

**14. MRSEC-Supported Publications and Patents**  
†Denotes Publications with International Co-Authors  
\*\*Denotes 100% MRSEC Supported  
Period 2

**IRG-1 Publications resulting from PRIMARY MRSEC Support**

1. Bidoky, F.Z.; Frisbie, C.D. *Sub-3V, MHz-Class Electrolyte-Gated Transistors and Inverters*. ACS Appl. Mater. Interfaces, **2022** [10.1021/acsami.2c01585](https://doi.org/10.1021/acsami.2c01585) DMR-2011401\*\*
2. Chaturvedi, V.; Postiglione, W.M.; Chakraborty, R.D.; Yu, B.; Tabiś, W.; Hameed, S.; Biniskos, N.; Jacobson, A.; Zhang, Z.; Zhou, H.; Greven, M.; Ferry, V.E.; Leighton, C. *Doping- and Strain-Dependent Electrolyte-Gate-Induced Perovskite to Brownmillerite Transformation in Epitaxial  $\text{La}_{1-x}\text{Sr}_x\text{CoO}_{3-\delta}$  Films*. ACS Appl. Mater. Interfaces, **2021**, *13* (43), 51205-51217. DOI: [10.1021/acsami.1c13828](https://doi.org/10.1021/acsami.1c13828) DMR-2011401\*\*, Collaboration with IRG-2
3. 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\*\*
4. He, T.; Frisbie, C.D. *Sub-Band Filling, Mott-like Transitions, and Ion Size Effects in  $\text{C}_{60}$  Single Crystal Electric Double Layer Transistors*. ACS Nano, **2022** DOI: [10.1021/acsnano.2c00222](https://doi.org/10.1021/acsnano.2c00222) DMR-2011401
5. He, T.; Stolte, M.; Wang, Y.; Renner, R.; Ruden, P.P.; Würthner, F.; Frisbie, C.D. *Site-specific chemical doping reveals electron atmospheres at the surfaces of organic semiconductor crystals*. Nat. Mater., **2021**, *20* (11), 1532-1538. DOI: [10.1038/s41563-021-01079-z](https://doi.org/10.1038/s41563-021-01079-z) DMR-2011401
6. Leighton, C.L.; Birol, T.; Walter, J. *What controls electrostatic vs. electrochemical response in electrolyte-gated materials? A perspective on critical materials factors*. APL Mater., **2022** DOI: [10.1063/5.0087396](https://doi.org/10.1063/5.0087396) DMR-2011401\*\*
7. Li, S.; Birol, T. *Free-Carrier-Induced Ferroelectricity in Layered Perovskites*. Phys. Rev. Lett., **2021**, *127* (8), 087601. DOI: [10.1103/PhysRevLett.127.087601](https://doi.org/10.1103/PhysRevLett.127.087601) DMR-2011401\*\*
8. Rajapitamahuni, A.K.; Manjeshwar, A.K.; Kumar, A.; Datta, A.; Ranga, P.; Thoutam, L.R.; Krishnamoorthy, S.; Singiseti, U.; Jalan, B. *Plasmon-phonon coupling in electrostatically gated  $\beta\text{-Ga}_2\text{O}_3$  films with mobility exceeding  $200\text{ cm}^2\text{V}^{-1}\text{s}^{-1}$* . ACS Nano, **2022**. DOI: [10.1021/acsnano.1c09535](https://doi.org/10.1021/acsnano.1c09535) DMR-2011401
9. Thoutam, L.R.; Truttmann, T.K.; Rajapitamahuni, A.K.; Jalan, B. *Hysteretic Magnetoresistance in a Non-Magnetic  $\text{SrSnO}_3$  Film via Thermal Coupling to Dynamic Substrate Behavior*. Nano Lett., **2021**, *21* (23), 10006-10011. DOI: [10.1021/acs.nanolett.1c03653](https://doi.org/10.1021/acs.nanolett.1c03653) DMR-2011401
10. Yun, H.; Prakash, A.; Birol, T.; Jalan, B.; Mkhoyan, K.A. *Dopant Segregation Inside and Outside Dislocation Cores in Perovskite  $\text{BaSnO}_3$  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\*\*

11. Zhang, Y.Y.; Eslamisaray, M.A.; Feng, T.; **Kortshagen, U.**; **Wang, X.** *Observation of suppressed diffuson and propagon thermal conductivity of hydrogenated amorphous silicon films.* *Nanoscale Adv.*, **2022**, *4* (1), 87-94. DOI: [10.1039/d1na00557j](https://doi.org/10.1039/d1na00557j) **DMR-2011401\*\***
12. Zhang, Y.Y.; Huang, D.B.; Zhang, C.; **Wang, X.J.** *The Spin-Heat Coupling and Enabling Applications*, *J. Appl. Phys.*, **2022**, *131*, 040902 [Editor's pick]. DOI: [10.1063/5.0073512](https://doi.org/10.1063/5.0073512) **DMR-2011401**

#### IRG-1 Publications resulting from PARTIAL MRSEC Support

13. Dentelski, D.; Day-Roberts, E.; **Biol, T.**; **Fernandes, R.M.**; Ruhman, J. *Robust gapless superconductivity in 4Hb-TaS<sub>2</sub>.* *Phys. Rev. B*, **2021**. DOI: [10.1103/PhysRevB.103.224522](https://doi.org/10.1103/PhysRevB.103.224522) **DMR-2011401**
14. El-Khatib, S.; Voigt, B.; Das, B.; Stahl, A.; Moore, W.; Maiti, M.; **Leighton, C.** *Conduction via surface states in antiferromagnetic Mott-insulating Ni S<sub>2</sub> single crystals.* *Phys. Rev. Mater.*, **2021**, *5*, (11). DOI: [10.1103/physrevmaterials.5.115003](https://doi.org/10.1103/physrevmaterials.5.115003) **DMR-2011401**
15. Kim, D.; Ghosh, S.; Akter, N.; Kraetz, A.; Duan, X.; Kwak, K.; Rangnekar, N.; Johnson, J.R.; Narasimharao, K.; Malik, M.A.; Al-Thabaiti, S.; McCool, B.; Boscoboinik, J.A.; **Mkhoyan, K.A.**; Tsapatsis, M. *Twin-free, directly-synthesized MFI nanosheets with improved thickness uniformity and their use in membrane fabrication.* **2022**. *Sci. Adv.* (8) DOI: [10.1126/sciadv.abm8162](https://doi.org/10.1126/sciadv.abm8162) **DMR-2011401**
16. Kundu, S.; Golani, P.; Yun, H.; Guo, S.; Youssef, K.M.; **Koester, S.J.**; **Mkhoyan, K.A.** *Tunable metal contacts at layered black-arsenic/metal interface forming during metal deposition for device fabrication.* *Commun. Mater.*, **2022**. DOI: [10.1038/s43246-022-00233-7](https://doi.org/10.1038/s43246-022-00233-7) **DMR-1420013, DMR-2011401**
17. 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 BaZrO<sub>3</sub> nanorods in REBCO superconductor.* *Supercond Sci Technol.*, **2021**, *34* (11), 115002. DOI: [10.1088/1361-6668/ac23ba](https://doi.org/10.1088/1361-6668/ac23ba) **DMR-1420013, DMR-2011401**
18. Nunn, W.; Truttmann, T.K.; **Jalan, B.** *A review of molecular-beam epitaxy of wide bandgap complex oxide semiconductors.* *J. Mater. Res.*, **2021**. DOI: [10.1557/s43578-021-00377-1](https://doi.org/10.1557/s43578-021-00377-1) **DMR-2011401**
19. Nunn, W.; Nair, S.; Yun, H.; Kamath Manjeshwar, A.; Rajapitamahuni, A.K.; Lee, D.; **Mkhoyan, K.A.**; **Jalan, B.** *Solid-source metal-organic molecular beam epitaxy of epitaxial RuO<sub>2</sub>.* *APL Mater.*, **2021**, *9* (9), 091112. DOI: [10.1063/5.0062726](https://doi.org/10.1063/5.0062726) **DMR-2011401**
20. Truttmann, T.K.; Zhou, J.J.; Lu, I.T.; Rajapitamahuni, A.K.; Liu, F.; Mates, T.E.; Bernardi, M.; **Jalan, B.** *Combined experimental-theoretical study of electron mobility-limiting mechanisms in SrSnO<sub>3</sub>.* *Comm. Phys.*, **2021**, *4* (1), 241. DOI: [10.1038/s42005-021-00742-w](https://doi.org/10.1038/s42005-021-00742-w) **DMR-2011401**
21. †Zhao, W.; Veerappan Vaithilingam, B.; Ghosh, S.; Li, X.; Geuzebroek, F.; El Nasr, A.S.; Khan, I.; Dara, S.; Mittal, N.; Daoutidis, P.; Al Hashimi, S.; **Mkhoyan, K.A.**; Al Wahedi, Y.; Tsapatsis, M.; **Stein, A.** *High-Capacity Regenerable H<sub>2</sub>S Sorbent for Reducing Sulfur Emissions.* *Ind. Eng. Chem. Res.*, **2021**, *60* (41), 14779-14787. DOI: [10.1021/acs.iecr.1c02715](https://doi.org/10.1021/acs.iecr.1c02715) **DMR-2011401**

### IRG-2 Publications resulting from PRIMARY MRSEC Support

22. Park, S.-J.; Bates, F.S.; Dorfman, K.D. *Alternating Gyroid in Block Polymer Blends*. ACS Macro Lett., (11) 643-650. 2022. DOI: [10.1021/acsmacrolett.2c00115](https://doi.org/10.1021/acsmacrolett.2c00115) DMR-2011401
23. Coughlin, M.L.; Edmund, J.; Bates, F.S.; Lodge, T.P. *Temperature Dependence of Chain Conformations and Fibril Formation in Solutions of Poly(N-isopropylacrylamide)-Grafted Methylcellulose*. Macromolecules, 2022. DOI: [10.1021/acs.macromol.1c02206](https://doi.org/10.1021/acs.macromol.1c02206) DMR-1420013, DMR-2011401\*\*
24. Liberman, L.; Coughlin, M.; Weigand, S.; Bates, F.S.; Lodge, T.P. *Phase Behavior of Linear-Bottlebrush Block Polymers*. Macromolecules, 2022. DOI: [10.1021/acs.macromol.2c00337](https://doi.org/10.1021/acs.macromol.2c00337) DMR-2011401\*\*
25. Park, S.J.; Cheong, G.K.; Bates, F.S.; Dorfman, K.D. *Stability of the Double Gyroid Phase in Bottlebrush Diblock Copolymer Melts*. Macromolecules, 2021, 54 (19), 9063-9070. DOI: [10.1021/acs.macromol.1c01654](https://doi.org/10.1021/acs.macromol.1c01654) DMR-2011401\*\*
26. Santa Chalarca, C.F.; Dalal, R.J.; Chapa, A.; Hanson, M.G.; Reineke, T.M. *Cation bulk and pK<sub>a</sub> modulate diblock polymer micelle binding to pDNA*, ACS Macro Lett., 2022. DOI: [10.1021/acsmacrolett.2c00015](https://doi.org/10.1021/acsmacrolett.2c00015) DMR-2011401
27. Sethuraman, V.; Zheng, D.; Morse, D.C.; Dorfman, K.D. *Adsorption of Charge Sequence-Specific Polydisperse Polyelectrolytes*. Macromolecules, DOI: [10.1021/acs.macromol.1c02623](https://doi.org/10.1021/acs.macromol.1c02623) 2022. DMR-2011401\*\*

### IRG-2 Publications resulting from PARTIAL MRSEC Support

28. Early, J.T.; Block, A.; Yager, K.G.; Lodge, T.P. *Molecular Weight Dependence of Block Copolymer Micelle Fragmentation Kinetics*. J. Am. Chem. Soc., 2021, 143 (20), 7748-7758. DOI: [10.1021/jacs.1c02147](https://doi.org/10.1021/jacs.1c02147) DMR-1420013, DMR-2011401, REU DMR-1559833
29. Kumar, R.; Santa Chalarca, C.F.; Bockman, M.R.; Bruggen, C.V.; Grimme, C.J.; Dalal, R.J.; Hanson, M.G.; Hexum, J.K.; Reineke, T.M. *Polymeric Delivery of Therapeutic Nucleic Acids*. Chem. Rev., 2021, 121 (18), 11527-11652. DOI: [10.1021/acs.chemrev.0c00997](https://doi.org/10.1021/acs.chemrev.0c00997) DMR-2011401
30. Magruder, B.R.; Park, S.J.; Collanton, R.P.; Bates, F.S.; Dorfman, K.D. *Laves Phase Field in a Diblock Copolymer Alloy*. Macromolecules, DOI: [10.1021/acs.macromol.2c00346](https://doi.org/10.1021/acs.macromol.2c00346), 2022. DMR-2011401
31. Panwar, V.; Metaxas, A.E.; Dutcher, C.S. *Polyelectrolyte solutions in Taylor-Couette flows*. J. 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

### SEED Publications resulting from PRIMARY MRSEC Support

32. Zhang, K.; Jiao, W.; Gonella, S. *Tunable band gaps and symmetry breaking in magnetomechanical metastructures inspired by multilayer two-dimensional materials*. Phys. Rev. B, 2021, 104 (2), L020301. DOI: [10.1103/PhysRevB.104.L020301](https://doi.org/10.1103/PhysRevB.104.L020301) DMR-2011401\*\*
33. Zhang, Y.; Choi, M.; Haugstad, G.; Tadmor, E.B.; Flannigan, D.J. *Holey Substrate-Directed Strain Patterning in Bilayer MoS<sub>2</sub>*. ACS Nano, 2021. DOI: [10.1021/acsnano.1c08348](https://doi.org/10.1021/acsnano.1c08348) DMR-2011401

### SEED Publications resulting from PARTIAL MRSEC Support

34. Curtis, W.A.; **Flannigan, D.** *Toward Å-fs-meV Resolution in Electron Microscopy: Systematic Simulation of the Temporal Spread of Single-Electron Packets.* Phys. Chem. Chem. Phys., **2021**, 23 (41), 23544-23553. DOI: [10.1039/d1cp03518e](https://doi.org/10.1039/d1cp03518e) **DMR-2011401**
35. Gnabasiak, R.A.; Suri, P.K.; Chen, J.; **Flannigan, D.J.** *Imaging coherent phonons and precursor dynamics in LaFeAsO with 4D ultrafast electron microscopy.* Phys. Rev. Mater., **2022**, 6, 024802. DOI: [10.1103/PhysRevMaterials.6.024802](https://doi.org/10.1103/PhysRevMaterials.6.024802) **DMR-2011401**
36. Gruba, S.M.; Francis, D.H.; Meyer, A.F.; Spanolios, E.; He, J.; Meyer, B.M.; Kim, D.; Xiong-hang, K.; **Haynes, C.L.** *Characterization of the Presence and Function of Platelet Opioid Receptors.* ACS Meas. Sci. Au, **2022**. DOI: [10.1021/acsmeasuresciau.1c00012](https://doi.org/10.1021/acsmeasuresciau.1c00012) **DMR-2011401**
37. Reisbick, S.A.; Zhang, Y.; Chen, J.; Engen, P.E.; **Flannigan, D.J.** *Coherent Phonon Disruption and Lock-In during a Photoinduced Charge-Density-Wave Phase Transition.* J. Phys. Chem. Lett., **2021**, 12 (27), 6439-6447. DOI: [10.1021/acs.jpcelett.1c01673](https://doi.org/10.1021/acs.jpcelett.1c01673) **DMR-2011401**
38. Yu, Z.; **Frontiera, R.R.** *Intermolecular Forces Dictate Vibrational Energy Transfer in Plasmonic-Molecule Systems.* ACS Nano, **2021**. DOI: [10.1021/acsnano.1c08431](https://doi.org/10.1021/acsnano.1c08431) **DMR-2011401**
39. Zhang, Y.; **Flannigan, D.J.** *Imaging Nanometer Phonon Softening at Crystal Surface Steps with 4D Ultrafast Electron Microscopy.* Nano Lett., **2021**, 21 (17), 7332-7338. DOI: [10.1021/acs.nanolett.1c02524](https://doi.org/10.1021/acs.nanolett.1c02524) **DMR-2011401**

### Publications resulting from the USE OF SHARED FACILITIES

40. Altay, E.; Jang, Y.J.; Kua, X.Q.; Hillmyer, M.A. *Synthesis, Microstructure, and Properties of High-Molar-Mass Polyglycolide Copolymers with Isolated Methyl Defects.* Biomacromolecules, **2021**, 22 (6), 2532-2543. DOI: [10.1021/acs.biomac.1c00269](https://doi.org/10.1021/acs.biomac.1c00269) **DMR-2011401**
41. Ayala, J.; Ramirez, D.; Myers, J.C.; **Lodge, T.P.**; Parsons, J.; Alcoutlabi, M. *Performance and morphology of centrifugally spun Co<sub>3</sub>O<sub>4</sub>/C composite fibers for anode materials in lithium-ion batteries.* Journal of Materials Science, **2021**, 56 (28), 16010-16027. DOI: [10.1007/s10853-021-06285-3](https://doi.org/10.1007/s10853-021-06285-3) **DMR-2011401**
42. Banerji, A.; Jin, K.; **Mahanthappa, M.K.**; **Bates, F.S.**; **Ellison, C.J.** *Porous Fibers Templated by Melt Blowing Cocontinuous Immiscible Polymer Blends.* ACS Macro Lett., **2021**, 10 (10), 1196-1203. DOI: [10.1021/acsmacrolett.1c00456](https://doi.org/10.1021/acsmacrolett.1c00456) **DMR-2011401**
43. Beaudette, C.A.; Andaraarachchi, H.P.; Wu, C.; **Kortshagen, U.R.** *Inductively coupled nonthermal plasma synthesis of aluminum nanoparticles.* Nanotechnology, **2021**, 32 (39), 395601, 395601. DOI: [10.1088/1361-6528/ac0cb3](https://doi.org/10.1088/1361-6528/ac0cb3) **DMR-2011401**
44. †Belthle, K.S.; Gries, U.N.; Mueller, M.P.; Kemp, D.; Prakash, A.; Rose, M.A.; Börgers, J.M.; **Jalan, B.**; Gunkel, F.; De Souza, R.A. *Quantitative Determination of Native Point-Defect Concentrations at the ppm Level in Un-Doped BaSnO<sub>3</sub> Thin Films.* Advanced Functional Materials, **2022**. DOI: [10.1002/adfm.202113023](https://doi.org/10.1002/adfm.202113023) **DMR-2011401**
45. Bu, F.; Nayak, G.; Bruggeman, P.; Annor, G.; Ismail, B.P. *Impact of plasma reactive species on the structure and functionality of pea protein isolate.* Food Chemistry, **2022**, 371, 131135. DOI: [10.1016/j.foodchem.2021.131135](https://doi.org/10.1016/j.foodchem.2021.131135) **DMR-2011401**



46. Buenaflor, J.P.; Lydon, C.K.; Zimmerman, A.; Desutter, O.L.; Wissinger, J.E. *Student explorations of calcium alginate bead formation by varying pH and concentration of acidic beverage juices*. Chem. Teacher Intl., **2022**, 0 (0). DOI: [10.1515/cti-2021-0027](https://doi.org/10.1515/cti-2021-0027) **DMR-2011401, DMR-1852044**
47. White J.M.; **Calabrese, M.A.** *Impact of small molecule and reverse poloxamer addition on the micellization and gelation mechanisms of poloxamer hydrogels*. Colloids and Surfaces A: Physicochemical and Engineering Aspects, **2022**, 638, 128246, 128246. DOI: [10.1016/j.colsurfa.2021.128246](https://doi.org/10.1016/j.colsurfa.2021.128246) **DMR-2011401**
48. Chatterjee, N.; Weidling, A.M.; Zhou, Y.; Ruden, P.P.; **Swisher, S.L.** *Influence of Thermal Postdeposition on Trap States in Sol-Gel Indium-Zinc Oxide TFTs*. IEEE Transactions on Electron Devices, **2022**, 69 (1), 180-188. DOI: [10.1109/ted.2021.3131107](https://doi.org/10.1109/ted.2021.3131107) **DMR-2011401**
49. Chawla, A.; **Bates, F.S.; Dorfman, K.D.; Morse, D.C.** *Identifying a critical micelle temperature in simulations of disordered asymmetric diblock copolymer melts*. Phys. Rev. Mater., **2021**, 5 (9), L092601. DOI: [10.1103/physrevmaterials.5.1092601](https://doi.org/10.1103/physrevmaterials.5.1092601) **DMR-2011401**
50. Cheong, G.K.; **Dorfman, K.D.** *Disordered Micelle Regime in a Conformationally Asymmetric Diblock Copolymer Melt*. Macromolecules, **2021**, 54 (21), 9868-9878. DOI: [10.1021/acs.macromol.1c01629](https://doi.org/10.1021/acs.macromol.1c01629) **DMR-2011401**
51. Cote, B.M.; Slauch, I.M.; Deceglie, M.G.; Silverman, T.J.; **Ferry, V.E.** *Light Management in Bifacial Photovoltaics with Spectrally Selective Mirrors*. ACS Appl. Energy Mater., **2021**, 4 (6), 5397-5402. DOI: [10.1021/acsae.1c01236](https://doi.org/10.1021/acsae.1c01236) **DMR-2011401**
52. Cote, B.M.; Slauch, I.M.; Silverman, T.J.; Deceglie, M.G.; **Ferry, V.E.** *Insulation or Irradiance: Exploring Why Bifacial Photovoltaics Run Hot*. IEEE Xplore, **2021**. 1228-1232. DOI: [10.1109/pvsc43889.2021.9518868](https://doi.org/10.1109/pvsc43889.2021.9518868) **DMR-2011401**
53. Derosa, C.A.; Luke, A.M.; Anderson, K.; **Reineke, T.M.; Tolman, W.B.; Bates, F.S.; Hillmyer, M.A.** *Regioregular Polymers from Biobased (R)-1,3-Butylene Carbonate*. Macromolecules, **2021**, 54 (13), 5974-5984. DOI: [10.1021/acs.macromol.1c00828](https://doi.org/10.1021/acs.macromol.1c00828) **DMR-2011401**
54. Duggirala, N.; Sonje, J.; Yuan, X.; Shalaev, E.; Suryanarayanan, R. *Phase behavior of poloxamer 188 in frozen aqueous solutions – Influence of processing conditions and cosolutes*. Int. J. Pharm., **2021**, 609, 121145. DOI: [10.1016/j.ijpharm.2021.121145](https://doi.org/10.1016/j.ijpharm.2021.121145) **DMR-2011401**
55. Fischer, N.G.; Chen, X.; Astleford-hopper, K.; He, J.; Mullikin, A.F.; Mansky, K.C.; Aparicio, C. *Antimicrobial and enzyme-responsive multi-peptide surfaces for bone-anchored devices*. Mater. Sci. Eng. C, **2021**, 125, 112108, 112108. DOI: [10.1016/j.msec.2021.112108](https://doi.org/10.1016/j.msec.2021.112108) **DMR-2011401**
56. Godbole, E.P.; von der Handt, A.; **Poerschke, D.** *Apatite and garnet stability in the Al–Ca–Mg–Si–(Gd/Y/Yb)–O systems and implications for T/EBC: CMAS reactions*. J. Am. Ceram. Soc., **2022**, 105 (2), 1596-1609. DOI: [10.1111/jace.18179](https://doi.org/10.1111/jace.18179) **DMR-2011401**
57. Hameed, S.; Joe, J.; Gautreau, D.M.; Freeland, J.W.; **Birol, T.; Greven, M.** *Two-component electronic phase separation in the doped Mott insulator  $Y_{1-x}Ca_xTiO_3$* . Phys. Rev. B, **2021**, 104 (4), 045112. DOI: [10.1103/PhysRevB.104.045112](https://doi.org/10.1103/PhysRevB.104.045112) **DMR-2011401**
58. †Hameed, S.; Joe, J.; Thoutam, L.R.; Garcia-Barriocanal, J.; Yu, B.; Yu, G.; Chi, S.; Hong, T.; Williams, T.J.; Freeland, J.W.; Gehring, P.M.; Xu, Z.; Matsuda, M.; **Jalan, B.;**

- Greven, M.** *Growth and characterization of large (Y, La)TiO<sub>3</sub> and (Y, Ca)TiO<sub>3</sub> single crystals.* Phys. Rev. Mater., **2021**, 5 (12), 125003. DOI: [10.1103/PhysRevMaterials.5.125003](https://doi.org/10.1103/PhysRevMaterials.5.125003) **DMR-2011401**
59. †Hameed, S.; El-Khatib, S.; Olson, K.P.; Yu, B.; Williams, T.J.; Hong, T.; Sheng, Q.; Yamakawa, K.; Zang, J.; Uemura, Y.J.; Zhao, G.Q.; Jin, C.Q.; Fu, L.; Gu, Y.; Ning, F.; Cai, Y.; Kojima, K.M.; Freeland, J.W.; Matsuda, M.; **Leighton, C.; Greven, M.** *Nature of the ferromagnetic-antiferromagnetic transition in Y<sub>1-x</sub>La<sub>x</sub>Ti O<sub>3</sub>.* Phys. Rev. B, **2021**, 104 (2), 024410. DOI: [10.1103/PhysRevB.104.024410](https://doi.org/10.1103/PhysRevB.104.024410) **DMR-2011401**
60. Ishibashi, J.S.A.; Pierce, I.C.; Chang, A.B.; Zografos, A.; El-zaatari, B.M.; Fang, Y.; Weigand, S.J.; **Bates, F.S.**; Kalow, J.A. *Mechanical and Structural Consequences of Associative Dynamic Cross-Linking in Acrylic Diblock Copolymers.* Macromolecules, **2021**, 54 (9), 3972-3986. DOI: [10.1021/acs.macromol.0c02744](https://doi.org/10.1021/acs.macromol.0c02744) **DMR-2011401**
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