15. MRSEC-Supported Publications, Patents, and Presentations, Period 3

†Denotes publications with international co-authors

Bolded names denote MRSEC primary participants

*Denotes 100% MRSEC-supported

**Denotes REU/RET participant co-author

IRG-1 Publications Resulting from PRIMARY MRSEC Support

1. Chakraborty, R.D.; Postiglione, W.M.; Ghosh, S.; **Mkhoyan, K.A.; Leighton, C.; Ferry, V.E.** *Optical properties of electrochemically gated $La_{1-x}Sr_xCoO_{3-\delta}$ as a topotactic phase-change material.* Adv. Opt. Mater., **2023,** 2300098. DOI: 10.1002/adom.202300098 **DMR-2011401***
2. Day-Roberts, E.; **Fernandes, R.M.; Birol, T.** *Gating-induced Mott transition in NiS_2.* Phys. Rev. B, **2023,** *107,* 085150. DOI: 10.1103/PhysRevB.107.085150 **DMR-2011401***
3. Wang, H.; Postiglione, W.M.; Chaturvedi, V.; Runnerstrom, E.L.; Cleri, A.; Nordlander, J.; Maria, J.; **Leighton, C.** *Electrolyte-gate-driven carrier density modulation and metal-insulator transition in semiconducting epitaxial CdO films.* APL Mater., **2022,** *10*, 121106. DOI: 10.1063/5.0116294 **DMR-2011401***
4. Yun, H.; Gautreau, D.; **Mkhoyan, K.A.; Birol, T.** *Strain effect on the ground-state structure of Sr_2SnO_4 Ruddlesden-Popper oxides.* Phys. Rev. Mater., **2022,** *6,* 104608. DOI: 10.1103/PhysRevMaterials.6.104608 **DMR-2011401**
5. Choudhary, R.; Nair, S.; Yang, Z.; Lee, D.; **Jalan, B.** *Semi-metallic $SrIrO_3$ films using solid-source metal-organic molecular beam epitaxy.* APL Mater., **2022,** *10*, 091118. DOI: 10.1063/5.0110707 **DMR-2011401**
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IRG-1 Publications Resulting from PARTIAL MRSEC Support

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9. Dewey, J.E.; Ghosh, S.; Chaturvedi, V.; Postiglione, W.M.; Figari, L.; Jacobson, A.; Korostynski, C.; Charlton, T.R.; **Mkhoyan, K.A.; Leighton, C.** *Anomalous strain relaxation and its impact on the valence-driven spin-state/metal-insulator transition in epitaxial $(Pr_{1-y}Y_y)_{1-x}Ca_xCoO_{3-\delta}$.* Phys. Rev. Mater., **2023,** *7,* 024415. DOI: 10.1103/physrevmaterials.7.024415 **DMR-2011401**
10. †Chaturvedi, V.; Ghosh, S.; Gautreau, D.M.; Postiglione, W.M.; Dewey, J.E.; Quarterman, P.; Balakrishnan, P.P.; Kirby, B.J.; Zhou, H.; Cheng, H.; Huon, A.; Charlton, T.; Fitzsimmons, M.R.; Korostynski, C.; Jacobson, A.; Figari, L.; Barriocanal, J.G.; **Birol, T.; Mkhoyan, K.A.; Leighton, C.** *Room-temperature valence transition in a strain-tuned perovskite oxide.* Nature Commun., **2022,** *13,* 7774. DOI: 10.1038/s41467-022-35024-8 **DMR-2011401**

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12. Fan, Y.; Cresswell, Z.; Guo, S.; Zhang, D.; Peterson, T.J.; Liu, J.; Lv, Y.; **Mkhoyan, K.A.; Wang, J.-P.** *Observation of unidirectional spin Hall magnetoresistance in amorphous $PtSn_4$/CoFeB bilayers.* Appl. Phys. Lett., **2022,** *121*, 092401. DOI: 10.1063/5.0097355 **DMR-2011401**
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IRG-2 Publications Resulting from PRIMARY MRSEC Support

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21. Park, S.J.; **Bates, F.S.; Dorfman, K.D.** *Complex phase behavior in binary blends of AB diblock copolymer and ABC triblock terpolymer.* Macromolecules, **2022,** *56*, 1278-1288. DOI: 10.1021/acs.macromol.2c02216 **DMR-2011401***
22. Cui, S.; Zhang, B.; Shen, L.; **Bates, F.S.; Lodge, T.P.** *Core-shell gyroid in ABC bottlebrush block terpolymers.* J. Am. Chem. Soc., **2022,** *144*, 21719-21727. DOI: 10.1021/jacs.2c09674 **DMR-2011401***
23. Bose, S.; Padilla, V.; Salinas, A.**; Ahmad, F.**; **Lodge, T.P.; Ellison, C.J.; Lozano, K.** *Hierarchical design strategies to produce internally structured nanofibers.* Polym. Rev., **2022.** DOI: 10.1080/15583724.2022.2132509 **DMR-2011401, DMR-2122178**

24. Chen, P.; **Mahanthappa, M.K.; Dorfman, K.D.** *Stability of cubic single network phases in diblock copolymer melts.* J. Polym. Sci., **2022,** *60*, 2543-2552. DOI: 10.1002/pol.20220318 **DMR-2011401**
25. Liberman Solomon, L.; Coughlin, M.L.; Weigand, S.; Edmund, J.; **Bates, F.S.; Lodge, T.P.** *Impact of side-chain length on the self-assembly of linear-bottlebrush diblock copolymers.* Macromolecules, **2022,** *55*, 4947-4955. DOI: 10.1021/acs.macromol.2c00758 **DMR-2011401***
26. Shen, Z.; Luo, K.; Park, S.J.; Li, D.; **Mahanthappa, M.K.; Bates, F.S.; Dorfman, K.D.; Lodge, T.P.; Siepmann, J.I.** *Stabilizing a double gyroid network phase with 2 nm feature size by blending of lamellar and cylindrical forming block oligomers.* JACS Au, **2022,** *2*, 1405-1416. DOI: 10.1021/jacsau.2c00101 **DMR-2011401***
27. Cote, B.M.; Lenart, W.; **Ellison, C.J.; Ferry, V.E.** *Surface structure dependent circular dichroism in single and double gyroid metamaterials.* Adv. Optical Mater., **2022,** *10*, 2200363. DOI: 10.1002/adom.202200363 **DMR-2011401***

IRG-2 Publications Resulting from PARTIAL MRSEC Support

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29. Neal, C.A.; León, V.**; Quan, M.C.; Chibambo, N.O.; **Calabrese, M.A.** *Tuning the thermodynamic, optical, and rheological properties of thermoresponsive polymer solutions via silica nanoparticle shape and concentration.* J. Colloid Interface Sci., **2023,** *629*, 878-895. DOI: 10.1016/j.jcis.2022.08.139 **DMR-2011401, DMR-2122178**
30. Neal, C.A.; Kresge, G.V.; Quan, M.C.; León, V.**; Chibambo, N.O.; **Calabrese, M.A.** *Effect of nanoparticle loading and magnetic field application on the thermodynamic, optical, and rheological behavior of thermoresponsive polymer solutions.* Vinyl Addit. Technol., **2022,** 1-18. DOI: 10.1002/vnl.21968 **DMR-2011401, DMR-2122178**
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Seed Publications Resulting from PRIMARY MRSEC Support

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41. **Flannigan, D.J.;** Curtis, W.A.; Vandenbussche, E.J.; Zhang, Y. *Low repetition-rate, high-resolution femtosecond transmission electron microscopy.* J. Mater. Chem. A, **2022,** *157*, 180903. DOI: 10.1063/5.0128109 **DMR-2011401**
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