LIST OF MRSEC-SUPPORTED PUBLICATIONS

2015-2016 MRL PUBLICATIONS [237]

IRG-1 [27]

a. Primary MRSEC Support that Acknowledge the MRSEC Award DMR-1121053 [13]

1. D.J. Audus, G.H. **Fredrickson**, "Field-based simulations of nanostructured polyelectrolyte gels," in *Materials for Energy Infrastructure*, Ed. W. Udomkichdecha, A. Mononukul, T. Böllinghaus, J. Lexow. Singapore: Springer, pp. 1-9 (2016). ISBN: 978-981-287-724-6
DOI: 10.1007/978-981-287-724-6 [PDF]

2. X. Banquy, D.W. Lee, K. Kristiansen, M.A. Gebbie, J.N. **Israelachvili**, "Interaction forces between supported lipid bilayers in the presence of PEGylated polymers," *Biomacromolecules* **17** (2016) 88-97.
DOI: 10.1021/acs.biomac.5b01216 [PDF]

3. K.W. Desmond, N.A. Zacchia, J.H. **Waite**, M.T. **Valentine**, "Dynamics of mussel plaque detachment," *Soft Matter* **11** (2015) 6832-6839.
DOI: 10.1039/C5SM01072A [PDF]

4. E. Filippidi, D.G. DeMartini, P. Malo de Molina, E.W. Danner, J. Kim, M.E. **Helgeson**, J.H. **Waite**, M.T. **Valentine**, "The microscopic network structure of mussel (*Mytilus)* adhesive plaques," *J. R. Soc. Interface* **12** (2015) 1-10.
DOI: 10.1098/rsif.2015.0827 [PDF]

5. W.R. Gutekunst, C.J. **Hawker**, "A general approach to sequence-controlled polymers using macrocyclic ring opening metathesis polymerization," *J. Am. Chem. Soc*. **137** (2015) 8038-8041.
DOI: 10.1021/jacs.5b04940 [PDF]

6. K. Kempe, R.A. Wylie, M.D. Dimitriou, H. Tran, R. Hoogenboom, U.S. Schubert, C.J. **Hawker**, L.M. Campos, L.A. Connal, "Preparation of non-spherical particles from amphiphilic block copolymers," *J. Polym. Sci. A: Polym. Chem.* **54** (2016) 750-757.
DOI: 10.1002/pola.27927 [PDF]

7. G.P. Maier, M.V. Rapp, J.H. **Waite**, J.N. **Israelachvili**, A. **Butler**, "Adaptive synergy between catechol and lysine promotes wet adhesion by surface salt displacement," *Science* **349** (2015) 628-632.
DOI: 10.1126/science.aab0556 [PDF]

8. K.M. Mattson, A.A. Latimer, A.J. McGrath, N.A. Lynd, P. Lundberg, Z.M. Hudson, C.J. **Hawker**, "A facile synthesis of catechol-functionalized poly(ethylene oxide) block and random copolymers," *J. Polym. Sci. A: Polym. Chem.* **53** (2015) 2685-2692.
DOI: 10.1002/pola.27749 [PDF]

9. M.S. Menyo, C.J. **Hawker**, J.H. **Waite**, "Rate-dependent stiffness and recovery in interpenetrating network hydrogels through sacrificial metal coordination bonds," *ACS Macro Lett.* **4** (2015) 1200-1204.
DOI: 10.1021/acsmacrolett.5b00664 [PDF]

10. D. Montarnal, N. Delbosc, C. Chamignon, M.A. Virolleaud, Y. Luo, C.J. **Hawker**, E. Drockenmuller, J. Bernard, "Highly ordered nanoporous films from supramolecular diblock copolymers with hydrogen-bonding junctions," *Angew. Chem. Int. Ed.* **54** (2015) 11117-11121.
DOI: 10.1002/anie.201504838 [PDF]

11. T. Murakami, B.V.K.J. Schmidt, H.R. Brown, C.J. **Hawker**, "One-pot 'click' fabrication of slide-ring gels," *Macromolecules* **48** (2015) 7774-7781.
DOI: 10.1021/acs.macromol.5b01713 [PDF]

12. A.M. Schrader, S.H. Donaldson, Jr., J. Song, C.-Y. Cheng, D.W. Lee, S. **Han**, J.N. **Israelachvili**, "Correlating steric hydration forces with water dynamics through surface force and diffusion NMR measurements in a lipid–DMSO–H_2O system," *PNAS* **112** (2015) 10708-10713.
DOI: 10.1073/pnas.1512325112 [PDF]

13. W. Shi, Y. Tateishi, W. Li, C.J. **Hawker**, G.H. **Fredrickson**, E.J. Kramer, "Producing small domain features using miktoarm block copolymers with large interaction parameters," *ACS Macro Lett.* **4** (2015) 1287-1292.
DOI: 10.1021/acsmacrolett.5b00712 [PDF]

b. Partial MRSEC Support that Acknowledge the MRSEC Award DMR-1121053 [14]

14. B.K. Ahn, S. Das, R. Linstadt, Y. Kaufman, N.R. Martinez Rodriguez, R. Mirshafian, E. Kesselman, Y. Talmon, B.H. Lipshutz, J.N. **Israelachvili**, J.H. **Waite**, "High-performance mussel-inspired adhesives of reduced complexity," *Nature Commun.* **6** (2015) 8663.
DOI: 10.1038/ncomms9663 [PDF]

15. J. Areephong, K.M. Mattson, N.J. Treat, S.O. Poelma, J.W. Kramer, H.A. Sprafke, A.A. Latimer, J. **Read de Alaniz**, C.J. **Hawker**, "Triazine-mediated controlled radical polymerization: New unimolecular initiators," *Polym. Chem.* **7** (2016) 370-374.
DOI: 10.1039/c5py01563d [PDF]

16. N.V. Handa, A.V. Serrano, M.J. Robb, C.J. **Hawker**, "Exploring the synthesis and impact of end-functional poly(3-hexylthiophene)," *J. Polym. Sci. A: Polym. Chem.* **53** (2015) 831-841.
DOI: 10.1002/pola.27522 [PDF]

17. K.L. Killops, C.G. Rodriguez, P. Lundberg, C.J. **Hawker**, N.A. Lynd, "A synthetic strategy for the preparation of sub-100 nm functional polymer particles of uniform diameter," *Polym. Chem.* **6** (2015) 1431-1435.
DOI: 10.1039/C4PY01703J [PDF]

18. A.J. McGrath, W. Shi, C.G. Rodriguez, E.J. Kramer, C.J. **Hawker**, N.A. Lynd, "Synthetic strategy for preparing chiral double-semicrystalline polyether block copolymers," *Polym. Chem.* **6** (2015) 1465-1473.
DOI: 10.1039/C4PY01503G [PDF]

19. D.R. Miller, S. Das, K.-Y. Huang, S. **Han**, J.N. **Israelachvili**, J.H. **Waite**, "Mussel coating protein-derived complex coacervates mitigate frictional surface damage," *ACS Biomater. Sci. Eng.* **1** (2015) 1121-1128.
DOI: 10.1021/acsbiomaterials.5b00252 [PDF]

20. D.R. Miller, J.E. Spahn, J.H. **Waite**, "The staying power of adhesion-associated antioxidant activity in *Mytilus californianus*," *J. R. Soc. Interface* **12** (2015) 20150614.
DOI: 10.1098/rsif.2015.0614 [PDF]

21. C.W. Pester, J.E. Poelma, B. Narupai, S.N. Patel, G.M. Su, T.E. Mates, Y. Luo, C.K. Ober, C.J. **Hawker**, E.J. Kramer, "Ambiguous anti-fouling surfaces: Facile synthesis by light-mediated radical polymerization," *J. Polym. Sci. A: Polym. Chem.* **54** (2016) 253-262.
DOI: 10.1002/pola.27748 [PDF]

22. B.V.K.J. Schmidt, J. Elbert, D. Scheid, C.J. **Hawker**, D. Klinger, M. Gallei, "Metallopolymer-based shape anisotropic nanoparticles," *ACS Macro Lett.* **4** (2015) 731-735.
DOI: 10.1021/acsmacrolett.5b00350 [PDF]

23. S. Seo, S. Das, P.J. Zalicki, R. Mirshafian, C.D. Eisenbach, J.N. **Israelachvili**, J.H. **Waite**, B.K. Ahn, "Microphase behavior and enhanced wet-cohesion of synthetic copolyampholytes inspired by a mussel foot protein," *J. Am. Chem. Soc*. **137** (2015) 9214-9217.
DOI: 10.1021/jacs.5b03827 [PDF]

24. W.C. Shi, A.J. McGrath, Y.L. Li, N.A. Lynd, C.J. **Hawker**, G.H. **Fredrickson**, E.J. Kramer, "Cooperative and sequential phase transitions in *it*-poly(propylene oxide)-*b*-poly(ethylene oxide)-*b*-*it*-poly(propylene oxide) triblock copolymers," *Macromolecules* **48** (2015) 3069-3079.
DOI: 10.1021/acs.macromol.5b00326 [PDF]

25. Y. Tan, S. Hoon, P.A. Guerette, W. Wei, A. Ghadban, C. Hao, A. Miserez, J.H. **Waite**, "Infiltration of chitin by protein coacervates defines the squid beak mechanical gradient," *Nature Chem. Biol*. **11** 488-495 (2015).
DOI: 10.1038/nchembio.1833 [PDF]

26. N.A. Zacchia, M.T. **Valentine**, "Design and optimization of arrays of neodymium iron boron-based magnets for magnetic tweezers applications," *Rev. of Sci. Instrum.* **86** (2015) 053704.
DOI: 10.1063/1.4921553 [PDF]

27. Y. Zhang, P. Lundberg, M. Diether, C. Porsch, C. Janson, N.A. Lynd, C. Ducani, M. Malkoch, E. Malmström, C.J. **Hawker**, A.M. Nyström, "Histamine-functionalized copolymer micelles as a drug delivery system in 2D and 3D models of breast cancer," *J. Mater. Chem. B* **3** (2015) 2472-2486.
DOI: 10.1039/C4TB02051K [PDF]

IRG-2 [20]

a. Primary MRSEC Support that Acknowledge the MRSEC Award DMR-1121053 [10]

28. L. Bjaalie, D.G. Ouellette, P. Moetakef, T.A. Cain, A. Janotti, B. Himmetoglu, S.J. Allen, S. **Stemmer**, C.G. **Van de Walle**, "Small hole polarons in rare-earth titanates," *Appl. Phys. Lett*. **106** (2015) 232103.
DOI: 10.1063/1.4922316 [PDF]

29. S. Bubel, A.J. Hauser, A.M. Glaudell, T.E. Mates, S. **Stemmer**, M.L. **Chabinyc**, "The electrochemical impact on electrostatic modulation of the metal-insulator transition in nickelates," *Appl. Phys. Lett*. **106** (2015) 122102.
DOI: 10.1063/1.4915269 [PDF]

30. S. Bubel, M.S. Menyo, T.E. Mates, J.H. **Waite**, M.L. **Chabinyc**, "Schmitt trigger using a self-healing ionic liquid gated transistor," *Adv. Mater*. **27** (2015) 3331-3335.
DOI: 10.1002/adma.201500556 [PDF]

31. T. Hogan, Z. Yamani, D. Walkup, X. Chen, R. Dally, T.Z. Ward, M.P.M. Dean, J. Hill, Z. Islam, V. Madhavan, S.D. **Wilson**, "First-order melting of a weak spin-orbit Mott insulator into a correlated metal," *Phys. Rev. Lett.* **114** (2015) 257203.
DOI: 10.1103/PhysRevLett.114.257203 [PDF]

32. S.W. Kaun, F. Wu, J.S. **Speck**, "β-$(Al_xGa_{1-x})_2O_3/Ga_2O_3$ (010) heterostructures grown on β- Ga_2O_3 (010) substrates by plasma-assisted molecular beam epitaxy," *J. Vac. Sci. Tech. A* **33** (2015) 041508.
DOI: 10.1116/1.4922340 [PDF]

33. P.M. McBride, A. Janotti, C.E. Dreyer, B. Himmetoglu, C.G. **Van de Walle**, "Effects of biaxial stress and layer thickness on octahedral tilts in $LaNiO_3$," *Appl. Phys. Lett*. **107** (2015) 261901.
DOI: 10.1063/1.4939002 [PDF]

34. E. Mikheev, S. Raghavan, J.Y. Zhang, P.B. Marshall, A.P. Kajdos, L. **Balents**, S. **Stemmer**, "Carrier density independent scattering rate in $SrTiO_3$-based electron liquids," *Sci. Rep*. **6** (2016) 20865.
DOI: 10.1038/srep20865 [PDF]

35. S. Nemšák, G. Conti, G.K. Palsson, C. Conlon, S. Cho, J.E. Rault, J. Avila, M.-C. Asensio, C.A. Jackson, P. Moetakef, A. Janotti, L. Bjaalie, B. Himmetoglu, C.G. **Van de Walle**, L. **Balents**, C.M. Schneider, S. **Stemmer**, C.S. Fadley, "Observation by resonant angle-resolved photoemission of a critical thickness for 2-dimensional electron gas formation in $SrTiO_3$ embedded in $GdTiO_3$," *Appl. Phys. Lett.* **107** (2015) 231602.
DOI: 10.1063/1.4936936 [PDF]

36. L. Weston, A. Janotti, X.Y. Cui, B. Himmetoglu, C. Stampfl, C.G. **Van de Walle**, "Structural and electronic properties of $SrZrO_3$ and $Sr(Ti,Zr)O_3$ alloys," *Phys. Rev. B* **92** (2015) 085201.
DOI: 10.1103/PhysRevB.92.085201 [PDF]

37. C.-H. Yee, L. **Balents**, "Phase separation in doped Mott insulators," *Phys. Rev. X* **5** (2015) 021007.
DOI: 10.1103/PhysRevX.5.021007 [PDF]

b. Partial MRSEC Support that Acknowledge the MRSEC Award DMR-1121053 [10]

38. S.J. Allen, A.J. Hauser, E. Mikheev, J.Y. Zhang, N.E. Moreno, J. Son, D.G. Ouellette, J. Kally, A. Kozhanov, L. **Balents**, S. **Stemmer**, "Gaps and pseudogaps in perovskite rare earth nickelates," *APL Mater*. **3** (2015) 062503.
DOI: 10.1063/1.4907771 [PDF]

39. L. Bjaalie, A. Verma, B. Himmetoglu, A. Janotti, S. Raghavan, V. Protasenko, E.H. Steenbergen, D. Jena, S. **Stemmer**, C.G. **Van de Walle**, "Determination of the Mott-Hubbard gap in $GdTiO_3$," *Phys. Rev. B* **92** (2015) 085111.
DOI: 10.1103/PhysRevB.92.085111 [PDF]

40. T.H. Hsieh, H. Ishizuka, L. **Balents**, T.L. Hughes, "Bulk topological proximity effect," *Phys. Rev. Lett*. **116** (2016) 086802.
DOI: 10.1103/PhysRevLett.116.086802 [PDF]

41. T. Kondo, M. Nakayama, R. Chen, J.J. Ishikawa, E.-G. Moon, T. Yamamoto, Y. Ota, W. Malaeb, H. Kanai, Y. Nakashima, Y. Ishida, R. Yoshida, H. Yamamoto, M. Matsunami, S. Kimura, N. Inami, K. Ono, H. Kumigashira, S. Nakatsuji, L. **Balents**, S. Shin, "Quadratic Fermi node in a 3D strongly correlated semimetal," *Nature Commun*. **6** (2015) 10042.
DOI: 10.1038/ncomms10042 [PDF]

42. D. Lee, H. Lu, Y. Gu, S.-Y. Choi, S.-D. Li, S. Ryu, T.R. Paudel, K. Song, E. Mikheev, S. Lee, S. **Stemmer**, D.A. Tenne, S.H. Oh, E.Y. Tsymbal, X. Wu, L.-Q. Chen, A. Gruverman, C.B. Eom, "Emergence of room-temperature ferroelectricity at reduced dimensions," *Science* **349** (2015) 1314-1317.
DOI: 10.1126/science.aaa6442 [PDF]

43. E. Mikheev, J. Hwang, A.P. Kajdos, A.J. Hauser, S. **Stemmer**, "Tailoring resistive switching in $Pt/SrTiO_3$ junctions by stoichiometry control," *Sci. Rep*. **5** (2015) 11079.
DOI: 10.1038/srep11079 [PDF]

44. H. Peelaers, D. Steiauf, J.B. Varley, A. Janotti, C.G. **Van de Walle**, "$(In_xGa_{1-x})_2O_3$ alloys for transparent electronics," *Phys. Rev. B* **92** (2015) 085206.
DOI: 10.1103/PhysRevB.92.085206 [PDF]

45. S. Raghavan, T. Schumann, H. Kim, J.Y. Zhang, T.A. Cain, S. **Stemmer**, "High-mobility $BaSnO_3$ grown by oxide molecular beam epitaxy," *APL Mater.* **4** (2016) 016106.
DOI: 10.1063/1.4939657 [PDF]

46. S. Raghavan, J.Y. Zhang, S. **Stemmer**, "Two-dimensional electron liquid at the (111) $SmTiO_3/SrTiO_3$ interface," *Appl. Phys. Lett*. **106** (2015) 132104.
DOI: 10.1063/1.4916963 [PDF]

47. J.Y. Zhang, J. Hwang, B.J. Isaac, S. **Stemmer**, "Variable-angle high-angle annular dark-field imaging: Application to three-dimensional dopant atom profiling," *Sci. Rep*. **5** (2015) 12419.
DOI: 10.1038/srep12419 [PDF]

IRG-3 [5]

a. Primary MRSEC Support that Acknowledge the MRSEC Award DMR-1121053 [5]

48. L. Decolvenaere, M.J. **Gordon**, A. **Van der Ven**, "Testing predictions from density functional theory at finite temperatures: ß$_2$-like ground states in Co-Pt," *Phys. Rev. B* **92** (2015) 085119.
DOI: 10.1103/PhysRevB.92.085119 [PDF]

49. K.A. Denault, J. Brgoch, S.D. Kloß, M.W. Gaultois, J. Siewenie, K. Page, R. **Seshadri**, "Average and local structure, Debye temperature, and structural rigidity in some oxide compounds related to phosphor hosts," *ACS Appl. Mater. Interfaces* **7** (2015) 7264-7272.
DOI: 10.1021/acsami.5b00445 [PDF]

50. J.E. Douglas, M.P. Echlin, W.C. Lenthe, R. **Seshadri**, T.M. **Pollock**, "Three-dimensional multimodal imaging and analysis of biphasic microstructure in a Ti-Ni-Sn thermoelectric material," *APL Mater*. **3** (2015) 096107.
DOI: 10.1063/1.4931764 [PDF]

51. M.W. Gaultois, J.E. Douglas, T.D. Sparks, R. **Seshadri**, "Single-step preparation and consolidation of reduced early-transition-metal oxide/metal n-type thermoelectric composites," *AIP Adv.* **5** (2015) 097144.
DOI: 10.1063/1.4931161 [PDF]

52. T.D. Sparks, M.W. Gaultois, A. Oliynyk, J. Brgoch, B. Meredig, "Data mining our way to the next generation of thermoelectrics," *Scr. Mater*. **111** (2016) 10-15.
DOI: 10.1016/j.scriptamat.2015.04.026 [PDF]

SEED [13]

a. Primary MRSEC Support that Acknowledge the MRSEC Award DMR-1121053 [8]

53. T. Das, P.P. Iyer, R.A. DeCrescent, J.A. **Schuller**, "Beam engineering for selective and enhanced coupling to multipolar resonances," *Phys. Rev. B* **92** (2015) 241110.
DOI: 10.1103/PhysRevB.92.241110 [PDF]

54. C.M. Evans, G.E. Sanoja, B.C. Popere, R.A. **Segalman**, "Anhydrous proton transport in polymerized ionic liquid block copolymers: Roles of block length, ionic content, and

confinement," *Macromolecules* **49** (2016) 395-404.
DOI: 10.1021/acs.macromol.5b02202 [PDF]

55. Y. Gao, J. Kim, M.E. **Helgeson**, "Microdynamics and arrest of coarsening during spinodal decomposition in colloidal gels," *Soft Matter* **11** (2015) 6360-6370. (Cover article)
DOI**:** 10.1039/C5SM00851D [PDF]

56. H.H. Kristoffersen, J.-E. **Shea**, H. Metiu, "Catechol and HCl adsorption on TiO_2(110) in vacuum and at the water–TiO_2 interface," *J. Phys. Chem. Lett*. **6** (2015) 2277-2281.
DOI: 10.1021/acs.jpclett.5b00958 [PDF]

57. Z.A. Levine, S.A. Fischer, J.-E. **Shea**, J. Pfaendtner, "Trp-cage folding on organic surfaces," *J. Phys. Chem. B* **119** (2015) 10417-10425.
DOI: 10.1021/acs.jpcb.5b04213 [PDF]

58. Z.A. Levine, L. Larini, N.E. LaPointe, S.C. Feinstein, J.-E. **Shea**, "Regulation and aggregation of intrinsically disordered peptides," *PNAS* **112** (2015) 2758-2763.
DOI: 10.1073/pnas.1418155112 [PDF]

59. E.K. Peter, I.V. Pivkin, J.-E. **Shea**, "A kMC-MD method with generalized move-sets for the simulation of folding of α-helical and β-stranded peptides," *J. Chem. Phys*. **142** (2015) 144903.
DOI: 10.1063/1.4915919 [PDF]

60. G.H. Zerze, R.G. Mullen, Z.A. Levine, J.-E. **Shea**, J. Mittal, "To what extent does surface hydrophobicity dictate peptide folding and stability near surfaces?" *Langmuir* **31** (2015) 12223-12230.
DOI: 10.1021/acs.langmuir.5b03814 [PDF]

b. Partial MRSEC Support that Acknowledge the MRSEC Award DMR-1121053 [5]

61. E.H. Discekici, C.W. Pester, N.J. Treat, J. Lawrence, K.M. Mattson, B. Narupai, E.P. Toumayan, Y. Luo, A.J. McGrath, P.G. Clark, J. **Read de Alaniz**, C.J. **Hawker**, "Simple benchtop approach to polymer brush nanostructures using visible-light-mediated metal-free atom transfer radical polymerization," *ACS Macro Lett.* **5** (2016) 258-262.
DOI: 10.1021/acsmacrolett.6b00004 [PDF]

62. E.H. Discekici, N.J. Treat, S.O. Poelma, K.M. Mattson, Z.M. Hudson, Y.D. Luo, C.J. **Hawker**, J. **Read de Alaniz**, "A highly reducing metal-free photoredox catalyst: Design and application in radical dehalogenations," *Chem. Commun.* **51** (2015) 11705-11708.
DOI: 10.1039/c5cc04677g [PDF]

63. S. Mubeen, J. Lee, D. Liu, G.D. **Stucky**, M. **Moskovits**, "Panchromatic photoproduction of H_2 with surface plasmons," *Nano Lett.* **15** (2015) 2132-2136.
DOI: 10.1021/acs.nanolett.5b00111 [PDF]

64. C.-Y. Park, D.R. Jacobson, D.T. Nguyen, S. Willardson, O.A. **Saleh**, "A thin permeable-membrane device for single-molecule manipulation," *Rev. Sci. Instrum.* **87** (2016) 014301.

DOI: 10.1063/1.4939197 [PDF]

65. O.A. **Saleh**, "Perspective: Single polymer mechanics across the force regimes," *J. Chem. Phys*. **142** (2015) 194902.
DOI: 10.1063/1.4921348 [PDF]

SHARED FACILITIES [172]

66. V. Agarwal, H. Metiu, "Energy of oxygen-vacancy formation on oxide surfaces: Role of the spatial distribution," *J. Phys. Chem. C* **120** (2016) 2320-2323.
DOI: 10.1021/acs.jpcc.5b12054 [PDF]

67. V. Agarwal, H. Metiu, "Hydrogen abstraction energies and ammonia binding to BEA, ZSM-5, and α-quartz doped with Al, Sc, B, or Ga," *J. Phys. Chem. C* **119** (2015) 16106-16114.
DOI: 10.1021/acs.jpcc.5b04171 [PDF]

68. E. Ahmadi, F. Wu, H. Li, S.W. Kaun, M. Tahhan, K. Hestroffer, S. Keller, J.S. **Speck**, U.K. Mishra, "N-face GaN/AlN/GaN/InAlN and GaN/AlN/AlGaN/GaN/InAlN high-electron-mobility transistor structures grown by plasma-assisted molecular beam epitaxy on vicinal substrates," *Semi. Sci. Tech*. **30** (2015) 055012.
DOI: 10.1088/0268-1242/30/5/055012 [PDF]

69. N.E.C. de Almeida, T.D. Do, M. Tro, N.E. LaPointe, S.C. Feinstein, J.-E. **Shea**, M.T. Bowers, "Opposing effects of cucurbit[7]uril and 1,2,3,4,6-penta-O-galloyl- β-D-glucopyranose on amyloid β_{25-35} assembly," *ACS Chem. Neurosci*. **7** (2016) 218-226.
DOI: 10.1021/acschemneuro.5b00280 [PDF]

70. K. Aoyagi, M. Zakrewsky, S. Mitragotri, "Formulating propranolol as an amorphous melt affords reduced skin irritation potential for transdermal drug delivery," *Technology* **03** (2015) 214-238.
DOI: 10.1142/S2339547815500107 [PDF]

71. I. Barel, N.O. Reich, F.L.H. Brown, "Extracting enzyme processivity from kinetic assays," *J. Chem. Phys*. **143** (2015) 224115.
DOI: 10.1063/1.4937155 [PDF]

72. A. Birkel, N.A. DeCino, C. Cozzan, A.A. Mikhailovsky, B.-C. Hong, R. **Seshadri**, "A single-phase full-color phosphor based on $Ba_3MgSi_2O_8$ co-activated with Eu^{2+}, Tb^{3+}, and Mn^{2+}," *Solid State Sciences* **48** (2015) 82-89.
DOI: 10.1016/j.solidstatesciences.2015.07.005 [PDF]

73. J. Botana, X. Wang, C. Hou, D. Yan, H. Lin, Y. Ma, M.-S. Miao, "Mercury under pressure acts as a transition metal: Calculated from first principles," *Angew. Chem. Int'l. Ed.* **54** (2015) 9280-9283.
DOI: 10.1002/anie.201503870 [PDF]

74. D.A. Browne, B. Mazumder, Y.-R. Wu, J.S. **Speck**, "Electron transport in unipolar InGaN/GaN multiple quantum well structures grown by NH_3 molecular beam epitaxy," *J. Appl. Phys*. **117** (2015) 185703.
DOI: 10.1063/1.4919750 [PDF]

75. N.A. Butakov, J.A. **Schuller**, "Hybrid optical antennas with photonic resistors," *Optics Express* **23** (2015) 29698-29707.
DOI: 10.1364/OE.23.029698 [PDF]

76. M. Cantore, N. Pfaff, R.M. Farrell, J.S. **Speck**, S. Nakamura, S.P. DenBaars, "High luminous flux from single crystal phosphor-converted laser-based white lighting system," *Optics Express* **24** (2016) A215-A221.
DOI: 10.1364/OE.24.00A215 [PDF]

77. M.F. Carilli, K.T. Delaney, G.H. **Fredrickson**, "Truncation-based energy weighting string method for efficiently resolving small energy barriers," *J. Chem. Phys*. **143** (2015) 054105.
DOI: 10.1063/1.4927580 [PDF]

78. S.P. Carmichael, M.S. Shell, "Entropic (de)stabilization of surface-bound peptides conjugated with polymers," *J. Chem. Phys*. **143** (2015) 243103.
DOI: 10.1063/1.4929592 [PDF]

79. C.L. Carpenter, K.T. Delaney, N. Laachi, G.H. **Fredrickson**, "Directed self-assembly of diblock copolymers in cylindrical confinement: Effect of under-filling and air-polymer interactions on configurations," *Proc. SPIE **9423**, Alternative Lithographic Technologies VII* (2015) 94231Z-1.
DOI: 10.1117/12.2085639 [PDF]

80. I.T. Carroll, R.M. Nisbet, "Departures from neutrality induced by niche and relative fitness differences," *Theoretical Ecology* **8** (2015) 449-465.
DOI: 10.1007/s12080-015-0261-0 [PDF]

81. D. Chang, M.-H. Chen, A. **Van der Ven**, "Factors contributing to path hysteresis of displacement and conversion reactions in Li ion batteries," *Chem. Mater*. **27** (2015) 7593-7600.
DOI: 10.1021/acs.chemmater.5b02356 [PDF]

82. H. Chen, L. Zhang, "A desulfonylative approach in oxidative gold catalysis: Regiospecific access to donor-substituted acyl gold carbenes," *Angew. Chem. Int'l. Ed*. **54** (2015) 11775-11779.
DOI: 10.1002/anie.201504511 [PDF]

83. M.-H. Chen, A. Emly, A. **Van der Ven**, "Anharmonicity and phase stability of antiperovskite Li_3OCl," *Phys. Rev. B* **91** (2015) 214306.
DOI: 10.1103/PhysRevB.91.214306 [PDF]

84. M.-H. Chen, B. Puchala, A. **Van der Ven**, "High-temperature stability of δ'-ZrO," *CALPHAD: Computer Coupling of Phase Diagrams and Thermochemistry* **51** (2015) 292-298.
DOI: 10.1016/j.calphad.2015.10.010 [PDF]

85. C.-Y. Cheng, J. Song, J. Pas, L.H.H. Meijer, S. **Han**, "DMSO induces dehydration near lipid membrane surfaces," *Biophys. J*. **109** (2015) 330-339.
DOI: 10.1016/j.bpj.2015.06.011 [PDF]

86. S. Chrétien, H. Metiu, "Hydrogen dissociative adsorption on lanthana: Polaron formation and the role of acid-base interactions," *J. Phys. Chem. C* **119** (2015) 19876-19882.
DOI: 10.1021/acs.jpcc.5b05310 [PDF]

87. R.R. Collino, T.R. Ray, R.C. Fleming, C.H. Sasaki, H. Haj-Hariri, M.R. Begley, "Acoustic field controlled patterning and assembly of anisotropic particles," *Extreme Mechanics Letters* **5** (2015) 37-46.
DOI: 10.1016/j.eml.2015.09.003 [PDF]

88. J.R. Conway, A.L. Beaulieu, N.L. Beaulieu, S.J. Mazer, A.A. Keller, "Environmental stresses increase photosynthetic disruption by metal oxide nanomaterials in a soil-grown plant," *ACS Nano* **9** (2015) 11737-11749.
DOI: 10.1021/acsnano.5b03091 [PDF]

89. S. Das, N.R. Martinez Rodriguez, W. Wei, J.H. **Waite**, J.N. **Israelachvili**, "Peptide length and dopa determine iron-mediated cohesion of mussel foot proteins," *Adv. Func. Mater*. **25** (2015) 5840-5847.
DOI: 10.1002/adfm.201502256 [PDF]

90. E.C. Davidson, B.S. Beckingham, V. Ho, R.A. **Segalman**, "Confined crystallization in lamellae forming poly(3-(2'-ethyl)hexylthiophene) (P3EHT) block copolymers," *J. Poly. Sci. B: Poly. Phys.* **54** (2016) 205-215.
DOI: 10.1002/polb.23904 [PDF]

91. Z. Deng, L. Zhang, D. Franklin, F.T. Chong, "Herniated hash tables: Exploiting multi-level phase change memory for in-place data expansion," in *MEMSYS '15 Proceedings of the 2015 Int'l. Symposium on Memory Systems*. New York, NY: ACM, pp. 247-257 (2015). ISBN: 978-1-4503-3604-8
DOI: 10.1145/2818950.2818981 [PDF]

92. K. Ding, A. Corma, J.A. Maciá-Agulló, J.G. Hu, S. Krämer, P.C. Stair, G.D. **Stucky**, "Constructing hierarchical porous zeolites via kinetic regulation," *J. Am. Chem. Soc.* **137** (2015) 11238-11241.
DOI: 10.1021/jacs.5b06791 [PDF]

93. T.D. Do, A. Chamas, X. Zheng, A. Barnes, D. Chang, T. Veldstra, H. Takhar, N. Dressler, B. Trapp, K. Miller, A. McMahon, S.C. Meredith, J.-E. **Shea**, K. Lazar Cantrell, M.T. Bowers, "Elucidation of the aggregation pathways of helix−turn−helix peptides: Stabilization at the turn region is critical for fibril formation," *Biochemistry* **54** (2015) 4050-4062.
DOI: 10.1021/acs.biochem.5b00414 [PDF]

94. T.D. Do, N.E. LaPointe, R. Nelson, P. Krotee, E.Y. Hayden, B. Ulrich, S. Quan, S.C. Feinstein, D.B. Teplow, D. Eisenberg, J.-E. **Shea**, M.T. Bowers, "Amyloid β-protein C-terminal fragments: Formation of cylindrins and β-barrels," *J. Am. Chem. Soc*. **138** (2016) 549-557.
DOI: 10.1021/jacs.5b09536 [PDF]

95. C.E. Dreyer, A. Janotti, C.G. **Van de Walle**, "Brittle fracture toughnesses of GaN and AlN from first-principles surface-energy calculations," *Appl. Phys. Lett*. **106** (2015) 212103.
DOI: 10.1063/1.4921855 [PDF]

96. N.D. Eisenmenger, K.T. Delaney, V. Ganesan, G.H. **Fredrickson**, M.L. **Chabinyc**, "Energy transfer directly to bilayer interfaces to improve exciton collection in organic photovoltaics," *J. Phys. Chem. C* **119** (2015) 19011-19021.
DOI: 10.1021/acs.jpcc.5b05749 [PDF]

97. N.A. Eschmann, T.D. Do, N.E. LaPointe, J.-E. **Shea**, S.C. Feinstein, M.T. Bowers, S. **Han**, "Tau aggregation propensity engrained in its solution state," *J. Phys. Chem. B* **119** (2015) 14421-14432.
DOI: 10.1021/acs.jpcb.5b08092 [PDF]

98. D.H. Fabini, T. Hogan, H.A. Evans, C.C. Stoumpos, M.G. Kanatzidis, R. **Seshadri**, "Dielectric and thermodynamic signatures of low-temperature glassy dynamics in the hybrid perovskites $CH_3NH_3PbI_3$ and $HC(NH_2)_2PbI_3$," *J. Phys. Chem. Lett*. **7** (2016) 376-381.
DOI: 10.1021/acs.jpclett.5b02821 [PDF]

99. N. Fechler, N.P. Zussblatt, R. Rothe, R. Schlögl, M.-G. Willinger, B.F. Chmelka, M. Antonietti, "Eutectic syntheses of graphitic carbon with high pyrazinic nitrogen content," *Adv. Mater*. **28** (2016) 1287-1294.
DOI: 10.1002/adma.201501503 [PDF]

100. M.N. Fireman, D.A. Browne, B. Mazumder, J.S. **Speck**, U.K. Mishra, "Demonstration of isotype GaN/AlN/GaN heterobarrier diodes by NH_3-molecular beam epitaxy," *Appl. Phys. Lett.* **106** (2015) 202106.
DOI: 10.1063/1.4921633 [PDF]

101. M.N. Fireman, D.A. Browne, U.K. Mishra, J.S. **Speck**, "Isotype InGaN/GaN heterobarrier diodes by ammonia molecular beam epitaxy," *J. Appl. Phys*. **119** (2016) 055709.
DOI: 10.1063/1.4941323 [PDF]

102. C. Fleischmann, J. Gopez, P. Lundberg, H. Ritter, K.L. Killops, C.J. **Hawker**, D. Klinger, "A robust platform for functional microgels *via* thiol-ene chemistry with reactive polyether-based nanoparticles," *Polym. Chem*. **6** (2015) 2029-2037.
DOI: 10.1039/C4PY01766H [PDF]

103. J.M. Franck, Y. Ding, K. Stone, P.Z. Qin, S. **Han**, "Anomalously rapid hydration water diffusion dynamics near DNA surfaces," *J. Am. Chem. Soc*. **137** (2015) 12013-12023.
DOI: 10.1021/jacs.5b05813 [PDF]

104. S.L. Fronk, C.-K. Mai, M. Ford, R.P. Noland, G.C. Bazan, "End-group-mediated aggregation of poly(3-hexylthiophene)," *Macromolecules* **48** (2015) 6224-6232.
DOI: 10.1021/acs.macromol.5b00986 [PDF]

105. P. Ganguly, T.D. Do, L. Larini, N.E. LaPointe, A.J. Sercel, M.F. Shade, S.C. Feinstein, M.T. Bowers, J.-E. **Shea**, "Tau assembly: The dominant role of PHF6 (VQIVYK) in microtubule binding region repeat R3," *J. Phys. Chem. B* **119** (2015) 4582-4593.
DOI: 10.1021/acs.jpcb.5b00175 [PDF]

106. E.S. Garcia, C.L. Tague, "Subsurface storage capacity influences climate–evapotranspiration interactions in three western United States catchments," *Hydrol. Earth Syst. Sci.* **19** (2015) 4845-4858.
DOI: 10.5194/hess-19-4845-2015 [PDF]

107. V.V. Ginzburg, J.D. Weinhold, P.D. Hustad, P. Trefonas, B. Kim, N. Laachi, G.H. **Fredrickson**, "Field-theoretic simulations and self-consistent field theory (SCFT) for studying block copolymer directed self-assembly," in *Directed Self-Assembly of Block Copolymers for Nano-Manufacturing*, Eds. R. Grohheid and P. Nealey. Cambridge, UK: Woodhead Publishing, Elsevier, pp. 67-95 (2015). ISBN: 978-0-08-100250-6
DOI: 10.1016/B978-0-08-100250-6.00004-3 [PDF]

108. L. Gordon, A. Janotti, C.G. **Van de Walle**, "Defects as qubits in 3*C*− and 4*H*−SiC," *Phys. Rev. B* **92** (2015) 045208.
DOI: 10.1103/PhysRevB.92.045208 [PDF]

109. L. Gordon, J.B. Varley, J.L. Lyons, A. Janotti, C.G. **Van de Walle**, "Sulfur doping of AlN and AlGaN for improved n-type conductivity," *Physica Status Solidi (RRL) - Rapid Research Lett.* **9** (2015) 462-465.
DOI: 10.1002/pssr.201510165 [PDF]

110. N.J. Hartmann, G. Wu, T.W. Hayton, "Synthesis of a 'masked' terminal nickel(II) sulfide by reductive deprotection and its reaction with nitrous oxide," *Angew. Chem. Int'l. Ed.* **54** (2015) 14956-14959.
DOI: 10.1002/anie.201508232 [PDF]

111. B.F. Hartmeier, M.A. Brady, N.D. Treat, M.J. Robb, T.E. Mates, A. Hexemer, C. Wang, C.J. **Hawker**, E.J. Kramer, M.L. **Chabinyc**, "Significance of miscibility in multidonor bulk heterojunction solar cells," *J. Polym. Sci. B: Polym. Phys.* **54** (2016) 237-246.
DOI: 10.1002/polb.23907 [PDF]

112. A.J. Hauser, E. Mikheev, N.E. Moreno, J. Hwang, J.Y. Zhang, S. **Stemmer**, "Correlation between stoichiometry, strain, and metal-insulator transitions of $NdNiO_3$ films," *Appl. Phys. Lett.* **106** (2015) 092104.
DOI: 10.1063/1.4914002 [PDF]

113. B. Himmetoglu, A. Janotti, "Transport properties of $KTaO_3$ from first-principles," *J. Phys.: Condens. Matter* **28** (2016) 065502.

DOI: 10.1088/0953-8984/28/6/065502 [PDF]

114. K. Hofmann, N. Kalyon, C. Kapfenberger, L. Lamontagne, S. Zarrini, R. Berger, R. **Seshadri**, B. Albert, "Metastable Ni_7B_3: A new paramagnetic boride from solution chemistry, its crystal structure and magnetic properties," *Inorg. Chem*. **54** (2015) 10873-10877.
DOI: 10.1021/acs.inorgchem.5b01929 [PDF]

115. C.C. Holland, E.A. Gamble, F.W. Zok, V.S. Deshpande, R.M. McMeeking, "Effect of design on the performance of steel–alumina bilayers and trilayers subject to ballistic impact," *Mechan. of Mater*. **91** (2015) 241-251.
DOI: 10.1016/j.mechmat.2015.05.002 [PDF]

116. N. Hu, C.-K. Mai, G.H. **Fredrickson**, G.C. Bazan, "One-pot synthesis of semicrystalline/amorphous multiblock copolymers *via* divinyl-terminated telechelic polyolefins," *Chem. Comm.* **52** (2016) 2237-2240.
DOI: 10.1039/C5CC09200K [PDF]

117. C.-Y. Huang, X. Bao, Z. Ye, S. Lee, H. Chiang, H. Li, V. Chobpattana, B. Thibeault, W. Mitchell, S. **Stemmer**, A. Gossard, E. Sanchez, M. Rodwell, "Ultrathin InAs-channel MOSFETs on Si substrates," *IEEE Proceedings of 2015 International Symposium on VLSI Technology, Systems and Application (VLSI-TSA),* pages 1-2, held in Hsinchu, Taiwan on 27-29 April 2015.
DOI: 10.1109/VLSI-TSA.2015.7117566 [PDF]

118. Y. Huang, A.A. Keller, "EDTA functionalized magnetic nanoparticle sorbents for cadmium and lead contaminated water treatment," *Water Research* **80** (2015) 159-168.
DOI: 10.1016/j.watres.2015.05.011 [PDF]

119. S. Hussain, M. Kinnebrew, N.S. Schonenbach, E. Aye, S. **Han**, "Functional consequences of the oligomeric assembly of proteorhodopsin," *J. Molec. Biol*. **427** (2015) 1278-1290.
DOI: 10.1016/j.jmb.2015.01.004 [PDF]

120. T. Iwama, N. Laachi, K.T. Delaney, G.H. **Fredrickson**, "Field-theoretic simulations of directed self-assembly for contact multiplication," *J. Photopolymer Sci. & Tech.* **28** (2015) 689.
DOI: 10.2494/photopolymer.28.689 [PDF]

121. P.P. Iyer, N.A. Butakov, J.A. **Schuller**, "Reconfigurable semiconductor phased-array metasurfaces," *ACS Photonics* **2** (2015)1077-1084.
DOI: 10.1021/acsphotonics.5b00132 [PDF]

122. K. Izumi, B. Kim, N. Laachi, K.T. Delaney, M. Carilli, G.H. **Fredrickson**, "Barriers to defect melting in chemo-epitaxial directed self-assembly of lamellar-forming diblock copolymer/homopolymer blends," *Proc. SPIE* **9423**, *Alternative Lithographic Technologies* **VII** (2015) 94232C.
DOI: 10.1117/12.2085685 [PDF]

123. R.W. Jackson, E.M. Zaleski, D.L. Poerschke, B.T. Hazel, M.R. Begley, C.G. **Levi**, "Interaction of molten silicates with thermal barrier coatings under temperature gradients," *Acta*

Mater. **89** (2015) 396-407.
DOI: 10.1016/j.actamat.2015.01.038 [PDF]

124. D.J. Jorgensen, M.S. Titus, T.M. **Pollock**, "Femtosecond laser ablation and nanoparticle formation in intermetallic NiAl," *Appl. Surface Sci*. **353** (2015) 700-707.
DOI: 10.1016/j.apsusc.2015.06.155 [PDF]

125. I.Kaminker, R. Barnes, S. **Han**, "Overhauser dynamic nuclear polarization studies on local water dynamics," in *Methods in Enzymology: Electron Paramagnetic Resonance Investigations of Biological Systems by Using Spin Labels, Spin Probes, and Intrinsic Metal Ions, Part B*, Eds. P. Qin, K. Warncke, Vol. 564, Elsevier, pp. 457-483 (2015). ISBN: 978-0-12-802835-3
DOI: 10.1016/bs.mie.2015.06.040 [PDF]

126. T. Kang, X. Banquy, J. Heo, C. Lim, N.A. Lynd, P. Lundberg, D.X. Oh, H.-K. Lee, Y.-K. Hong, D.S. Hwang, J.H. **Waite**, J.N. **Israelachvili**, C.J. **Hawker**, "Mussel-inspired anchoring of polymer loops that provide superior surface lubrication and antifouling properties," *ACS Nano* **10** (2016) 930-937.
DOI: 10.1021/acsnano.5b06066 [PDF]

127. T. Kang, D.X. Oh, J. Heo, H.-K. Lee, S. Choy, C.J. **Hawker**, D.S. Hwang, "Formation, removal, and reformation of surface coatings on various metal oxide surfaces inspired by mussel adhesives," *ACS Appl. Mater. Interfaces* **7** (2015) 24656-24662.
DOI: 10.1021/acsami.5b06910 [PDF]

128. S.W. Kaun, B. Mazumder, M.N. Fireman, E.C.H. Kyle, U.K Mishra, J.S. **Speck**, "Pure AlN layers in metal-polar AlGaN/AlN/GaN and AlN/GaN heterostructures grown by low-temperature ammonia-based molecular beam epitaxy," *Semi. Sci. Tech*. **30** (2015) 055010.
DOI: 10.1088/0268-1242/30/5/055010 [PDF]

129. E. Kioupakis, D. Steiauf, P. Rinke, K.T. Delaney, C.G. **Van de Walle**, "First-principles calculations of indirect Auger recombination in nitride semiconductors," *Phys. Rev. B* **92** (2015) 035207.
DOI: 10.1103/PhysRevB.92.035207 [PDF]

130. A. Knappschneider, C. Litterscheid, J. Brgoch, N.C. George, S. Henke, A.K. Cheetham, J.G. Hu, R. **Seshadri**, B. Albert, "Manganese tetraboride, MnB_4: High-temperature crystal structure, p–n transition, ^{55}Mn NMR spectroscopy, solid solutions, and mechanical properties," *Chem. Eur. J*. **21** (2015) 8177-8181.
DOI: 10.1002/chem.201406631 [PDF]

131. S.J. Kowsz, C.D. Pynn, S.H. Oh, R.M. Farrell, J.S. **Speck**, S.P. DenBaars, S. Nakamura, "Demonstration of phosphor-free polarized white light emission from monolithically integrated semipolar InGaN quantum wells," *Appl. Phys. Lett*. **107** (2015) 101104.
DOI: 10.1063/1.4930304 [PDF]

132. K. Krishnaswamy, L. Bjaalie, B. Himmetoglu, A. Janotti, L. Gordon, C.G. **Van de Walle**, "$BaSnO_3$ as a channel material in perovskite oxide heterostructures," *Appl. Phys. Lett*. **108** (2016) 083501.
DOI: 10.1063/1.4942366 [PDF]

133. K. Krishnaswamy, C.E. Dreyer, A. Janotti, C.G. **Van de Walle**, "First-principles study of surface charging in $LaAlO_3/SrTiO_3$ heterostructures," *Phys. Rev. B* **92** (2015) 085420.
DOI: 10.1103/PhysRevB.92.085420 [PDF]

134. H.H. Kristoffersen, H. Metiu, "Molten LiCl layer supported on MgO: Its possible role in enhancing the oxidative dehydrogenation of ethane," *J. Phys. Chem*. **C** 119 (2015) 8681-8691.
DOI: 10.1021/jp5128628 [PDF]

135. H.H. Kristoffersen, H. Metiu, "Reconstruction of low-index α-V_2O_5 surfaces," *J. Phys. Chem. C* **119** (2015) 10500-10506.
DOI: 10.1021/acs.jpcc.5b02383 [PDF]

136. H.H. Kristoffersen, H. Metiu, "Structure of V_2O_5•*n*H_2O xerogels," *J. Phys. Chem. C* **120** (2016) 3986-3992.
DOI: 10.1021/acs.jpcc.5b12418 [PDF]

137. D. Kudela, S.A. Smith, A. May-Masnou, G.B. Braun, A. Pallaoro, C.K. Nguyen, T.T. Chuong, S. Nownes, R. Allen, N.R. Parker, H.H. Rashidi, J.H. Morrissey, G.D. **Stucky**, "Clotting activity of polyphosphate-functionalized silica nanoparticles," *Angew. Chem. Int. Ed*. **54** (2015) 4018-4022.
DOI: 10.1002/anie.201409639 [PDF]

138. S. Kumar, M. Chen, A.C. Anselmo, J.A. Muraski, S. Mitragotri, "Enhanced epidermal localization of topically applied steroids using SPACE™ peptide," *Drug Delivery and Translational Research* **5** (2015) 523-530.
DOI: 10.1007/s13346-015-0232-4 (No PDF available)

139. L.Y. Kuritzky, D.J. Myers, J. Nedy, K.M. Kelchner, S. Nakamura, S.P. DenBaars, C. Weisbuch, J.S. **Speck**, "Electroluminescence characteristics of blue InGaN quantum wells on *m*-plane GaN 'double miscut' substrates," *Appl. Phys. Express* **8** (2015) 061002.
DOI: 10.7567/APEX.8.061002 [PDF]

140. E.C.H. Kyle, S.W. Kaun, E.C. Young, J.S. **Speck**, "Increased p-type conductivity through use of an indium surfactant in the growth of Mg-doped GaN," *Appl. Phys. Lett*. **106** (2015) 222103.
DOI: 10.1063/1.4922216 [PDF]

141. N. Laachi, T. Iwama, K.T. Delaney, D. Shykind, C.J. Weinheimer, G.H. **Fredrickson**, "Directed self-assembly of linear arrays of block copolymer cylinders," *J. Polym. Sci. B: Polym. Phys.* **53** (2015) 317.
DOI: 10.1002/polb.23630 [PDF]

142. J.G. Labram, D.H. Fabini, E.E. Perry, A.J. Lehner, H. Wang, A.M. Glaudell, G. Wu, H. Evans, D. Buck, R. Cotta, L. Echegoyen, F. Wudl, R. **Seshadri**, M.L. **Chabinyc**, "Temperature-dependent polarization in field-effect transport and photovoltaic measurements of methylammonium lead iodide," *J. Phys. Chem. Lett.* **6** (2015) 3565-3571.
DOI: 10.1021/acs.jpclett.5b01669 [PDF]

143. B.H. Lee, G.C. Bazan, A.J. Heeger, "Doping-induced carrier density modulation in polymer field-effect transistors," *Adv. Mater.* **28** (2016) 57-62.
DOI: 10.1002/adma.201504307 [PDF]

144. B.H. Lee, B.B.Y. Hsu, S.N. Patel, J. Labram, C. Luo, G.C. Bazan, A.J. Heeger, "Flexible organic transistors with controlled nanomorphology," *Nano Lett.* **16** (2016) 314-319.
DOI: 10.1021/acs.nanolett.5b03868 [PDF]

145. D.G. Lee, P.R. Roehrdanz, M. Feraud, J. Ervin, T. Anumol, A. Jia, M. Park, C. Tamez, E.W. Morelius, J.L. Gardea-Torresdey, J. Izbicki, J.C. Means, S.A. Snyder, P.A. Holden, "Wastewater compounds in urban shallow groundwater wells correspond to exfiltration probabilities of nearby sewers," *Water Research* **85** (2015) 467-475.
DOI: 10.1016/j.watres.2015.08.048 [PDF]

146. W. Lee, Y.-S. Jun, J. Park, G.D. **Stucky**, "Crystalline poly(triazine imide) based g-CN as an efficient electrocatalyst for counter electrodes of dye-sensitized solar cells using a triiodide/iodide redox electrolyte," *J. Mater. Chem. A* **3** (2015) 24232-24236.
DOI: 10.1039/C5TA08650G [PDF]

147. A.J. Lehner, D.H. Fabini, H.A. Evans, C.-A. Hébert, S.R. Smock, J. Hu, H. Wang, J.W. Zwanziger, M.L. **Chabinyc**, R. **Seshadri**, "Crystal and electronic structures of complex bismuth iodides $A_3Bi_2I_9$ (A = K, Rb, Cs) related to perovskite: Aiding the rational design of photovoltaics," *Chem. Mater.* **27** (2015) 7137-7148.
DOI: 10.1021/acs.chemmater.5b03147 [PDF]

148. A.J. Lehner, H. Wang, D.H. Fabini, C.D. Liman, C.-A. Hébert, E.E. Perry, M. Wang, G.C. Bazan, M.L. **Chabinyc**, R. **Seshadri**, "Electronic structure and photovoltaic application of BiI_3," *Appl. Phys. Lett.* **107** (2015) 131109.
DOI: 10.1063/1.4932129 [PDF]

149. J.T. Leonard, D.A. Cohen, B.P. Yonkee, R.M. Farrell, S.P. DenBaars, J.S. **Speck**, S. Nakamura, "Smooth e-beam-deposited tin-doped indium oxide for III-nitride vertical-cavity surface-emitting laser intracavity contacts," *J. of Appl. Phys.* **118** (2015) 145304.
DOI: 10.1063/1.4931883 [PDF]

150. J.T. Leonard, D.A. Cohen, B.P. Yonkee, R.M. Farrell, T. Margalith, S. Lee, S.P. DenBaars, J.S. **Speck**, S. Nakamura, "Nonpolar III-nitride vertical-cavity surface-emitting lasers incorporating an ion implanted aperture," *Appl. Phys. Lett.* **107** (2015) 011102.
DOI: 10.1063/1.4926365 [PDF]

151. J.T. Leonard, B.P. Yonkee, D.A. Cohen, L. Megalini, S. Lee, J.S. **Speck**, S.P. DenBaars, S. Nakamura, "Nonpolar III-nitride vertical-cavity surface-emitting laser with a photoelectrochemically etched air-gap aperture," *Appl. Phys. Lett*. **108** (2016) 031111.
DOI: 10.1063/1.4940380 [PDF]

152. J.T. Leonard, E.C. Young, B.P. Yonkee, D.A. Cohen, T. Margalith, S.P. DenBaars, J.S. **Speck**, S. Nakamura, "Demonstration of a III-nitride vertical-cavity surface-emitting laser with a III-nitride tunnel junction intracavity contact," *Appl. Phys. Lett*. **107** (2015) 091105.
DOI: 10.1063/1.4929944 [PDF]

153. R. Levenson, C. Bracken, N. Bush, D.E. Morse, "Cyclable condensation and hierarchical assembly of metastable reflectin proteins, the drivers of tunable biophotonics," *J. of Biol. Chem.* **291** (2016) 4058-4068.
DOI: 10.1074/jbc.M115.686014 [PDF]

154. T. Lewi, P.P. Iyer, N.A. Butakov, A.A. Mikhailovsky, J.A. **Schuller**, "Widely tunable infrared antennas using free carrier refraction," *Nano Lett*. **15** (2015) 8188-8193.
DOI: 10.1021/acs.nanolett.5b03679 [PDF]

155. H. Li, S. Keller, S.H. Chan, J. Lu, S.P. DenBaars, U.K. Mishra, "Unintentional gallium incorporation in AlN and its impact on the electrical properties of GaN/AlN and GaN/AlN/AlGaN heterostructures," *Semicond. Sci. Technol*. **30** (2015) 055015.
DOI: 10.1088/0268-1242/30/5/055015 [PDF]

156. W. Li, C.H. Hinton, S.S. Lee, J. Wu, J.D. Fortner, "Surface engineering superparamagnetic nanoparticles for aqueous applications: Design and characterization of tailored organic bilayers," *Environ. Sci.: Nano* **3** (2016) 85-93.
DOI: 10.1039/c5en00089k [PDF]

157. W. Li, D. Ruth, J.D. Gunton, J.M. Rickman, "Selective encapsulation by Janus particles," *J. Chem. Phys*. **142** (2015) 244705.
DOI: 10.1063/1.4922781 [PDF]

158. H.-X. Lin, L. Chen, D.-Y. Liu, Z.-C. Lei, Y. Wang, X.-S. Zheng, B. Ren, Z.-X. Xie, G.D. **Stucky**, Z.-Q. Tian, "Constructing two-dimensional nanoparticle arrays on layered materials inspired by atomic epitaxial growth," *J. Am. Chem. Soc*. **137** (2015) 2828-2831.
DOI: 10.1021/ja5128538 [PDF]

159. D.-Y. Liu, X. Peng, B. Wu, X. Zheng, T.T. Chuong, J. Li, S. Sun, G.D. **Stucky**, "Uniform concave polystyrene-carbon core-shell nanospheres by a swelling induced buckling process," *J. Am. Chem. Soc.* **137** (2015) 9772-9775.
DOI: 10.1021/jacs.5b05027 [PDF]

160. J. Liu, N. Laachi, K.T. Delaney, G.H. **Fredrickson**, "Advantages and limitations of density functional theory in block copolymer directed self-assembly," *Proc. SPIE Alternative Lithographic Technologies VII* **9423** (2015) 94231I-1.
DOI: 10.1117/12.2085666 [PDF]

161. W. Liu, D. Sarkar, J. Kang, W. Cao, K. Banerjee, "Impact of contact on the operation and performance of back-gated monolayer MoS_2 field-effect-transistors," *ACS Nano* **9** (2015) 7904-7912.
DOI: 10.1021/nn506512j [PDF]

162. X. Liu, C.M. Jackson, F. Wu, B. Mazumder, R. Yeluri, J. Kim, S. Keller, A.R. Arehart, S.A. Ringel, J.S. **Speck**, U.K. Mishra, "Electrical and structural characterizations of crystallized Al_2O_3/GaN interfaces formed by in situ metalorganic chemical vapor deposition," *J. Appl. Phys*. **119** (2016) 015303.
DOI: 10.1063/1.4939157 [PDF]

163. Y. Luo, D. Montarnal, S. Kirn, W. Shi, K.P. Barteau, C.W. Pester, P.D. Hustad, M.D. Christianson, G.H. **Fredrickson**, E.J. Kramer, C.J. **Hawker**, "Poly(dimethylsiloxane-*b*-methyl methacrylate): A promising candidate for sub-10 nm patterning," *Macromolecules* **48** (2015) 3422-3430.
DOI: 10.1021/acs.macromol.5b00518 [PDF]

164. Y. Luo, D. Montarnal, N.J. Treat, P.D. Hustad, M.D. Christianson, E.J. Kramer, G.H. **Fredrickson**, C.J. **Hawker**, "Enhanced block copolymer phase separation using click chemistry and ionic junctions," *ACS Macro Lett.* **4** (2015) 1332-1336.
DOI: 10.1021/acsmacrolett.5b00767 [PDF]

165. J.L. Lyons, A. Alkauskas, A. Janotti, C.G. **Van de Walle**, "First-principles theory of acceptors in nitride semiconductors," *Physica Status Solidi (b)* **252** (2015) 900-908.
DOI: 10.1002/pssb.201552062 [PDF]

166. J.L. Lyons, K. Krishnaswamy, L. Gordon, A. Janotti, C.G. **Van de Walle**, "Identification of microscopic hole-trapping mechanisms in nitride semiconductors," *IEEE Electron Device Lett.* **37** (2016) 154-156.
DOI: 10.1109/LED.2015.2509068 [PDF]

167. J.L. Lyons, C.G. **Van de Walle**, "Surprising stability of neutral interstitial hydrogen in diamond and cubic BN," *J. Phys.: Condens. Matter* **28** (2016) 06LT01.
DOI: 10.1088/0953-8984/28/6/06LT01 [PDF]

168. B.M. McSkimming, C. Chaix, J.S. **Speck** "High active nitrogen flux growth of GaN by plasma assisted molecular beam epitaxy," *J. Vac. Sci. Tech. A* **33** (2015) 05E128.
DOI: 10.1116/1.4928415 [PDF]

169. C.-K. Mai, T. Arai, X. Liu, S.L. Fronk, G.M. Su, R.A. **Segalman**, M.L. **Chabinyc**, G.C. Bazan, "Electrical properties of doped conjugated polyelectrolytes with modulated density of the ionic functionalities," *Chem. Comm*. **51** (2015) 17607-17610.
DOI: 10.1039/c5cc06690e [PDF]

170. C.-K. Mai, B. Russ, S.L. Fronk, N. Hu, M.B. Chan-Park, J.J. Urban, R.A. **Segalman**, M.L. **Chabinyc**, G.C. Bazan, "Varying the ionic functionalities of conjugated polyelectrolytes

leads to both p- and n-type carbon nanotube composites for flexible thermoelectrics," *Energy Environ. Sci*. **8** (2015) 2341-2346.
DOI: 10.1039/c5ee00938c [PDF]

171. R.N. Majzoub, K.K. Ewert, E.L. Jacovetty, B. Carragher, C.S. Potter, Y. Li, C.R. Safinya, "Patterned threadlike micelles and DNA-tethered nanoparticles: A structural study of PEGylated cationic liposome–DNA assemblies," *Langmuir* **31** (2015) 7073-7083.
DOI: 10.1021/acs.langmuir.5b00993 [PDF]

172. P. Malo de Molina, S. Lad, M.E. **Helgeson**, "Heterogeneity and its influence on the properties of di-functional poly(ethylene glycol) hydrogels: Structure and mechanics," *Macromolecules* **48** (2015) 5402-5411.
DOI: 10.1021/acs.macromol.5b01115 [PDF]

173. N.R. Martinez Rodriguez, S. Das, Y. Kaufman, J.N. **Israelachvili**, J.H. **Waite**, "Interfacial pH during mussel adhesive plaque formation," *Biofouling: The J. Bioadhesion and Biofilm Research* **31** (2015) 221-227.
DOI: 10.1080/08927014.2015.1026337 [PDF]

174. F.A. Medrano, R.L. Church, "A parallel computing framework for finding the supported solutions to a biobjective network optimization problem," *J. Multi-Crit. Decis. Anal*. **22** (2015) 244-259.
DOI: 10.1002/mcda.1541 [PDF]

175. L. Megalini, D.L. Becerra, R.M. Farrell, A. Pourhashemi, J.S. **Speck**, S. Nakamura, S.P. DenBaars, D.A. Cohen, "Continuous-wave operation of a $_{(20\text{-}2\text{-}1)}$ InGaN laser diode with a photoelectrochemically etched current aperture," *Appl. Phys. Express* **8** (2015) 042701.
DOI: 10.7567/APEX.8.042701 [PDF]

176. L. Megalini, L.Y. Kuritzky, J.T. Leonard, R. Shenoy, K. Rose, S. Nakamura, J.S. **Speck**, D.A. Cohen, S.P. DenBaars "Selective and controllable lateral photoelectrochemical etching of nonpolar and semipolar InGaN/GaN multiple quantum well active regions," *Appl. Phys. Express* **8** (2015) 066502.
DOI: 10.7567/APEX.8.066502 [PDF]

177. A. Melker, B.P. Fors, C.J. **Hawker**, J.E. Poelma, "Continuous flow synthesis of poly(methyl methacrylate) via a light-mediated controlled radical polymerization," *J. Polym. Sci. A: Polym. Chem.* **53** (2015) 2693-2698.
DOI: 10.1002/pola.27765 [PDF]

178. R.J. Messinger, T.G. Marks, S.S. Gleiman, F. Milstein, B.F. Chmelka, "Molecular origins of macroscopic mechanical properties of elastomeric organosiloxane foams," *Macromolecules* **48** (2015) 4835-4849.
DOI: 10.1021/acs.macromol.5b00532 [PDF]

179. M.-S. Miao, X.-L. Wang, J. Brgoch, F. Spera, M.G. Jackson, G. Kresse, H.-Q. Lin, "Anionic chemistry of noble gases: Formation of Mg–NG (NG = Xe, Kr, Ar) compounds under pressure,"

J. Am. Chem. Soc. **137** (2015) 14122-14128.
DOI: 10.1021/jacs.5b08162 [PDF]

180. E. Mikheev, C.R. Freeze, B.J. Isaac, T.A. Cain, S. **Stemmer**, "Separation of transport lifetimes in $SrTiO_3$-based two-dimensional electron liquids," *Phys. Rev. B* **91** (2015) 165125.
DOI: 10.1103/PhysRevB.91.165125 [PDF]

181. E. Mikheev, A.J. Hauser, B. Himmetoglu, N.E. Moreno, A. Janotti, C.G. **Van de Walle**, S. **Stemmer**, "Tuning bad metal and non-Fermi liquid behavior in a Mott material: Rare earth nickelate thin films," *Sci. Adv*. **1** (2015) e1500797.
DOI: 10.1126/sciadv.1500797 [PDF]

182. E. Mikheev, S. Raghavan, S. **Stemmer**, "Dielectric response of metal/$SrTiO_3$/two-dimensional electron liquid heterostructures," *Appl. Phys. Lett*. **107** (2015) 072905.
DOI: 10.1063/1.4928751 [PDF]

183. D. Morton, S. Mortezaei, S. Yemenicioglu, M.J. Isaacman, I.C. Nova, J.H. Gundlach, L. Theogarajan, "Tailored polymeric membranes for Mycobacterium smegmatis porin A (MspA) based biosensors," *J. Mater. Chem. B* **3** (2015) 5080.
DOI: 10.1039/c5tb00383k [PDF]

184. S. Mubeen, Y.-S. Jun, J. Lee, E.W. **McFarland**, "Solid suspension flow batteries using earth abundant materials," *ACS Appl. Mater. Interfaces* **8** (2016) 1759-1765.
DOI: 10.1021/acsami.5b09515 [PDF]

185. R.G. Mullen, J.-E. **Shea**, B. Peters, "Easy transition path sampling methods: Flexible-length aimless shooting and permutation shooting," *J. Chem. Theory Comput*. **11** (2015) 2421-2428.
DOI: 10.1021/acs.jctc.5b00032 [PDF]

186. H.R. Naughton, M.A. Alexandrou, T.H. Oakley, B.J. Cardinale, "Phylogenetic distance does not predict competition in green algal communities," *Ecosphere* **6** (2015) 1-19.
DOI: 10.1890/ES14-00502.1 [PDF]

187. J.G. Nedy, N.G. Young, K.M. Kelchner, Y. Hu, R.M. Farrell, S. Nakamura, S.P. DenBaars, C. Weisbuch, J.S. **Speck**, "Low damage dry etch for III-nitride light emitters," *Semi. Sci. Tech.* **30** (2015) 085019.
DOI: 10.1088/0268-1242/30/8/085019 [PDF]

188. T.-A.D. Nguyen, Z.R. Jones, B.R. Goldsmith, W.R. Buratto, G. Wu, S.L. Scott, T.W. Hayton, "A Cu_{25} nanocluster with partial Cu(0) character," *J. Am. Chem. Soc.* **137** (2015) 13319-13324.
DOI: 10.1021/jacs.5b07574 [PDF]

189. H. Ohtaki, F. Deplace, G.D. Vo, A.M. LaPointe, F. Shimizu, T. Sugano, E.J. Kramer, G.H. **Fredrickson**, G.W. Coates, "Allyl-terminated polypropylene macromonomers: A route to polyolefin elastomers with excellent elastic behavior," *Macromolecules* **48** (2015) 7489.
DOI: 10.1021/acs.macromol.5b01975 [PDF]

190. S.J. Patel, J.A. Logan, S.D. Harrington, B.D. Schultz, C.J. **Palmstrøm**, "Surface reconstructions and transport of epitaxial PtLuSb (001) thin films grown by MBE," *J. Cryst. Growth* **436** (2016) 145-149.
DOI: 10.1016/j.jcrysgro.2015.12.003 [PDF]

191. S.N. Patel, G.M. Su, C. Luo, M. Wang, L.A. Perez, D.A. Fischer, D. Prendergast, G.C. Bazan, A.J. Heeger, M.L. **Chabinyc**, E.J. Kramer, "NEXAFS spectroscopy reveals the molecular orientation in blade-coated pyridal[2,1,3]thiadiazole-containing conjugated polymer thin films," *Macromolecules* **48** (2015) 6606-6616.
DOI: 10.1021/acs.macromol.5b01647 [PDF]

192. J.S. Paustian, C.D. Angulo, R. Nery-Azevedo, N. Shi, A.I. Abdel-Fattah, T.M. Squires, "Direct measurements of colloidal solvophoresis under imposed solvent and solute gradients," *Langmuir* **31** (2015) 4402-4410.
DOI: 10.1021/acs.langmuir.5b00300 [PDF]

193. A. Pavlova, C.-Y. Cheng, M. Kinnebrew, J. Lew, F.W. Dahlquist, S. **Han**, "Protein structural and surface water rearrangement constitute major events in the earliest aggregation stages of tau," *PNAS* **113** (2016) E127-E136.
DOI: 10.1073/pnas.1504415113 [PDF]

194. H. Peelaers, E. Kioupakis, C.G. **Van de Walle**, "Free-carrier absorption in transparent conducting oxides: Phonon and impurity scattering in SnO_2," *Phys. Rev. B* **92** (2015) 235201.
DOI: 10.1103/PhysRevB.92.235201 [PDF]

195. H. Peelaers, K. Krishnaswamy, L. Gordon, D. Steiauf, A. Sarwe, A. Janotti, C.G. **Van de Walle**, "Impact of electric-field dependent dielectric constants on two-dimensional electron gases in complex oxides," *Appl. Phys. Lett*. **107** (2015) 183505.
DOI: 10.1063/1.4935222 [PDF]

196. H. Peelaers, C.G. **Van de Walle**, "Brillouin zone and band structure of β-Ga_2O_3," *Phys. Status Solidi B* **252** (2015) 828-832.
DOI: 10.1002/pssb.201451551 [PDF]

197. N.D. Petsev, L.G. Leal, M.S. Shell, "Multiscale simulation of ideal mixtures using smoothed dissipative particle dynamics," *J. Chem. Phys*. **144** (2016) 084115.
DOI: 10.1063/1.4942499 [PDF]

198. S. Pimputkar, S. Suihkonen, M. Imade, Y. Mori, J.S. **Speck**, S. Nakamura, "Free electron concentration dependent sub-bandgap optical absorption characterization of bulk GaN crystals," *J. Cryst. Growth* **432** (2015) 49-53.
DOI: 10.1016/j.jcrysgro.2015.09.016 [PDF]

199. D.L. Poerschke, G.G.E. Seward, C.G. **Levi**, "Influence of Yb:Hf ratio on ytterbium hafnate/molten silicate (CMAS) reactivity," *J. Am. Ceram. Soc*. **99** (2016) 651-659.
DOI: 10.1111/jace.13964 [PDF]

200. B.C. Popere, B. Russ, A.T. Heitsch, P. Trefonas, R.A. **Segalman**, "Large-area, nanometer-scale discrete doping of semiconductors via block copolymer self-assembly," *Adv. Mater. Interfaces* **2** (2015) 1500421.
DOI: 10.1002/admi.201500421 [PDF]

201. A. Pourhashemi, R.M. Farrell, D.A. Cohen, J.S. **Speck**, S.P. DenBaars, S. Nakamura, "High-power blue laser diodes with indium tin oxide cladding on semipolar (2021) GaN substrates," *Appl. Phys. Lett.* **106** (2015) 111105.
DOI: 10.1063/1.4915324 [PDF]

202. J.W. Pro, R.K. Lim, L.R. Petzold, M. Utz, M.R. Begley, "GPU-based simulations of fracture in idealized brick and mortar composites," *J. Mech. Phys. Sol.* **80** (2015) 68-85.
DOI: 10.1016/j.jmps.2015.03.011 [PDF]

203. J.W. Pro, R.K. Lim, L.R. Petzold, M. Utz, M.R. Begley, "The impact of stochastic microstructures on the macroscopic fracture properties of brick and mortar composites," *Extreme Mechanics Lett.* **5** (2015) 1-9.
DOI: 10.1016/j.eml.2015.09.001 [PDF]

204. M.G. Ramírez, J.P. Jahnke, M.J.N. Junk, J.M. Villalvilla, P.G. Boj, J.A. Quintana, E.M. Calzado, B.F. Chmelka, M.A. Díaz-García, "Improved amplified spontaneous emission of dye-doped functionalized mesostructured silica waveguide films," *Adv. Optical Mater.* **3** (2015) 1454-1461.
DOI: 10.1002/adom.201500297 [PDF]

205. R.K. Rhein, P.C. Dodge, M.-H. Chen, M.S. Titus, T.M. **Pollock**, A. **Van der Ven**, "Role of vibrational and configurational excitations in stabilizing the $L1_2$ structure in Co-rich Co-Al-W alloys," *Phys. Rev. B* **92** (2015) 174117.
DOI: 10.1103/PhysRevB.92.174117 [PDF]

206. A.Y. Rogachev, M.-S. Miao, G. Merino, R. Hoffmann, "Molecular CsF_5 and CsF_2^+," *Angewandte Chemie Int'l. Ed.* **54** (2015) 8275-8278.
DOI: 10.1002/ange.201500402 [PDF]

207. M.N. Rossol, V.P. Rajan, F.W. Zok, "Effects of weave architecture on mechanical response of 2D ceramic composites," *Composites Part A: Appl. Sci. and Manufac.* **74** (2015) 141-152.
DOI: 10.1016/j.compositesa.2015.04.003 [PDF]

208. R.P. Sangodkar, B.J. Smith, D. Gajan, A.J. Rossini, L.R. Roberts, G.P. Funkhouser, A. Lesage, L. Emsley, B.F. Chmelka, "Influences of dilute organic adsorbates on the hydration of low-surface-area silicates," *J. Am. Chem. Soc.* **137** (2015) 8096-8112.
DOI: 10.1021/jacs.5b00622 [PDF]

209. D. Sarkar, X. Xie, W. Liu, W. Cao, J. Kang, Y. Gong, S. Kraemer, P.M. Ajayan, K. Banerjee, "A subthermionic tunnel field-effect transistor with an atomically thin channel," *Nature* **526** (2015) 91.

DOI: 10.1038/nature15387 [PDF]

210. M. Seal, N. Singh, E.W. **McFarland**, J. Baltrusaitis, "Electrochemically deposited Sb and In doped tin sulfide (SnS) photoelectrodes," *J. Phys. Chem. C* **119** (2015) 6471-6480.
DOI: 10.1021/jp512927y [PDF]

211. K.A. See, S. Hug, K. Schwinghammer, M.A. Lumley, Y. Zheng, J.M. Nolt, G.D. **Stucky**, F. Wudl, B.V. Lotsch, R. **Seshadri**, "Lithium charge storage mechanisms of cross-linked triazine networks and their porous carbon derivatives," *Chem. Mater*. **27** (2015) 3821-3829.
DOI: 10.1021/acs.chemmater.5b00772 [PDF]

212. M.-J. Sher, N.M. Mangan, M.J. Smith, Y.-T. Lin, S. Marbach, T.M. Schneider, S. Gradečak, M.P. Brenner, E. Mazur, "Femtosecond-laser hyperdoping silicon in an SF_6 atmosphere: Dopant incorporation mechanism," *J. Appl. Phys*. **117** (2015) 125301.
DOI: 10.1063/1.4914520 [PDF]

213. J.B. Sherman, C.-Y. Chiu, R. Fagenson, G. Wu, C.J. **Hawker**, M.L. **Chabinyc**, "Suppressing crystallization in solution-processed thin films of organic semiconductors," *MRS Commun.* **5** (2015) 447-452.
DOI: 10.1557/mrc.2015.60 [PDF]

214. J.B. Sherman, K. Moncino, T. Baruah, G. Wu, S.R. Parkin, B. Purushothaman, R. Zope, J. Anthony, M.L. **Chabinyc**, "Crystalline alloys of organic donors and acceptors based on TIPS-pentacene," *J. Phys. Chem. C* **119** (2015) 20823-20832.
DOI: 10.1021/acs.jpcc.5b06363 [PDF]

215. W. Shi, G.H. **Fredrickson**, E.J. Kramer, C. Ntaras, A. Avgeropoulos, Q. Demassieux, C. Creton, "Mechanics of an asymmetric hard−soft lamellar nanomaterial," *ACS Nano* **10** (2016) 2054-2062.
DOI: 10.1021/acsnano.5b06215 [PDF]

216. W. Shi, A.L. Hamilton, K.T. Delaney, G.H. **Fredrickson**, E.J. Kramer, C. Ntaras, A. Avgeropoulos, N.A. Lynd, "Creating extremely asymmetric lamellar structures via fluctuation-assisted unbinding of miktoarm star block copolymer alloys," *J. Am. Chem. Soc. Comm.* **137** (2015) 6160-6163.
DOI: 10.1021/jacs.5b02881 [PDF]

217. W. Shi, A.L. Hamilton, K.T. Delaney, G.H. **Fredrickson**, E.J. Kramer, C. Ntaras, A. Avgeropoulos, N.A. Lynd, Q. Demassieux, C. Creton, "Aperiodic `bricks and mortar' mesophase: A new equilibrium state of soft matter and application as a stiff thermoplastic elastomer," *Macromolecules* **48** (2015) 5378. [Cover Article].
DOI: 10.1021/acs.macromol.5b01210 [PDF]

218. W. Shi, W. Li, K.T. Delaney, G.H. **Fredrickson**, E.J. Kramer, C. Ntaras, A. Avgeropoulos, N.A. Lynd, "Morphology re-entry in asymmetric PS-PI-PS' triblock copolymer and PS homopolymer blends," *J. Polym. Sci. B: Polym. Phys.* **54** (2016) 169-179.
DOI: 10.1002/polb.23811 [PDF]

219. B. Shojaei, A. McFadden, J. Shabani, B.D. Schultz, C.J. **Palmstrøm**, "Studies of scattering mechanisms in gate tunable InAs/(Al,Ga)Sb two dimensional electron gases," *Appl. Phys. Lett.* **106** (2015) 222101.
DOI: 10.1063/1.4921970 [PDF]

220. B. Shojaei, P.J.J. O'Malley, J. Shabani, P. Roushan, B.D. Schultz, R.M. Lutchyn, C. Nayak, J.M. Martinis, C.J. **Palmstrøm**, "Demonstration of gate control of spin splitting in a high-mobility InAs/AlSb two-dimensional electron gas," *Phys. Rev. B* **93** (2016) 075302.
DOI: 10.1103/PhysRevB.93.075302 [PDF]

221. S.D. Springer, A. **Butler**, "Magnetic susceptibility of Mn(III) complexes of hydroxamate siderophores," *J. Inorg. Biochem.* **148** (2015) 22-26.
DOI: 10.1016/j.jinorgbio.2015.04.015 [PDF]

222. G.M. Su, E. Lim, E.J. Kramer, M.L. **Chabinyc**, "Phase separated morphology of ferroelectric–semiconductor polymer blends probed by synchrotron X-ray methods," *Macromolecules* **48** (2015) 5861-5867.
DOI: 10.1021/acs.macromol.5b01354 [PDF]

223. M.S. Titus, M.P. Echlin, P. Gumbsch, T.M. **Pollock**, "Dislocation injection in strontium titanate by femtosecond laser pulses," *J. Appl. Phys.* **118** (2015) 075901.
DOI: 10.1063/1.4928772 [PDF]

224. F.M. Toma, F. Puntoriero, T.V. Pho, M. La Rosa, Y.-S. Jun, B.J. Tremolet de Villers, J. Pavlovich, G.D. **Stucky**, S. Campagna, F. Wudl, "Polyimide dendrimers containing multiple electron donor-acceptor units and their unique photophysical properties," *Angew. Chem. Int. Ed.* **54** (2015) 6775-6779.
DOI: 10.1002/anie.201501298 [PDF]

225. J.S. Van Sluytman, S. Krämer, V.K. Tolpygo, CG. **Levi**, "Microstructure evolution of ZrO_2–$YbTaO_4$ thermal barrier coatings," *Acta Mater.* **96** (2015) 133-142.
DOI: 10.1016/j.actamat.2015.06.007 [PDF]

226. C.X. Wang, A. Braendle, M.S. Menyo, C.W. Pester, E.E. Perl, I. Arias, C.J. **Hawker**, D. Klinger, "Catechol-based layer-by-layer assembly of composite coatings: A versatile platform to hierarchical nano-materials," *Soft Matter* **11** (2015) 6173-6178.
DOI: 10.1039/c5sm01374g [PDF]

227. X. Wang, J.L. Brosmer, A. Thevenon, P.L. Diaconescu, "Highly active yttrium catalysts for the ring-opening polymerization of ε-caprolactone and δ-valerolactone," *Organometallics* **34** (2015) 4700-4706.
DOI: 10.1021/acs.organomet.5b00442 [PDF]

228. M.Q. Wilber, J. Kitzes, J. Harte, "Scale collapse and the emergence of the power law species–area relationship," *Global Ecology and Biogeography* **24** (2015) 883-895.
DOI: 10.1111/geb.12309 [PDF]

229. B. Wu, D. Liu, S. Mubeen, T.T. Chuong, M. **Moskovits**, G.D. **Stucky**, "Anisotropic growth of TiO_2 onto gold nanorods for plasmon-enhanced hydrogen production from water reduction," *J. Am. Chem. Soc.* **138** (2016) 1114-1117.
DOI: 10.1021/jacs.5b11341 [PDF]

230. B.P. Yonkee, R.M. Farrell, J.T. Leonard, S.P. DenBaars, J.S. **Speck**, S. Nakamura, "Demonstration of low resistance ohmic contacts to p-type (20-21) GaN," *Semi. Sci. Tech*. **30** (2015) 075007.
DOI: 10.1088/0268-1242/30/7/075007 [PDF]

231. E.C. Young, B.P. Yonkee, F. Wu, S.H. Oh, S.P. DenBaars, S. Nakamura, J.S. **Speck**, "Hybrid tunnel junction contacts to III–nitride light-emitting diodes," *Appl. Phys. Express.* **9** (2016) 022102.
DOI: 10.7567/APEX.9.022102 [PDF]

232. N.G. Young, R.M. Farrell, S. Oh, M. Cantore, F. Wu, S. Nakamura, S.P. DenBaars, C. Weisbuch, J.S. **Speck**, "Polarization field screening in thick (0001) InGaN/GaN single quantum well light-emitting diodes," *Appl. Phys. Lett*. **108** (2016) 061105.
DOI: 10.1063/1.4941815 [PDF]

233. E.M. Zaleski, C. Ensslen, C.G. **Levi**, "Melting and crystallization of silicate systems relevant to thermal barrier coating damage," *J. Am. Ceram. Soc.* **98** (2015) 1642-1649.
DOI: 10.1111/jace.13478 [PDF]

234. E. Zamanidoost, F.M. Bayat, D. Strukov, I. Kataeva, "Manhattan rule training for memristive crossbar circuit pattern classifiers," *2015 IEEE 9th International Symposium on Intelligent Signal Processing (WISP)*, pages 1-6, 15-17 May 2015 in Siena, Italy.
DOI: 10.1109/WISP.2015.7139171 [PDF]

235. H. Zeng, D. Liu, Y. Zhang, K.A. See, Y.-S. Jun, G. Wu, J.A. Gerbec, X. Ji, G.D. **Stucky**, "Nanostructured Mn-doped V_2O_5 cathode material fabricated from layered vanadium jarosite," *Chem. Mater*. **27** (2015) 73317336.
DOI: 10.1021/acs.chemmater.5b02840 [PDF]

236. Y. Zheng, M.-S. Miao, G. Dantelle, N.D. Eisenmenger, G. Wu, I. Yavuz, M.L. **Chabinyc**, K.N. Houk, F. Wudl, "A solid-state effect responsible for an organic quintet state at room temperature and ambient pressure," *Adv. Mater*. **27** (2015) 1718-1723.
DOI: 10.1002/adma.201405093 [PDF]

237. N.E.R. Zimmermann, B. Vorselaars, D. Quigley, B. Peters, "Nucleation of NaCl from aqueous solution: Critical sizes, ion-attachment kinetics, and rates," *J. Am. Chem. Soc*. **137** (2015) 13352-13361.
DOI: 10.1021/jacs.5b08098 [PDF]