P.; Jayaraman, A.; **Lodge, T.P.**; **Mahanthappa, M.K.**; **Bates, F.S.** *Quasicrystals and Their Approximants in a Crystalline-Amorphous Diblock Copolymer*. Macromolecules, **2021**, *54* (6), 2647-2660. DOI: [10.1021/acs.macromol.0c02871](https://doi.org/10.1021/acs.macromol.0c02871) DMR-1420013, DMR-2011401
55. Chavez, R.O.; **Lodge, T.P.**; Huitron, J.; Chipara, M.; Alcoutlabi, M. *Centrifugally spun carbon fibers prepared from aqueous poly(vinylpyrrolidone) solutions as binder-free anodes in lithium-ion batteries*. Journal of Applied Polymer Science, **2020**, *138* (18), 50396.

DOI: [10.1002/app.50396](https://doi.org/10.1002/app.50396) DMR-1420013

56. Early, J.T.; Yager, K.G.; **Lodge, T.P.** *Direct Observation of Micelle Fragmentation via in Situ Liquid-Phase Transmission Electron Microscopy*. ACS Macro Lett., **2020**, 9 (5), 756-761.
DOI: [10.1021/acsmacrolett.0c00273](https://doi.org/10.1021/acsmacrolett.0c00273) DMR-1420013
57. Klimovica, K.; Pan, S.; Lin, T.W.; Peng, X.; **Ellison, C.J.**; Lapointe, A.M.; **Bates, F.S.**; Coates, G.W. *Compatibilization of iPP/HDPE Blends with PE-g-iPP Graft Copolymers*. ACS Macro Lett., **2020**, 9 (8), 1161-1166. DOI: [10.1021/acsmacrolett.0c00339](https://doi.org/10.1021/acsmacrolett.0c00339)
58. Radlauer, M.R.; Arora, A.; Matta, M.E.; **Bates, F.S.**; **Dorfman, K.D.**; Hillmyer, M.A. *Order and Disorder in ABCA' Tetra-block Terpolymers*. J. Phys. Chem. B, **2020**, 124 (45), 10266-10275.
DOI: [10.1021/acs.jpcc.0c07543](https://doi.org/10.1021/acs.jpcc.0c07543)

SEED Publications resulting from PRIMARY MRSEC Support

59. †Lee, H.R.; Kim, D.W.; Jones, V.O.; Choi, Y.; **Ferry, V.E.**; Geller, M.A.; Azarin, S.M. *Sonosensitizer-Functionalized Graphene Nanoribbons for Adhesion Blocking and Sonodynamic Ablation of Ovarian Cancer Spheroids*. Advanced Healthcare Materials, **2021**, 10 (13), 2001368.
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