SHyNE Publications for Calendar Year 2020

Internal User Papers (362)

1. Accardo, J. V.; McClure, E. R.; Mosquera, M. A.; Kalow, J. A., Using Visible Light to Tune Boronic Acid–ester Equilibria. Journal of the American Chemical Society 2020, 142 (47), 19969-19979.
2. Akono, A.-T., Nanostructure and fracture behavior of carbon nanofiber-reinforced cement using nanoscale depth-sensing methods. Materials 2020, 13 (17), 3837.
3. Akono, A.-T.; Chen, J.; Zhan, M.; Shah, S. P., Basic creep and fracture response of fine recycled aggregate concrete. Construction and Building Materials 2020, 266, 121107.
4. Akono, A.-T.; Dávila, G.; Druhan, J.; Shi, Z.; Jessen, K.; Tsotsis, T., Influence of geochemical reactions on the creep behavior of Mt. Simon sandstone. International Journal of Greenhouse Gas Control 2020, 103, 103183.
5. Akono, A. T., Fracture behavior of metakaolin-based geopolymer reinforced with carbon nanofibers. International Journal of Ceramic Engineering & Science 2020, 2 (5), 234-242.
6. Altman, A. B.; Tamerius, A. D.; Koocher, N. Z.; Meng, Y.; Pickard, C. J.; Walsh, J. P.; Rondinelli, J. M.; Jacobsen, S. D.; Freedman, D. E., Computationally Directed Discovery of MoBi2. Journal of the American Chemical Society 2020.
7. Amsterdam, S. H.; LaMountain, T.; Stanev, T. K.; Sangwan, V. K.; López-Arteaga, R.; Padgaonkar, S.; Watanabe, K.; Taniguchi, T.; Weiss, E. A.; Marks, T. J., Tailoring the Optical Response of Pentacene Thin Films via Templated Growth on Hexagonal Boron Nitride. The Journal of Physical Chemistry Letters 2020, 12, 26-31.
8. An, D.; Baik, S.-I.; Ren, Q.; Jiang, M.; Zhu, M.; Isheim, D.; Krakauer, B. W.; Seidman, D. N., A transmission electron microscopy and atom-probe tomography study of martensite morphology and composition in a dual-phase steel. Materials Characterization 2020, 162, 110207.
9. Anferov, A.; Suleymanzade, A.; Oriani, A.; Simon, J.; Schuster, D. I., Millimeter-Wave Four-Wave Mixing via Kinetic Inductance for Quantum Devices. Physical Review Applied 2020, 13 (2), 024056.
10. Arinaga, A. M.; Liu, S.; Marks, T. J., Oxidative dehydrogenation of propane over transition metal sulfides using sulfur as an alternative oxidant. Catalysis Science & Technology 2020, 10 (20), 6840-6848.
11. Bae, Y. J.; Shimizu, D.; Schultz, J. D.; Kang, G.; Zhou, J.; Schatz, G. C.; Osuka, A.; Wasielewski, M. R., Balancing Charge Transfer and Frenkel Exciton Coupling Leads to Excimer Formation in Molecular Dimers: Implications for Singlet Fission. The Journal of Physical Chemistry A 2020, 124 (41), 8478-8487.
12. Bae, Y. J.; Zhao, X.; Kryzaniak, M. D.; Nagashima, H.; Strzalka, J.; Zhang, Q.; Wasielewski, M. R., Spin Dynamics of Quintet and Triplet States Resulting from Singlet Fission in Oriented Terrylenediimide and Quaterrylenediimide Films. The Journal of Physical Chemistry C 2020, 124 (18), 9822-9833.
13. Baik, S.-I.; Gupta, R. K.; Kumar, K. S.; Seidman, D. N., Temperature increases and thermoplastic microstructural evolution in adiabatic shear bands in a high-strength and high-toughness 10 wt.% Ni steel. Acta Materialia 2020, 116568.
14. Baik, S.-I.; Rawlings, M. J.; Dunand, D. C., Effect of aging on coarsening-and creep resistance of a Ti-modified Fe–Ni–Al–Cr–Mo ferritic steel with L21/B2 composite precipitates. Materials Science and Engineering: A 2020, 776, 138987.

15. Balch, H. B.; Evans, A. M.; Dasari, R. R.; Li, H.; Li, R.; Thomas, S.; Wang, D.; Bisbey, R. P.; Slicker, K.; Castano, I., Electronically Coupled 2D Polymer/MoS2 Heterostructures. Journal of the American Chemical Society 2020.
16. Bandodkar, A.; Lee, S.; Huang, I.; Li, W.; Wang, S.; Su, C.-J.; Jeang, W.; Hang, T.; Mehta, S.; Nyberg, N., Sweat-activated biocompatible batteries for epidermal electronic and microfluidic systems. Nature Electronics 2020, 3 (9), 554-562.
17. Bao, J.-K.; Malliakas, C. D.; Zhang, C.; Cai, S.; Chen, H.; Rettie, A. J.; Fisher, B. L.; Chung, D. Y.; Dravid, V. P.; Kanatzidis, M. G., Quasi-two-dimensional heterostructures (K $ M_ {1-x} $ Te)(LaTe $ _ {3} $)($ M $= Mn, Zn) with charge density waves. arXiv preprint arXiv:2011.11068 2020.
18. Battistella, C.; McCallum, N. C.; Gnanasekaran, K.; Zhou, X.; Caponetti, V.; Montalti, M.; Gianneschi, N. C., Mimicking Natural Human Hair Pigmentation with Synthetic Melanin. ACS Central Science 2020.
19. Battistella, C.; McCallum, N. C.; Vanthournout, B.; Forman, C. J.; Ni, Q. Z.; La Clair, J. J.; Burkart, M. D.; Shawkey, M. D.; Gianneschi, N. C., Bioinspired Chemoenzymatic Route to Artificial Melanin for Hair Pigmentation. Chemistry of Materials 2020, 32 (21), 9201-9210.
20. Baturalp, T. B.; Rodriguez, L.; Coverstone, V. L.; Coppejans, R.; Cao, J.; Chung, Y.-W.; Buchholz, D. B.; Ulmer, M. P., Stable membrane candidate for deployable membrane space telescopes. Journal of Astronomical Telescopes, Instruments, and Systems 2020, 6 (3), 034001.
21. Baumann, A. E.; Downing, J. R.; Burns, D. A.; Hersam, M. C.; Thoi, V. S., Graphene–Metal–Organic Framework Composite Sulfur Electrodes for Li–S Batteries with High Volumetric Capacity. ACS applied materials & interfaces 2020, 12 (33), 37173-37181.
22. Beck, M. E.; Shylendra, A.; Sangwan, V. K.; Guo, S.; Rojas, W. A. G.; Yoo, H.; Bergeron, H.; Su, K.; Trivedi, A. R.; Hersam, M. C., Spiking neurons from tunable Gaussian heterojunction transistors. Nature communications 2020, 11 (1), 1-8.
23. Bentz, K. C.; Gnanasekaran, K.; Bailey, J. B.; Ayala, S.; Tezcan, F. A.; Gianneschi, N. C.; Cohen, S. M., Inside polyMOFs: layered structures in polymer-based metal–organic frameworks. Chemical Science 2020, 11 (38), 10523-10528.
24. Bergeron, H.; Guiney, L. M.; Beck, M. E.; Zhang, C.; Sangwan, V. K.; Torres-Castanedo, C. G.; Gish, J. T.; Rao, R.; Austin, D. R.; Guo, S. L.; Lam, D.; Su, K. E.; Brown, P. T.; Glavin, N. R.; Maruyama, B.; Bedzyk, M. J.; Dravid, V. P.; Hersam, M. C., Large-area optoelectronic-grade InSe thin films via controlled phase evolution. Applied Physics Reviews 2020, 7 (4).
25. Bernardini, J.; Sen, U.; Jafari Gukeh, M.; Asinari, P.; Megaridis, C. M., Wettability-Engineered Meshes for Gas Microvolume Precision Handling in Liquids. ACS applied materials & interfaces 2020, 12 (15), 18046-18055.
26. Bhattacharya, A.; Niederholtmeyer, H.; Podolsky, K. A.; Bhattacharya, R.; Song, J.-J.; Brea, R. J.; Tsai, C.-H.; Sinha, S. K.; Devaraj, N. K., Lipid Sponge Droplets as Programmable Synthetic Organelles. bioRxiv 2020.
27. Bienfait, A.; Zhong, Y.; Chang, H.-S.; Chou, M.-H.; Conner, C. R.; Dumur, É.; Grebel, J.; Peairs, G. A.; Povey, R. G.; Satzinger, K. J., Quantum erasure using entangled surface acoustic phonons. Physical Review X 2020, 10 (2), 021055.
28. Bobbala, S.; Allen, S. D.; Yi, S.; Vincent, M.; Frey, M.; Karabin, N. B.; Scott, E. A., Employing bicontinuous-to-micellar transitions in nanostructure morphology for on-demand photo-oxidation responsive cytosolic delivery and off–on cytotoxicity. Nanoscale 2020, 12 (9), 5332-5340.
29. Bourassa, A.; Anderson, C. P.; Miao, K. C.; Onizhuk, M.; Ma, H.; Crook, A. L.; Abe, H.; Ul-Hassan, J.; Ohshima, T.; Son, N. T., Entanglement and control of single nuclear spins in isotopically engineered silicon carbide. Nature Materials 2020, 19 (12), 1319-1325.

30. Bourassa, A.; Anderson, C. P.; Miao, K. C.; Onizhuk, M.; Ma, H.; Crook, A. L.; Abe, H.; Ul-Hassan, J.; Ohshima, T.; Son, N. T., Entanglement and control of single quantum memories in isotopically engineered silicon carbide. arXiv preprint arXiv:2005.07602 2020.
31. Brasiliense, V.; Park, J. E.; Chen, Z.; Van Duyne, R. P.; Schatz, G. C., Nanopipette-based electrochemical SERS platforms: Using electrodeposition to produce versatile and adaptable plasmonic substrates. Journal of Raman Spectroscopy 2020.
32. Burke, D. W.; Sun, C.; Castano, I.; Flanders, N. C.; Evans, A. M.; Vitaku, E.; McLeod, D. C.; Lambeth, R. H.; Chen, L. X.; Gianneschi, N. C., Acid Exfoliation of Imine-linked Covalent Organic Frameworks Enables Solution Processing into Crystalline Thin Films. Angewandte Chemie International Edition 2020, 59 (13), 5165-5171.
33. Burke, J.; Zhang, X.; Bobbala, S.; Frey, M.; Fuentes, C.; Haddad, H.; Allen, S.; Richardson, R.; Amaral, L.; Ameer, G., Subcutaneous nanotherapy repurposes the immunosuppressive mechanism of rapamycin to enhance allogeneic islet graft viability. bioRxiv 2020.
34. Butcher, A.; Guo, X.; Shreiner, R.; Delegan, N.; Hao, K.; Duda III, P. J.; Awschalom, D. D.; Heremans, F. J.; High, A. A., High-Q Nanophotonic Resonators on Diamond Membranes using Templated Atomic Layer Deposition of TiO2. Nano Letters 2020, 20 (6), 4603-4609.
35. Butcher, A.; Guo, X.; Shreiner, R.; Delegan, N.; Hao, K.; Duda, P. J.; Awschalom, D. D.; Heremans, F. J.; High, A. A., High-Q Nanophotonic Resonators on Diamond Membranes using Templated Atomic Layer Deposition of TiO2. Nano Letters 2020.
36. Caesar, L. K.; Robey, M. T.; Swyers, M.; Islam, M. N.; Ye, R.; Vagadia, P. P.; Schiltz, G. E.; Thomas, P. M.; Wu, C. C.; Kelleher, N. L., Heterologous Expression of the Unusual Terreazepine Biosynthetic Gene Cluster Reveals a Promising Approach for Identifying New Chemical Scaffolds. Mbio 2020, 11 (4).
37. Cai, K.; Cui, B.; Song, B.; Wang, H.; Qiu, Y.; Jones, L. O.; Liu, W.; Shi, Y.; Vemuri, S.; Shen, D., Radical cyclic [3] daisy chains. Chem 2020.
38. Cai, S.; Hao, S.; Luo, Y.; Su, X.; Luo, Z.-Z.; Hu, X.; Wolverton, C.; Dravid, V. P.; Kanatzidis, M. G., Ultralow Thermal Conductivity and Thermoelectric Properties of Rb2Bi8Se13. Chemistry of Materials 2020, 32 (8), 3561-3569.
39. Cai, S.; Hao, S.; Luo, Z.-Z.; Li, X.; Hadar, I.; Bailey, T. P.; Hu, X.; Uher, C.; Hu, Y.-Y.; Wolverton, C., Discordant nature of Cd in PbSe: off-centering and core–shell nanoscale CdSe precipitates lead to high thermoelectric performance. Energy & Environmental Science 2020, 13 (1), 200-211.
40. Cai, S.; Hu, X.; Kanatzidis, M.; Dravid, V., Novel Core-shell Nanoscale Precipitates in High Performance PbSe-CdSe Thermoelectric Materials. Microscopy and Microanalysis 2020, 26 (S2), 34-36.
41. Cai, S.; Luo, Z.; Kanatzidis, M.; Dravid, V., Role of Advanced Electron Microscopy in Unraveling Complex Microstructure in Nanostructured Thermoelectric Materials. Microscopy and Microanalysis 2020, 26 (S2), 266-268.
42. Caldwell, M. A.; Brue, C. R.; Whittemore, T. J.; Meade, T. J., A Ln (iii)-3-hydroxypyridine pH responsive probe optimized by DFT. RSC advances 2020, 10 (15), 8994-8999.
43. Callmann, C. E.; Cole, L. E.; Kusmierz, C. D.; Huang, Z.; Horiuchi, D.; Mirkin, C. A., Tumor cell lysate-loaded immunostimulatory spherical nucleic acids as therapeutics for triple-negative breast cancer. Proceedings of the National Academy of Sciences 2020, 117 (30), 17543-17550.
44. Cannon, M. L.; Westover, J. B.; Bleher, R.; Sanchez-Gonzalez, M. A.; Ferrer, G., In Vitro Analysis of the Anti-viral Potential of nasal spray constituents against SARS-CoV-2. bioRxiv 2020.
45. Carlson, J.; Pack, A.; Transtrum, M. K.; Lee, J.; Seidman, D. N.; Liarte, D. B.; Sitaraman, N.; Senanian, A.; Sethna, J. P.; Arias, T., Analysis of Magnetic Vortex Dissipation in Sn-Segregated Boundaries in Nb $ _3 $ Sn SRF Cavities. arXiv preprint arXiv:2003.03362 2020.

46. Casar, C. P.; Kruger, B. R.; Flynn, T. M.; Masterson, A. L.; Momper, L. M.; Osburn, M. R., Mineral-hosted biofilm communities in the continental deep subsurface, Deep Mine Microbial Observatory, SD, USA. Geobiology 2020.
47. Chakram, S.; He, K.; Dixit, A. V.; Oriani, A. E.; Naik, R. K.; Leung, N.; Kwon, H.; Ma, W.-L.; Jiang, L.; Schuster, D. I., Multimode photon blockade. arXiv preprint arXiv:2010.15292 2020.
48. Chakram, S.; Oriani, A. E.; Naik, R. K.; Dixit, A. V.; He, K.; Agrawal, A.; Kwon, H.; Schuster, D. I., Seamless high-Q microwave cavities for multimode circuit QED. arXiv preprint arXiv:2010.16382 2020.
49. Chandrasiri, I.; Abebe, D. G.; Loku Yaddehige, M.; Williams, J. S. D.; Zia, M. F.; Dorris, A.; Barker, A.; Simms, B. L.; Parker, A.; Vinjamuri, B. P., Self-Assembling PCL–PAMAM Linear Dendritic Block Copolymers (LDBCs) for Bioimaging and Phototherapeutic Applications. ACS Applied Bio Materials 2020, 3 (9), 5664-5677.
50. Chang, H.-S.; Satzinger, K. J.; Zhong, Y.; Bienfait, A.; Chou, M.-H.; Conner, C. R.; Dumur, É.; Grebel, J.; Peairs, G. A.; Povey, R. G., A fast and large bandwidth superconducting variable coupler. Applied Physics Letters 2020, 117 (24), 244001.
51. Chang, H.-S.; Zhong, Y.; Bienfait, A.; Chou, M.-H.; Conner, C. R.; Dumur, É.; Grebel, J.; Peairs, G. A.; Povey, R. G.; Satzinger, K. J., Remote entanglement via adiabatic passage using a tunably dissipative quantum communication system. Physical Review Letters 2020, 124 (24), 240502.
52. Chen, J.; Akono, A.-T., Influence of multi-walled carbon nanotubes on the hydration products of ordinary Portland cement paste. Cement and Concrete Research 2020, 137, 106197.
53. Chen, J. E.; Wang, Q.; Shull, K. R.; Richards, J. J., Control over Electroless Plating of Silver on Silica Nanoparticles with Sodium Citrate. Journal of Colloid and Interface Science 2020.
54. Chen, M.; Powers-Riggs, N. E.; Coleman, A. F.; Young, R. M.; Wasielewski, M. R., Singlet fission in quaterrylenediimide thin films. The Journal of Physical Chemistry C 2020, 124 (5), 2791-2798.
55. Chen, P.; Kenel, C.; Wang, Y.; Dunand, D. C., SnO2-Ag composites with high thermal cycling stability created by Ag infiltration of 3D ink-extruded SnO2 microlattices. Applied Materials Today 2020, 21, 100794.
56. Chen, P.-C.; Liu, Y.; Du, J. S.; Meckes, B.; Dravid, V. P.; Mirkin, C. A., Chain-End Functionalized Polymers for the Controlled Synthesis of Sub-2 nm Particles. Journal of the American Chemical Society 2020, 142 (16), 7350-7355.
57. Chen, X.; Marks, A.; Paulsen, B. D.; Wu, R.; Rashid, R. B.; Chen, H.; Alsufyani, M.; Rivnay, J.; McCulloch, I., N-type Rigid Semiconducting Polymers Bearing Oligo (Ethylene Glycol) Side Chains for High Performance Organic Electrochemical Transistors. Angewandte Chemie International Edition 2020.
58. Chen, X.; Wilke, C. M.; Gaillard, J.-F.; Gray, K. A., Combined toxicity of nano-CuO/nano-TiO2 and CuSO4/nano-TiO2 on Escherichia coli in aquatic environments under dark and light conditions. NanoImpact 2020, 19, 100250.
59. Chen, X.-Y.; Shen, D.; Cai, K.; Jiao, Y.; Wu, H.; Song, B.; Zhang, L.; Tan, Y.; Wang, Y.; Feng, Y., Suit [3] ane. Journal of the American Chemical Society 2020, 142 (47), 20152-20160.
60. Chen, Z.; Li, P.; Anderson, R.; Wang, X.; Zhang, X.; Robison, L.; Redfern, L. R.; Moribe, S.; Islamoglu, T.; Gómez-Gualdrón, D. A., Balancing volumetric and gravimetric uptake in highly porous materials for clean energy. Science 2020, 368 (6488), 297-303.
61. Cheng, M.; dos Reis, R.; Chica, D.; Kanatzidis, M.; Dravid, V., Structural, Chemical, and Local Properties of Layered Metal Chalcophosphate Systems. Microscopy and Microanalysis 2020, 26 (S2), 2342-2345.
62. Chica, D. G.; He, Y.; McCall, K. M.; Chung, D. Y.; Pak, R. O.; Trimarchi, G.; Liu, Z.; De Lurgio, P. M.; Wessels, B. W.; Kanatzidis, M. G., Direct thermal neutron detection by the 2D semiconductor 6 LiInP 2 Se 6. Nature 2020, 577 (7790), 346-349.

63. Chien, P.-H.; Harada, J. K.; Liu, H.; Patel, S.; Huang, C.; Rondinelli, J. M.; Poeppelmeier, K. R.; Hu, Y.-Y., Microscopic Insights into the Reconstructive Phase Transition of KNaNbOF5 with 19F NMR Spectroscopy. Chemistry of Materials 2020.
64. Chiou, K.; Huang, J., Cresol-Carbon Nanotube Charge-Transfer Complex: Stability in Common Solvents and Implications for Solution Processing. Matter 2020, 3 (1), 302-319.
65. Choi, H.; Bae, G.; Khatua, C.; Min, S.; Jung, H. J.; Li, N.; Jun, I.; Liu, H. W.; Cho, Y.; Na, K. H., Remote Manipulation of Slidable Nano-Ligand Switch Regulates the Adhesion and Regenerative Polarization of Macrophages. Advanced Functional Materials 2020, 30 (35), 2001446.
66. Choi, J.; Chen, S.; Deng, Y.; Xue, Y.; Reeder, J. T.; Franklin, D.; Oh, Y. S.; Model, J. B.; Aranyosi, A. J.; Lee, S. P., Skin-Interfaced Microfluidic Systems that Combine Hard and Soft Materials for Demanding Applications in Sweat Capture and Analysis. Advanced Healthcare Materials 2020, 2000722.
67. Choi, Y. S.; Hsueh, Y.-Y.; Koo, J.; Yang, Q.; Avila, R.; Hu, B.; Xie, Z.; Lee, G.; Ning, Z.; Liu, C., Stretchable, dynamic covalent polymers for soft, long-lived bioresorbable electronic stimulators designed to facilitate neuromuscular regeneration. Nature communications 2020, 11 (1), 1-14.
68. Choi, Y. S.; Koo, J.; Lee, Y. J.; Lee, G.; Avila, R.; Ying, H.; Reeder, J.; Hambitzer, L.; Im, K.; Kim, J., Biodegradable Polyanhydrides as Encapsulation Layers for Transient Electronics. Advanced Functional Materials 2020, 2000941.
69. Chou, M.-H.; Dumur, É.; Zhong, Y.; Peairs, G.; Bienfait, A.; Chang, H.-S.; Conner, C.; Grebel, J.; Povey, R.; Satzinger, K., Measurements of a quantum bulk acoustic resonator using a superconducting qubit. Applied Physics Letters 2020, 117 (25), 254001.
70. Chung, D.-W.; Toinin, J. P.; Lass, E. A.; Seidman, D. N.; Dunand, D. C., Effects of Cr on the properties of multicomponent cobalt-based superalloys with ultra high γ'volume fraction. Journal of Alloys and Compounds 2020, 832, 154790.
71. Collins, K. A.; Saballos, R. J.; Fataftah, M. S.; Puggioni, D.; Rondinelli, J. M.; Freedman, D. E., Synthetic investigation of competing magnetic interactions in 2D metal–chloranilate radical frameworks. Chemical Science 2020.
72. Collinson, D. W.; Emnett, H. M.; Ning, J.; Hartmann, M. J.; Brinson, L. C., Tapered Polymer Whiskers to Enable Three-Dimensional Tactile Feature Extraction. Soft Robotics 2020.
73. Coste, S. C.; Pearson, T. J.; Altman, A. B.; Klein, R. A.; Finney, B. A.; Hu, M. Y.; Alp, E. E.; Vlaisavljevich, B.; Freedman, D. E., Orbital energy mismatch engenders high-spin ground states in heterobimetallic complexes. Chemical Science 2020, 11 (36), 9971-9977.
74. Crook, A. L.; Anderson, C. P.; Miao, K. C.; Bourassa, A.; Lee, H.; Bayliss, S. L.; Bracher, D. O.; Zhang, X.; Abe, H.; Ohshima, T., Purcell enhancement of a single silicon carbide color center with coherent spin control. Nano letters 2020, 20 (5), 3427-3434.
75. Dalecky, L.; Juillerat, C.; Cody, J., Bis (3-methyl-1-propyl-1H-imidazol-3-ium) bis (4, 6-disulfanidyl-4, 6-disulfanylidene-1, 2, 3, 5, 4, 6-tetrathiadiphosphinane-κ3S2, S4, S6) nickel. IUCrData 2020, 5 (4), x200312.
76. Davis, J. L.; Zhang, Y.; Yi, S.; Du, F.; Song, K.-H.; Scott, E. A.; Sun, C.; Zhang, H. F., Super-resolution imaging of self-assembled nanocarriers using quantitative spectroscopic analysis for cluster extraction. Langmuir 2020, 36 (9), 2291-2299.
77. De Luca, A.; Seidman, D. N.; Dunand, D. C., Mn and Mo additions to a dilute Al-Zr-Sc-Er-Si-based alloy to improve creep resistance through solid-solution-and precipitation-strengthening. Acta Materialia 2020, 194, 60-67.
78. De Luca, A.; Shu, S.; Seidman, D. N., Effect of microadditions of Mn and Mo on dual L12-and α-precipitation in a dilute Al-Zr-Sc-Er-Si alloy. Materials Characterization 2020, 169, 110585.
79. De Moraes, A. C.; Hyun, W. J.; Luu, N. S.; Lim, J.-M.; Park, K.-Y.; Hersam, M. C., Phase-Inversion Polymer Composite Separators Based on Hexagonal Boron Nitride Nanosheets for

High-Temperature Lithium-Ion Batteries. ACS Applied Materials & Interfaces 2020, 12 (7), 8107-8114.
80. De Moraes, A. C.; Obrzut, J.; Sangwan, V. K.; Downing, J. R.; Chaney, L. E.; Patel, D. K.; Elmquist, R. E.; Hersam, M. C., Elucidating charge transport mechanisms in cellulose-stabilized graphene inks. Journal of Materials Chemistry C 2020, 8 (43), 15086-15091.
81. Delgado, D. E.; King, D. R.; Cui, K.; Gong, J. P.; Shull, K. R., High-Fidelity Hydrogel Thin Films Processed from Deep Eutectic Solvents. ACS applied materials & interfaces 2020, 12 (38), 43191-43200.
82. Dems, D.; Freeman, R.; Riker, K. D.; Coradin, T.; Stupp, S. I.; Aimé, C., Multivalent Clustering of Adhesion Ligands in Nanofiber-Nanoparticle Composites. Acta Biomaterialia 2020.
83. Dereshgi, S. A.; Folland, T. G.; Murthy, A. A.; Song, X.; Tanriover, I.; Dravid, V. P.; Caldwell, J. D.; Aydin, K., Lithography-free IR polarization converters via orthogonal in-plane phonons in α-MoO 3 flakes. Nature communications 2020, 11 (1), 1-9.
84. Dereshgi, S. A.; Folland, T. G.; Murthy, A. A.; Song, X.; Tanriover, I.; Dravid, V. P.; Caldwell, J. D.; Aydin, K., Lithography-free, planar IR polarization filters and converters via biaxial phonons in a-MoO3 flakes integrated into Fabry-Perot cavities. arXiv preprint arXiv:2006.10855 2020.
85. DeRocher, K. A.; Smeets, P. J.; Goodge, B. H.; Zachman, M. J.; Balachandran, P. V.; Stegbauer, L.; Cohen, M. J.; Gordon, L. M.; Rondinelli, J. M.; Kourkoutis, L. F., Chemical gradients in human enamel crystallites. Nature 2020, 583 (7814), 66-71.
86. Ding, F.; Griffith, K. J.; Koçer, C. P.; Saballos, R. J.; Wang, Y.; Zhang, C.; Nisbet, M. L.; Morris, A. J.; Rondinelli, J. M.; Poeppelmeier, K. R., Multimodal Structure Solution with 19F NMR Crystallography of Spin Singlet Molybdenum Oxyfluorides. Journal of the American Chemical Society 2020, 142 (28), 12288-12298.
87. DiStefano, J. G.; Murthy, A. A.; Hao, S.; Dos Reis, R.; Wolverton, C.; Dravid, V. P., Topology of transition metal dichalcogenides: the case of the core–shell architecture. Nanoscale 2020, 12 (47), 23897-23919.
88. DiStefano, J. G.; Murthy, A. A.; Lescott, C. J.; Dos Reis, R.; Li, Y.; Dravid, V. P., Au@ MoS2@ WS2 Core–Shell Architectures: Combining Vapor Phase and Solution-Based Approaches. The Journal of Physical Chemistry C 2020, 124 (4), 2627-2633.
89. Dixit, A. V.; Chakram, S.; He, K.; Agrawal, A.; Naik, R. K.; Schuster, D. I.; Chou, A., Searching for Dark Matter with a Superconducting Qubit. arXiv preprint arXiv:2008.12231 2020.
90. Dolejsi, M.; Nealey, P., Utilization of metal–polymer interactions for self-aligned directed self-assembly of device relevant.
91. Dombrowski, J. P.; Ziegler, M. S.; Phadke, N. M.; Mansoor, E.; Levine, D. S.; Witzke, R. J.; Head-Gordon, M.; Bell, A. T.; Tilley, T. D., Siloxyaluminate and Siloxygallate Complexes as Models for Framework and Partially Hydrolyzed Framework Sites in Zeolites and Zeotypes. Chemistry-a European Journal 2021, 27 (1), 307-315.
92. dos Reis, R.; Pakzad, A.; Smeets, P.; Dravid, V., Applications of Phase-Contrast STEM as Dose Efficient Method for High-resolution Imaging of Soft Materials. Microscopy and Microanalysis 2020, 26 (S2), 2158-2160.
93. Dravid, V., Soft Microscopy: Multimodal, Correlative and Dynamic Characterization of Soft and Hybrid Structures. Microscopy and Microanalysis 2020, 26 (S2), 2014-2015.
94. Du, J.; Rong, Q.; Chen, X.; Liu, Q.; Dravid, V., Hierarchically Structured Mixed Oxide Electrodes for Oxygen Evolution Reaction: A Multimodal Electron Microscopy Study. Microscopy and Microanalysis 2020, 26 (S2), 618-620.
95. Du, J. S.; Shin, D.; Stanev, T. K.; Musumeci, C.; Xie, Z.; Huang, Z.; Lai, M.; Sun, L.; Zhou, W.; Stern, N. P., Halide perovskite nanocrystal arrays: Multiplexed synthesis and size-dependent emission. Science advances 2020, 6 (39), eabc4959.

96. Du, Y.; Li, X.; Zhang, X.; Chung, Y.-W.; Isheim, D.; Vaynman, S., Design and Characterization of a Heat-Resistant Ferritic Steel Strengthened by MX Precipitates. Metallurgical and Materials Transactions A 2020, 51 (2), 638-647.
97. Edmonds, M. E.; Woodruff, T. K., Testicular organoid formation is a property of immature somatic cells, which self-assemble and exhibit long-term hormone-responsive endocrine function. Biofabrication 2020.
98. Evans, A. M.; Bradshaw, N. P.; Litchfield, B.; Strauss, M. J.; Seckman, B.; Ryder, M. R.; Castano, I.; Gilmore, C.; Gianneschi, N. C.; Mulzer, C. R., High-Sensitivity Acoustic Molecular Sensors Based on Large-Area, Spray-Coated 2D Covalent Organic Frameworks. Advanced Materials 2020, 32 (42), 2004205.
99. Evans, A. M.; Ryder, M. R.; Ji, W.; Strauss, M. J.; Corcos, A. R.; Vitaku, E.; Flanders, N. C.; Bisbey, R. P.; Dichtel, W. R., Trends in the thermal stability of two-dimensional covalent organic frameworks. Faraday Discussions 2020.
100. Fan, Z.; Yang, Y.; Zhang, F.; Xu, Z.; Zhao, H.; Wang, T.; Song, H.; Huang, Y.; Rogers, J. A.; Zhang, Y., Inverse Design Strategies for 3D Surfaces Formed by Mechanically Guided Assembly. Advanced Materials 2020, 32 (14), 1908424.
101. Fang, Y.; Han, E.; Zhang, X.-X.; Jiang, Y.; Lin, Y.; Shi, J.; Wu, J.; Meng, L.; Gao, X.; Griffin, P. J., Dynamic and programmable cellular-scale granules enable tissue-like materials. Matter 2020.
102. Farkoosh, A. R.; Dunand, D. C.; Seidman, D. N., Effects of W and Si microadditions on microstructure and the strength of dilute precipitation-strengthened Al–Zr–Er alloys. Materials Science and Engineering: A 2020, 798, 140159.
103. Farkoosh, A. R.; Dunand, D. C.; Seidman, D. N., Tungsten solubility in L12-ordered Al3Er and Al3Zr nanoprecipitates formed by aging in an aluminum matrix. Journal of Alloys and Compounds 2020, 820, 153383.
104. Feng, H.; Dolejsi, M.; Zhu, N.; Zhou, C.; Rowan, S.; Nealey, P., Engineering Block Copolymers To Achieve Equal Surface Free Energy and Tunable χN For Directed Self-Assembly Applications. Bulletin of the American Physical Society 2020, 65.
105. Feriante, C.; Evans, A. M.; Jhulki, S.; Castano, I.; Strauss, M. J.; Barlow, S.; Dichtel, W. R.; Marder, S. R., New Mechanistic Insights into the Formation of Imine-Linked Two-Dimensional Covalent Organic Frameworks. Journal of the American Chemical Society 2020, 142 (43), 18637-18644.
106. Ferrer, J. R.; Sinegra, A. J.; Ivancic, D.; Yeap, X. Y.; Qiu, L.; Wang, J.-J.; Zhang, Z. J.; Wertheim, J. A.; Mirkin, C. A., Structure-Dependent Biodistribution of Liposomal Spherical Nucleic Acids. ACS nano 2020, 14 (2), 1682-1693.
107. Figg, C. A.; Winegar, P. H.; Hayes, O. G.; Mirkin, C. A., Controlling the DNA Hybridization Chain Reaction. Journal of the American Chemical Society 2020.
108. Flanders, N. C.; Kirschner, M. S.; Kim, P.; Fauvell, T.; Evans, A.; Helweh, W.; Spencer, A. P.; Schaller, R. D.; Dichtel, W.; Chen, L. X., Ultrafast Exciton Dynamics in Two Dimensional Covalent Organic Frameworks Reveals Size Dependence to Exciton Diffusion. 2020.
109. Flanders, N. C.; Kirschner, M. S.; Kim, P.; Fauvell, T. J.; Evans, A. M.; Helweh, W.; Spencer, A. P.; Schaller, R. D.; Dichtel, W. R.; Chen, L. X., Large Exciton Diffusion Coefficients in Two-Dimensional Covalent Organic Frameworks with Different Domain Sizes Revealed by Ultrafast Exciton Dynamics. Journal of the American Chemical Society 2020, 142 (35), 14957-14965.
110. Flynn, S.; Sanghvi, S.; Nisbet, M. L.; Griffith, K. J.; Zhang, W.; Halasyamani, P. S.; Haile, S. M.; Poeppelmeier, K. R., LiIn2SbO6: A New Rutile-Related Structure-type with Unique Ion Channels. Chemistry of Materials 2020.
111. Friedl, M.; Cerveny, K.; Huang, C.; Dede, D.; Samani, M.; Hill, M. O.; Morgan, N.; Kim, W.; Güniat, L.; Segura-Ruiz, J., Remote doping of scalable nanowire branches. Nano letters 2020, 20 (5), 3577-3584.

112. Fu, X.; Zhao, X.; Hu, X.; He, K.; Yu, Y.; Li, T.; Tu, Q.; Qian, X.; Yue, Q.; Wasielewski, M. R., Alternative route for electrochemical ammonia synthesis by reduction of nitrate on copper nanosheets. Applied Materials Today 2020, 19, 100620.
113. Fu, Y.; Jiang, X.; Li, X.; Traoré, B.; Spanopoulos, I.; Katan, C.; Even, J.; Kanatzidis, M. G.; Harel, E., Cation Engineering in Two-Dimensional Ruddlesden–Popper Lead Iodide Perovskites with Mixed Large A-Site Cations in the Cages. Journal of the American Chemical Society 2020, 142 (8), 4008-4021.
114. Garner, A. L.; Meng, G.; Fu, Y.; Loveless, A. M.; Brayfield, R. S.; Darr, A. M., Transitions between electron emission and gas breakdown mechanisms across length and pressure scales. Journal of Applied Physics 2020, 128 (21), 210903.
115. Giovannitti, A.; Rashid, R. B.; Thiburce, Q.; Paulsen, B. D.; Cendra, C.; Thorley, K.; Moia, D.; Mefford, J. T.; Hanifi, D.; Weiyuan, D., Energetic Control of Redox-Active Polymers toward Safe Organic Bioelectronic Materials. Advanced Materials 2020, 32 (16), 1908047.
116. Glerum, J. A.; Kenel, C.; Sun, T.; Dunand, D. C., Synthesis of precipitation-strengthened Al-Sc, Al-Zr and Al-Sc-Zr alloys via selective laser melting of elemental powder blends. Additive Manufacturing 2020, 36, 101461.
117. Gnanasekaran, K.; Chang, H.; Smeets, P. J.; Korpanty, J.; Geiger, F. M.; Gianneschi, N. C., In Situ Ni2+ Stain for Liposome Imaging by Liquid-Cell Transmission Electron Microscopy. Nano Letters 2020.
118. Gnanasekaran, K.; Vailonis, K. M.; Jenkins, D. M.; Gianneschi, N. C., In Situ Monitoring of the Seeding and Growth of Silver Metal–Organic Nanotubes by Liquid-Cell Transmission Electron Microscopy. ACS nano 2020, 14 (7), 8735-8743.
119. Godbe, J. M.; Freeman, R.; Burbulla, L. F.; Lewis, J.; Krainc, D.; Stupp, S. I., Gelator Length Precisely Tunes Supramolecular Hydrogel Stiffness and Neuronal Phenotype in 3D Culture. ACS Biomaterials Science & Engineering 2020, 6 (2), 1196-1207.
120. Gosavi, A.; Mirkin, C.; Notestein, J., Mapping the thermal entrenchment behavior of Pd nanoparticles on planar SiO 2 supports. Nanoscale 2020, 12 (26), 14245-14258.
121. Griffith, K. J.; Hope, M. A.; Reeves, P. J.; Anayee, M.; Gogotsi, Y.; Grey, C. P., Bulk and Surface Chemistry of the Niobium MAX and MXene Phases from Multinuclear Solid-State NMR Spectroscopy. Journal of the American Chemical Society 2020, 142 (44), 18924-18935.
122. Guan, J.; Sagar, L. K.; Li, R.; Wang, D.; Bappi, G.; Wang, W.; Watkins, N.; Bourgeois, M. R.; Levina, L.; Fan, F., Quantum Dot-Plasmon Lasing with Controlled Polarization Patterns. ACS nano 2020, 14 (3), 3426-3433.
123. Guan, J.; Sagar, L. K.; Li, R.; Wang, D.; Bappi, G.; Watkins, N. E.; Bourgeois, M. R.; Levina, L.; Fan, F.; Hoogland, S., Engineering Directionality in Quantum Dot Shell Lasing Using Plasmonic Lattices. Nano letters 2020, 20 (2), 1468-1474.
124. Guo, Q.-H.; Qiu, Y.; Kuang, X.; Liang, J.; Feng, Y.; Zhang, L.; Jiao, Y.; Shen, D.; Astumian, R. D.; Stoddart, J. F., Artificial Molecular Pump Operating in Response to Electricity and Light. Journal of the American Chemical Society 2020, 142 (34), 14443-14449.
125. Guo, X.; Ni, X.; Li, J.; Zhang, H.; Zhang, F.; Yu, H.; Wu, J.; Bai, Y.; Lei, H.; Huang, Y., Designing Mechanical Metamaterials with Kirigami-Inspired, Hierarchical Constructions for Giant Positive and Negative Thermal Expansion. Advanced Materials 2020, 2004919.
126. Han, J.; Park, J.; Bak, S. M.; Son, S. B.; Gim, J.; Villa, C.; Hu, X.; Dravid, V. P.; Su, C. C.; Kim, Y., New High-Performance Pb-Based Nanocomposite Anode Enabled by Wide-Range Pb Redox and Zintl Phase Transition. Advanced Functional Materials 2020, 2005362.
127. Han, M.; Chen, L.; Aras, K.; Liang, C.; Chen, X.; Zhao, H.; Li, K.; Faye, N. R.; Sun, B.; Kim, J.-H., Catheter-integrated soft multilayer electronic arrays for multiplexed sensing and actuation during cardiac surgery. Nature Biomedical Engineering 2020, 4 (10), 997-1009.
128. Hemmat, Z.; Cavin, J.; Ahmadiparidari, A.; Ruckel, A.; Rastegar, S.; Misal, S. N.; Majidi, L.; Kumar, K.; Wang, S.; Guo, J., Quasi-Binary Transition Metal Dichalcogenide Alloys:

Thermodynamic Stability Prediction, Scalable Synthesis, and Application. Advanced Materials 2020, 32 (26), 1907041.
129. Hershewe, J. M.; Warfel, K. F.; Iyer, S. M.; Peruzzi, J. A.; Sullivan, C. J.; Roth, E. W.; DeLisa, M. P.; Kamat, N. P.; Jewett, M. C., Improving cell-free glycoprotein synthesis by characterizing and enriching native membrane vesicles. biorxiv 2020.
130. Hicks, K. E.; Rosen, A. S.; Syed, Z. H.; Snurr, R. Q.; Farha, O. K.; Notestein, J. M., Zr6O8 Node-Catalyzed Butene Hydrogenation and Isomerization in the Metal–Organic Framework NU-1000. ACS Catalysis 2020, 10, 14959-14970.
131. Hodges, J. M.; Xia, Y.; Malliakas, C. D.; Slade, T. J.; Wolverton, C.; Kanatzidis, M. G., Mixed-Valent Copper Chalcogenides: Tuning Structures and Electronic Properties Using Multiple Anions. Chemistry of Materials 2020, 32 (23), 10146-10154.
132. Hoffman, J. M.; Malliakas, C. D.; Sidhik, S.; Hadar, I.; McClain, R.; Mohite, A. D.; Kanatzidis, M. G., Long periodic ripple in a 2D hybrid halide perovskite structure using branched organic spacers. Chemical Science 2020, 11 (44), 12139-12148.
133. Hornsby, A.; Barry, P.; Doyle, S.; Tang, Q.; Shirokoff, E., Reducing the susceptibility of lumped-element KIDs to two-level system effects. Journal of Low Temperature Physics 2020, 200 (5), 239-246.
134. Hourlier-Fargette, A.; Schon, S.; Xue, Y.; Avila, R.; Li, W.; Gao, Y.; Liu, C.; Kim, S. B.; Raj, M. S.; Fields, K. B., Skin-interfaced soft microfluidic systems with modular and reusable electronics for in situ capacitive sensing of sweat loss, rate and conductivity. Lab on a Chip 2020, 20 (23), 4391-4403.
135. Hu, J.; Liu, T.; Choo, P.; Wang, S.; Reese, T.; Sample, A. D.; Odom, T. W., Single-Nanoparticle Orientation Sensing by Deep Learning. ACS central science 2020, 6 (12), 2339-2346.
136. Hu, Z.; Sun, H.; Thompson, M. P.; Xiao, M.; Allen, M. C.; Zhou, X.; Ni, Q. Z.; Wang, Z.; Li, W.; Burkart, M. D., Structurally Colored Inks from Synthetic Melanin-Based Crosslinked Supraparticles. ACS Materials Letters 2020, 3, 50-55.
137. Huang, H.; Park, H.; Liu, Y.; Huang, J., On-Mask Chemical Modulation of Respiratory Droplets. Matter 2020, 3 (5), 1791-1810.
138. Huang, L.; Lin, H.; Zheng, C. Y.; Kluender, E. J.; Golnabi, R.; Shen, B.; Mirkin, C. A., Multimetallic High-Index Faceted Heterostructured Nanoparticles. Journal of the American Chemical Society 2020, 142 (10), 4570-4575.
139. Huang, L.; Zheng, C. Y.; Shen, B.; Mirkin, C. A., High-Index-Facet Metal-Alloy Nanoparticles as Fuel Cell Electrocatalysts. Advanced Materials 2020, 32 (30), 2002849.
140. Huang, Z. N.; Cole, L. E.; Callmann, C. E.; Wang, S.; Mirkin, C. A., Sequence Multiplicity within Spherical Nucleic Acids. ACS nano 2020, 14 (1), 1084-1092.
141. Hyun, W. J.; Chaney, L. E.; Downing, J. R.; de Moraes, A. C.; Hersam, M. C., Printable Hexagonal Boron Nitride Ionogels. Faraday Discussions 2020.
142. Irgen-Gioro, S.; Roy, P.; Padgaonkar, S.; Harel, E., Low energy excited state vibrations revealed in conjugated copolymer PCDTBT. The Journal of Chemical Physics 2020, 152 (4), 044201.
143. Jiang, X.; Jun, S.; Hoffman, J. M.; Kanatzidis, M. G.; Harel, E., Global Analysis for Time and Spectrally Resolved Multi-Dimensional Microscopy: Application to CH3NH3PbI3 Perovskite Thin Films. The Journal of Physical Chemistry A 2020.
144. Johnson, C. R.; Tran, M. N.; Michelitsch, L.-M.; Abraham, S.; Hu, J.; Gray, K. A.; Hartmann, E. M., Nano-enabled, antimicrobial toothbrushes–How physical and chemical properties relate to antibacterial capabilities. Journal of Hazardous Materials 2020, 122445.
145. Jung, D.; Das, P.; Atilgan, A.; Li, P.; Hupp, J. T.; Islamoglu, T.; Kalow, J. A.; Farha, O. K., Reactive Porous Polymers for Detoxification of a Chemical Warfare Agent Simulant. Chemistry of Materials 2020, 32 (21), 9299-9306.

146. Jung, H. J.; Murthy, A.; Alexander, G.; Cheng, M.; Kanatzidis, M.; Dravid, V., In-situ Observation of Out-of-plane Switching Filament in 2D Halide (PbI2) 1-x (BiI3) x Memristor Under Operando Biasing. Microscopy and Microanalysis 2020, 26 (S2), 848-849.
147. Karunakaran, D.; Simpson, S. M.; Su, J. T.; Bryndza-Tfaily, E.; Hope, T. J.; Veazey, R.; Dobek, G.; Qiu, J.; Watrous, D.; Sung, S., Design and testing of a cabotegravir implant for HIV prevention. Journal of Controlled Release 2020.
148. Kell, M. J.; Ang, S. F.; Pigati, L.; Halpern, A.; Fölsch, H., Novel function for AP-1B during cell migration. Molecular biology of the cell 2020, 31 (22), 2475-2493.
149. Kenel, C.; Geisendorfer, N.; Shah, R.; Dunand, D., Hierarchically-porous metallic scaffolds via 3D extrusion and reduction of oxide particle inks with salt space-holders. Additive Manufacturing 2020, 101637.
150. Kenel, C.; Sesseg, J. P.; Geisendorfer, N. R.; Shah, R. N.; Spolenak, R.; Dunand, D. C., 3D-printed tungsten sheet-gyroids via reduction and sintering of extruded WO3-nanopowder inks. Additive Manufacturing 2020, 101613.
151. Kennedy, N. W.; Hershewe, J. M.; Nichols, T. M.; Roth, E. W.; Wilke, C. D.; Mills, C. E.; Jewett, M. C.; Tullman-Ercek, D., Apparent size and morphology of bacterial microcompartments varies with technique. PloS one 2020, 15 (3), e0226395.
152. Khan, A. M.; Wu, H.; Ma, Q.; Chung, Y.-W.; Wang, Q. J., Relating Tribological Performance and Tribofilm Formation to the Adsorption Strength of Surface-Active Precursors. Tribology Letters 2020, 68 (1), 6.
153. Khatua, C.; Min, S.; Jung, H. J.; Shin, J. E.; Li, N.; Jun, I.; Liu, H.-W.; Bae, G.; Choi, H.; Ko, M. J., In Situ Magnetic Control of Macroscale Nanoligand Density Regulates the Adhesion and Differentiation of Stem Cells. Nano Letters 2020.
154. Kim, D.; Jung, H. J.; Park, I. J.; Larson, B. W.; Dunfield, S. P.; Xiao, C.; Kim, J.; Tong, J.; Boonmongkolras, P.; Ji, S. G., Efficient, stable silicon tandem cells enabled by anion-engineered wide-bandgap perovskites. Science 2020, 368 (6487), 155-160.
155. Kim, S.; Lee, B.; Reeder, J. T.; Seo, S. H.; Lee, S.-U.; Hourlier-Fargette, A.; Shin, J.; Sekine, Y.; Jeong, H.; Oh, Y. S., Soft, skin-interfaced microfluidic systems with integrated immunoassays, fluorometric sensors, and impedance measurement capabilities. Proceedings of the National Academy of Sciences 2020, 117 (45), 27906-27915.
156. Kim, S. B.; Koo, J.; Yoon, J.; Hourlier-Fargette, A.; Lee, B.; Chen, S.; Jo, S.; Choi, J.; Oh, Y. S.; Lee, G., Soft, skin-interfaced microfluidic systems with integrated enzymatic assays for measuring the concentration of ammonia and ethanol in sweat. Lab on a Chip 2020, 20 (1), 84-92.
157. Kimmel, B. R.; Modica, J. A.; Parker, K.; Dravid, V.; Mrksich, M., Solid-Phase Synthesis of Megamolecules. Journal of the American Chemical Society 2020, 142 (10), 4534-4538.
158. Klemes, M. J.; Skala, L. P.; Ateia, M.; Trang, B.; Helbling, D. E.; Dichtel, W. R., Polymerized Molecular Receptors as Adsorbents to Remove Micropollutants from Water. Accounts of chemical research 2020, 53 (10), 2314-2324.
159. Kong, Z.; Daab, M.; Yano, H.; Huang, H.; Breu, J.; Sasaki, T.; Nguyen, S. T.; Huang, J., Visualizing Transparent 2D Sheets by Fluorescence Quenching Microscopy. Small Methods 2020, 4 (3), 2000036.
160. Kwak, J. W.; Han, M.; Xie, Z.; Chung, H. U.; Lee, J. Y.; Avila, R.; Yohay, J.; Chen, X.; Liang, C.; Patel, M., Wireless sensors for continuous, multimodal measurements at the skin interface with lower limb prostheses. Science translational medicine 2020, 12 (574).
161. Lee, H. S.; Sangwan, V. K.; Rojas, W. A. G.; Bergeron, H.; Jeong, H. Y.; Yuan, J.; Su, K.; Hersam, M. C., Dual-Gated MoS2 Memtransistor Crossbar Array. Advanced Functional Materials 2020, 30 (45), 2003683.

162. Lee, S.-H.; Jung, J.-G.; Baik, S.-I.; Seidman, D. N.; Kim, M.-S.; Lee, Y.-K.; Euh, K., Precipitation strengthening in naturally aged Al–Zn–Mg–Cu alloy. Materials Science and Engineering: A 2020, 140719.
163. Lee, S.-H.; Oh, T.; Ryu, J.; Mirkin, C. A.; Jang, J.-W., Understanding Optomagnetic Interactions in Fe Nanowire–Au Nanoring Hybrid Structures Synthesized through Coaxial Lithography. Chemistry of Materials 2020, 32 (7), 2843-2851.
164. Lee, S.-J.; Mancuso, J. L.; Le, K. N.; Malliakas, C. D.; Bae, Y.-S.; Hendon, C. H.; Islamoglu, T.; Farha, O. K., Time-Resolved in Situ Polymorphic Transformation from One 12-Connected Zr-MOF to Another. ACS Materials Letters 2020, 2 (5), 499-504.
165. Lee, Y.-A. L.; Pryamitsyn, V.; Rhee, D.; De La Cruz, M. O.; Odom, T. W., Strain-Dependent Nanowrinkle Confinement of Block Copolymers. Nano letters 2020, 20 (2), 1433-1439.
166. Lescott, C.; Modak, M.; Scott, E.; Dravid, V., Unraveling the Complex Architecture of Hybrid Hard-soft Polymer-Nanoparticle Systems with Soft Microscopy. Microscopy and Microanalysis 2020, 26 (S2), 582-584.
167. Lewis, J.; Isheim, D.; Jolliff, B.; Seidman, D.; Ogliore, R.; Gillis-Davis, J., Nanometer-scale Analysis of Space-weathered Lunar Regolith by Atom Probe Tomograhpy. Microscopy and Microanalysis 2020, 26 (S2), 2584-2587.
168. Lewis, J. A.; Freeman, R.; Carrow, J. K.; Clemons, T. D.; Palmer, L. C.; Stupp, S. I., Transforming growth factor β-1 binding by peptide amphiphile hydrogels. ACS Biomaterials Science & Engineering 2020, 6 (8), 4551-4560.
169. Lewis, J. B.; Floss, C.; Isheim, D.; Daulton, T. L.; Seidman, D. N.; Ogliore, R., Origins of meteoritic nanodiamonds investigated by coordinated atom-probe tomography and transmission electron microscopy studies. Meteoritics & Planetary Science 2020.
170. Li, C.; Chung, D.-W.; Dunand, D. C.; Seidman, D. N., Microstructural stability and mechanical behavior of a Co–20Ni–7Al–7W–4Ti at.% superalloy. Journal of Alloys and Compounds 2020, 848, 156378.
171. Li, C.; Iscen, A.; Palmer, L. C.; Schatz, G. C.; Stupp, S. I., Light-Driven Expansion of Spiropyran Hydrogels. Journal of the American Chemical Society 2020, 142 (18), 8447-8453.
172. Li, C.; Iscen, A.; Sai, H.; Sato, K.; Sather, N. A.; Chin, S. M.; Álvarez, Z.; Palmer, L. C.; Schatz, G. C.; Stupp, S. I., Supramolecular–covalent hybrid polymers for light-activated mechanical actuation. Nature materials 2020, 19 (8), 900-909.
173. Li, C.; Lau, G. C.; Yuan, H.; Aggarwal, A.; Dominguez, V. L.; Liu, S.; Sai, H.; Palmer, L. C.; Sather, N. A.; Pearson, T. J., Fast and programmable locomotion of hydrogel-metal hybrids under light and magnetic fields. Science Robotics 2020, 5 (49).
174. Li, T.; Xu, Y.; Qian, X.; Yue, Q.; Kang, Y., Low-Temperature Molten Salt Synthesis for Ligand-Free Transition Metal Oxide Nanoparticles. ACS Applied Energy Materials 2020, 3 (4), 3984-3990.
175. Li, Y.; Eshein, A.; Virk, R.; Eid, A.; Wu, W.; Frederick, J.; VanDerway, D.; Gladstein, S.; Huang, K.; Anthony, N., Nanoscale Chromatin Imaging and Analysis (nano-ChIA) platform bridges 4-D chromatin organization with molecular function. bioRxiv 2020.
176. Liang, Y.; Sun, H.; Cao, W.; Thompson, M. P.; Gianneschi, N. C., Degradable Polyphosphoramidate via Ring-Opening Metathesis Polymerization. ACS Macro Letters 2020, 9 (10), 1417-1422.
177. Lim, D.-K.; Plymill, A. B.; Paik, H.; Qian, X.; Zecevic, S.; Chisholm, C. R.; Haile, S. M., Solid Acid Electrochemical Cell for the Production of Hydrogen from Ammonia. Joule 2020, 4 (11), 2338-2347.
178. Lim, J.-M.; Luu, N. S.; Park, K.-Y.; Tan, M. T.; Kim, S.; Downing, J. R.; He, K.; Dravid, V. P.; Hersam, M. C., Enhancing nanostructured nickel-rich lithium-ion battery cathodes via surface stabilization. Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films 2020, 38 (6), 063210.

179. Lin, L.; Kightlinger, W.; Prabhu, S. K.; Hockenberry, A. J.; Li, C.; Wang, L.-X.; Jewett, M. C.; Mrksich, M., Sequential Glycosylation of Proteins with Substrate-Specific N-Glycosyltransferases. ACS Central Science 2020, 6 (2), 144-154.
180. Lin, Y.; Wood, M.; Imasato, K.; Kuo, J. J.; Lam, D.; Mortazavi, A. N.; Slade, T. J.; Hodge, S. A.; Xi, K.; Kanatzidis, M. G., Expression of interfacial Seebeck coefficient through grain boundary engineering with multi-layer graphene nanoplatelets. Energy & Environmental Science 2020, 13 (11), 4114-4121.
181. Littlewood, P.; Liu, S.; Weitz, E.; Marks, T. J.; Stair, P. C., Ni-alumina dry reforming catalysts: Atomic layer deposition and the issue of Ni aluminate. Catalysis Today 2020, 343, 18-25.
182. Liu, L.; Li, L.; Ziebel, M. E.; Harris, T. D., Metal–Diamidobenzoquinone Frameworks via Post-Synthetic Linker Exchange. Journal of the American Chemical Society 2020, 142 (10), 4705-4713.
183. Liu, L.; Rabinowitz, J.; Bianconi, S.; Park, M.-S.; Mohseni, H., Highly sensitive SWIR detector array based on nanoscale phototransistors integrated on CMOS readout. Applied Physics Letters 2020, 117 (19), 191102.
184. Liu, W.; Jones, L. O.; Wu, H.; Stern, C. L.; Sponenburg, R. A.; Schatz, G. C.; Stoddart, J. F., Supramolecular Gold Stripping from Activated Carbon Using α-Cyclodextrin. Journal of the American Chemical Society 2020.
185. Liu, W.; Stern, C. L.; Stoddart, J. F., Suit [4] ane. Journal of the American Chemical Society 2020.
186. Long, F.; Baik, S.-I.; Chung, D.-W.; Xue, F.; Lass, E. A.; Seidman, D. N.; Dunand, D. C., Microstructure and creep performance of a multicomponent co-based L12–ordered intermetallic alloy. Acta Materialia 2020, 196, 396-408.
187. Lu, D.; Yan, Y.; Avila, R.; Kandela, I.; Stepien, I.; Seo, M. H.; Bai, W.; Yang, Q.; Li, C.; Haney, C. R., Bioresorbable, wireless, passive sensors as temporary implants for monitoring regional body temperature. Advanced Healthcare Materials 2020, 9 (16), 2000942.
188. Lu, D.; Yan, Y.; Deng, Y.; Yang, Q.; Zhao, J.; Seo, M. H.; Bai, W.; MacEwan, M. R.; Huang, Y.; Ray, W. Z., Bioresorbable Wireless Sensors as Temporary Implants for In Vivo Measurements of Pressure. Advanced Functional Materials 2020, 30 (40), 2003754.
189. Lu, M. Y.; Yang, T.; Scipioni, R.; Chart, Y. A.; Furlong, A.; Barnett, S. A., Sm0. 5Sr0. 5CoO3− δ Surface Modification of La0. 6Sr0. 4Co0. 2Fe0. 8O3− δ-Ce0. 9Gd0. 12− δ Composite Oxygen Electrodes for Solid Oxide Electrochemical Cells. Journal of the Electrochemical Society 2020, 167 (16), 164504.
190. Lu, X. Y.; Luo, H.; Wang, K.; Zhang, Y. Y.; Zhu, X. F.; Li, D.; Ma, B.; Xiong, S.; Nealey, P. F.; Li, Q., CO2-Based Dual-Tone Resists for Electron Beam Lithography. Advanced Functional Materials 2020, 2007417.
191. Luo, Y.; Cai, S.; Hao, S.; Pielnhofer, F.; Hadar, I.; Luo, Z.-Z.; Xu, J.; Wolverton, C.; Dravid, V. P.; Pfitzner, A., High-performance thermoelectrics from cellular nanostructured Sb2Si2Te6. Joule 2020, 4 (1), 159-175.
192. Luo, Y.; Hao, S.; Cai, S.; Slade, T. J.; Luo, Z. Z.; Dravid, V. P.; Wolverton, C.; Yan, Q.; Kanatzidis, M. G., High Thermoelectric Performance in the New Cubic Semiconductor AgSnSbSe3 by High-Entropy Engineering. Journal of the American Chemical Society 2020, 142 (35), 15187-15198.
193. Luo, Z. Z.; Cai, S. T.; Hao, S. Q.; Bailey, T. P.; Spanopoulos, I.; Luo, Y. B.; Xu, J. W.; Uher, C.; Wolverton, C.; Dravid, V. P.; Yan, Q. Y.; Kanatzidis, M. G., Strong Valence Band Convergence to Enhance Thermoelectric Performance in PbSe with Two Chemically Independent Controls. Angewandte Chemie-International Edition 2021, 60 (1), 268-273.
194. Lyu, J.; Gong, X.; Lee, S.-J.; Gnanasekaran, K.; Zhang, X.; Wasson, M. C.; Wang, X.; Bai, P.; Guo, X.; Gianneschi, N. C., Phase Transitions in Metal–Organic Frameworks Directly Monitored through In Situ Variable Temperature Liquid-Cell Transmission Electron Microscopy and In Situ X-ray Diffraction. Journal of the American Chemical Society 2020, 142 (10), 4609-4615.

195. Ma, Q.; Khan, A. M.; Wang, Q. J., Dependence of Tribological Performance and Tribopolymerization on the Surface Binding Strength of Selected Cycloalkane-Carboxylic Acid Additives. Tribology Letters 2020, 68 (3), 1-10.
196. Ma, T.; Dong, B. X.; Grocke, G. L.; Strzalka, J.; Patel, S. N., Leveraging Sequential Doping of Semiconducting Polymers to Enable Functionally Graded Materials for Organic Thermoelectrics. Macromolecules 2020, 53 (8), 2882-2892.
197. Maddali, S.; Li, P.; Pateras, A.; Timbie, D.; Delegan, N.; Crook, A.; Lee, H.; Calvo-Almazan, I.; Sheyfer, D.; Cha, W., General approaches for shear-correcting coordinate transformations in Bragg coherent diffraction imaging. Part I. Journal of Applied Crystallography 2020, 53 (2).
198. Madhvapathy, S. R.; Wang, H.; Kong, J.; Zhang, M.; Lee, J. Y.; Park, J. B.; Jang, H.; Xie, Z.; Cao, J.; Avila, R., Reliable, low-cost, fully integrated hydration sensors for monitoring and diagnosis of inflammatory skin diseases in any environment. Science Advances 2020, 6 (49), eabd7146.
199. Matta, M.; Wu, R.; Paulsen, B. D.; Petty, A.; Sheelamanthula, R.; McCulloch, I.; Schatz, G. C.; Rivnay, J., Ion Coordination and Chelation in a Glycolated Polymer Semiconductor: Molecular Dynamics and X-Ray Fluorescence Study. 2020.
200. McClain, R.; Malliakas, C. D.; Shen, J.; He, J.; Wolverton, C.; González, G. B.; Kanatzidis, M. G., Mechanistic insight of KBiQ 2 (Q= S, Se) using panoramic synthesis towards synthesis-by-design. Chemical Science 2020.
201. McLeod, S. M.; Robison, L.; Parigi, G.; Olszewski, A.; Drout, R. J.; Gong, X.; Islamoglu, T.; Luchinat, C.; Farha, O. K.; Meade, T. J., Maximizing Magnetic Resonance Contrast in Gd (III) Nanoconjugates: Investigation of Proton Relaxation in Zirconium Metal–Organic Frameworks. ACS applied materials & interfaces 2020, 12 (37), 41157-41166.
202. Metcalf, K. J.; Kimmel, B. R.; Sykora, D. J.; Modica, J. A.; Parker, K. A.; Berens, E.; Dai, R.; Dravid, V. P.; Werb, Z.; Mrksich, M., Synthetic Tuning of Domain Stoichiometry in Nanobody–Enzyme Megamolecules. Bioconjugate Chemistry 2020.
203. Mian, M. R.; Islamoglu, T.; Afrin, U.; Goswami, S.; Cao, R.; Kirlikovali, K. O.; Hall, M. G.; Peterson, G. W.; Farha, O. K., Catalytic Degradation of an Organophosphorus Agent at Zn–OH Sites in a Metal–Organic Framework. Chemistry of Materials 2020, 32 (16), 6998-7004.
204. Mian, M. R.; Redfern, L. R.; Pratik, S. M.; Ray, D.; Liu, J.; Idrees, K. B.; Islamoglu, T.; Gagliardi, L.; Farha, O. K., Precise Control of Cu Nanoparticle Size and Catalytic Activity through Pore Templating in Zr Metal–Organic Frameworks. Chemistry of Materials 2020, 32 (7), 3078-3086.
205. Miao, K. C.; Blanton, J. P.; Anderson, C. P.; Bourassa, A.; Crook, A. L.; Wolfowicz, G.; Abe, H.; Ohshima, T.; Awschalom, D. D., Universal coherence protection in a solid-state spin qubit. Science 2020, 369 (6510), 1493-1497.
206. Miller, B.; Mick, S., Data Processing Using Python in DigitalMicrograph. Microscopy and Microanalysis 2020, 26 (S2), 1172-1174.
207. Miller, D. M.; Fleming-Miller, T. W.; Cuentas-Condori, A.; Manning, L.; Palumbos, S.; Richmond, J. E., Transcriptional control of parallel-acting pathways that remove discrete presynaptic proteins in remodeling neurons. bioRxiv 2020.
208. Min, S.; Jeon, Y. S.; Choi, H.; Khatua, C.; Li, N.; Bae, G.; Jung, H. J.; Kim, Y.; Hong, H.; Shin, J., Large and Externally Positioned Ligand-Coated Nanopatches Facilitate the Adhesion-Dependent Regenerative Polarization of Host Macrophages. Nano letters 2020, 20 (10), 7272-7280.
209. Min, S.; Jeon, Y. S.; Jung, H. J.; Khatua, C.; Li, N.; Bae, G.; Choi, H.; Hong, H.; Shin, J. E.; Ko, M. J., Independent Tuning of Nano-Ligand Frequency and Sequences Regulates the Adhesion and Differentiation of Stem Cells. Advanced Materials 2020, 32 (40), 2004300.
210. Modak, M.; Bobbala, S.; Lescott, C.; Liu, Y.-G.; Nandwana, V.; Dravid, V. P.; Scott, E. A., Magnetic Nanostructure-Loaded Bicontinuous Nanospheres Support Multicargo Intracellular Delivery and Oxidation-Responsive Morphological Transitions. ACS Applied Materials & Interfaces 2020.

211. Mukherjee, P.; Berns, E. J.; Patino, C. A.; Hakim Moully, E.; Chang, L.; Nathamgari, S. S. P.; Kessler, J. A.; Mrksich, M.; Espinosa, H. D., Temporal Sampling of Enzymes from Live Cells by Localized Electroporation and Quantification of Activity by SAMDI Mass Spectrometry. Small 2020, 2000584.
212. Murthy, A. A.; Stanev, T. K.; Dos Reis, R.; Hao, S.; Wolverton, C.; Stern, N. P.; Dravid, V. P., Direct visualization of electric-field-induced structural dynamics in monolayer transition metal dichalcogenides. ACS nano 2020, 14 (2), 1569-1576.
213. Murthy, A. A.; Stanev, T. K.; Ribet, S. M.; Liu, P.; Watanabe, K.; Taniguchi, T.; Stern, N. P.; Reis, R. d.; Dravid, V. P., Spatial Mapping of Electrostatics and Dynamics across 2D Heterostructures. arXiv preprint arXiv:2012.13842 2020.
214. Narayanachari, K.; Buchholz, D. B.; Goldfine, E. A.; Wenderott, J. K.; Haile, S. M.; Bedzyk, M. J., Combinatorial Approach for Single-Crystalline TaON Growth: Epitaxial β-TaON (100)/α-Al2O3 (012). ACS Applied Electronic Materials 2020, 2 (11), 3571-3576.
215. Ng, D. S.; Chung, D.-W.; Toinin, J. P.; Seidman, D. N.; Dunand, D. C.; Lass, E. A., Effect of Cr additions on a γ-γ'microstructure and creep behavior of a Co-based superalloy with low W content. Materials Science and Engineering: A 2020, 778, 139108.
216. Ng, D. S.; Dunand, D. C., Aging-and creep-resistance of a cast hypoeutectic Al-6.9 Ce-9.3 Mg (wt.%) alloy. Materials Science and Engineering: A 2020, 139398.
217. Nichols, T. M.; Kennedy, N. W.; Tullman-Ercek, D., A genomic integration platform for heterologous cargo encapsulation in 1, 2-propanediol utilization bacterial microcompartments. Biochemical Engineering Journal 2020, 156, 107496.
218. Nisbet, M. L.; Pendleton, I. M.; Nolis, G. M.; Griffith, K. J.; Schrier, J.; Cabana, J.; Norquist, A. J.; Poeppelmeier, K. R., Machine-Learning-Assisted Synthesis of Polar Racemates. Journal of the American Chemical Society 2020, 142 (16), 7555-7566.
219. Nisbet, M. L.; Wang, Y.; Poeppelmeier, K. R., Symmetry-Dependent Intermolecular π–π Stacking Directed by Hydrogen Bonding in Racemic Copper-Phenanthroline Compounds. Crystal Growth & Design 2020.
220. Noh, H.; Jeon, N.; Martinson, A. B.; Hupp, J. T., Stabilization of Low Valent Zirconium Nitrides in Titanium Nitride via Plasma-Enhanced Atomic Layer Deposition and Assessment of Electrochemical Properties. ACS Applied Energy Materials 2020.
221. Noh, H.; Yang, Y.; Zhang, X.; Goetjen, T. A.; Syed, Z. H.; Lu, Z.; Ahn, S.; Farha, O. K.; Hupp, J. T., Single-Site, Single-Metal-Atom, Heterogeneous Electrocatalyst: Metal–Organic-Framework Supported Molybdenum Sulfide for Redox Mediator-Assisted Hydrogen Evolution Reaction. ChemElectroChem 2020, 7 (2), 509-516.
222. Oakley, L.; Zaleski, S.; Males, B.; Cossairt, O.; Walton, M., Improved spectral imaging microscopy for cultural heritage through oblique illumination. Heritage Science 2020, 8 (1), 1-11.
223. Oh, K. H.; Sheoran, S.; Richmond, J. E.; Kim, H., Alcohol induces mitochondrial fragmentation and stress responses to maintain normal muscle function in Caenorhabditis elegans. The FASEB Journal 2020.
224. Olshansky, J. H.; Harvey, S. M.; Pennel, M. L.; Krzyaniak, M. D.; Schaller, R. D.; Wasielewski, M. R., Using Photoexcited Core/Shell Quantum Dots To Spin Polarize Appended Radical Qubits. Journal of the American Chemical Society 2020, 142 (31), 13590-13597.
225. Onizhuk, M.; Miao, K. C.; Blanton, J. P.; Ma, H.; Anderson, C. P.; Bourassa, A.; Awschalom, D. D.; Galli, G., Probing the coherence of solid-state qubits at avoided crossings. arXiv preprint arXiv:2010.11077 2020.
226. Pack, A. R., Superconductivity at its Limit: Simulating Superconductor Dynamics Near the Superconducting Superheating Field in Eilenberger and Ginzburg-Landau Theory. 2020.

227. Parate, K.; Pola, C. C.; Rangnekar, S. V.; Mendivelso-Perez, D. L.; Smith, E. A.; Hersam, M. C.; Gomes, C. L.; Claussen, J. C., Aerosol-jet-printed graphene electrochemical histamine sensors for food safety monitoring. 2D Materials 2020, 7 (3), 034002.
228. Parate, K.; Rangnekar, S. V.; Jing, D.; Mendivelso-Perez, D. L.; Ding, S.; Secor, E. B.; Smith, E. A.; Hostetter, J. M.; Hersam, M. C.; Claussen, J. C., Aerosol-Jet-Printed Graphene Immunosensor for Label-Free Cytokine Monitoring in Serum. ACS Applied Materials & Interfaces 2020, 12 (7), 8592-8603.
229. Park, B.-K.; Scipioni, R.; Zhang, Q.; Cox, D. M.; Voorhees, P. W.; Barnett, S., Tuning electrochemical and transport processes to achieve extreme performance and efficiency in solid oxide cells. Journal of Materials Chemistry A 2020.
230. Park, K. Y.; Lim, J. M.; Luu, N. S.; Downing, J. R.; Wallace, S. G.; Chaney, L. E.; Yoo, H.; Hyun, W. J.; Kim, H. U.; Hersam, M. C., Concurrently Approaching Volumetric and Specific Capacity Limits of Lithium Battery Cathodes via Conformal Pickering Emulsion Graphene Coatings. Advanced Energy Materials 2020, 2001216.
231. Park, S. S.; Urbach, Z. J.; Brisbois, C. A.; Parker, K. A.; Partridge, B. E.; Oh, T.; Dravid, V. P.; Olvera de la Cruz, M.; Mirkin, C. A., DNA-and Field-Mediated Assembly of Magnetic Nanoparticles into High-Aspect Ratio Crystals. Advanced Materials 2020, 32 (4), 1906626.
232. Park, Y.; Kwon, K.; Kwak, S. S.; Kwak, J. W.; Luan, H.; Chung, T. S.; San Chun, K.; Kim, J. U.; Jang, H.; Ryu, H., Wireless, skin-interfaced sensors for compression therapy. Science Advances 2020, 6 (49), eabe1655.
233. Parker, K.; Zhou, S.; Kimmel, B.; Dhindwal, S.; Bleher, R.; Hampton, C.; Drummy, L.; Mrksich, M.; Dravid, V., Soft Microscopy: Strategies for Contrast Enhancement of Macromolecules. Microscopy and Microanalysis 2020, 26 (S2), 1026-1028.
234. Parr, Z. S.; Rashid, R. B.; Paulsen, B. D.; Poggi, B.; Tan, E.; Freeley, M.; Palma, M.; Abrahams, I.; Rivnay, J.; Nielsen, C. B., Semiconducting Small Molecules as Active Materials for p-Type Accumulation Mode Organic Electrochemical Transistors. Advanced Electronic Materials 2020, 2000215.
235. Passarelli, J. V.; Mauck, C. M.; Winslow, S. W.; Perkinson, C. F.; Bard, J. C.; Sai, H.; Williams, K. W.; Narayanan, A.; Fairfield, D. J.; Hendricks, M. P., Tunable exciton binding energy in 2D hybrid layered perovskites through donor–acceptor interactions within the organic layer. Nature chemistry 2020, 12 (8), 672-682.
236. Patel, U.; Divan, R.; Gades, L.; Guruswamy, T.; Yan, D.; Quaranta, O.; Miceli, A., Development of Transition-Edge Sensor X-ray Microcalorimeter Linear Array for Compton Scattering and Energy Dispersive Diffraction Imaging. Journal of Low Temperature Physics 2020, 1-9.
237. Paul, P. P.; Paranjape, H. M.; Amin-Ahmadi, B.; Pagan, D. C.; Chumlyakov, Y. I.; Brinson, L. C., Heterogeneity and Inelasticity of Deformation in a Notched Martensitic NiTi Shape Memory Alloy Specimen. Acta Materialia 2020.
238. Peairs, G.; Chou, M.-H.; Bienfait, A.; Chang, H.-S.; Conner, C.; Dumur, É.; Grebel, J.; Povey, R.; Şahin, E.; Satzinger, K., Continuous and Time-Domain Coherent Signal Conversion between Optical and Microwave Frequencies. Physical Review Applied 2020, 14 (6), 061001.
239. Perez, K.; Rogers, C.; Weiss, E. A., Quantum Dot-Catalyzed Photoreductive Removal of Sulfonyl-Based Protecting Groups. Angewandte Chemie International Edition 2020.
240. Ponedal, A.; Zhu, S.; Sprangers, A. J.; Wang, X.-Q.; Yeo, D. C.; Lio, D. C.; Zheng, M.; Capek, M.; Narayan, S. P.; Meckes, B., Attenuation of Abnormal Scarring Using Spherical Nucleic Acids Targeting Transforming Growth Factor Beta 1. ACS Applied Bio Materials 2020, 3 (12), 8603-8610.
241. Posen, S.; Lee, J.; Seidman, D. N.; Romanenko, A.; Tennis, B.; Oleksandr, M.; Sergatskov, D., Advances in Nb3Sn superconducting radiofrequency cavities towards first practical accelerator applications. Superconductor Science and Technology 2020.

242. Powers-Riggs, N. E.; Schlesinger, I.; Wasielewski, M. R., Correlating structural changes with the photophysics of terrylenediimide films during spontaneous annealing. Journal of Materials Chemistry C 2020, 8 (43), 15189-15198.
243. Qian, X.; He, J.; Mastronardo, E.; Baldassarri, B.; Wolverton, C.; Haile, S. M., Favorable redox thermodynamics of SrTi0. 5Mn0. 5O3− δ in solar thermochemical water splitting. Chemistry of Materials 2020, 32 (21), 9335-9346.
244. Qin, L.; Wang, S.; Dominguez, D.; Long, A.; Chen, S.; Fan, J.; Ahn, J.; Skakuj, K.; Huang, Z.; Lee, A., Development of Spherical Nucleic Acids for Prostate Cancer Immunotherapy. Frontiers in immunology 2020, 11, 1333.
245. Qiu, Y.; Song, B.; Pezzato, C.; Shen, D.; Liu, W.; Zhang, L.; Feng, Y.; Guo, Q.-H.; Cai, K.; Li, W., A precise polyrotaxane synthesizer. Science 2020, 368 (6496), 1247-1253.
246. Rabinowitz, J.; Rezaei, M.; Park, M.-S.; Tan, C. L.; Ulmer, M.; Mohseni, H., When shot-noise-limited photodetectors disobey Poisson statistics. Optics Letters 2020, 45 (11), 3009-3012.
247. Ramirez, C. E.; Chen, S.; Powers-Riggs, N. E.; Schlesinger, I.; Young, R. M.; Wasielewski, M. R., Symmetry-Breaking Charge Separation in the Solid State: Tetra (phenoxy) perylenediimide Polycrystalline Films. Journal of the American Chemical Society 2020, 142 (42), 18243-18250.
248. Rashid, R. B.; Ciechowski, R. J.; Rivnay, J., Self-aligned, laser-cut organic electrochemical transistors. Flexible and Printed Electronics 2020, 5 (1), 014007.
249. Ratsch, M.; Ye, C.; Yang, Y.; Zhang, A.; Evans, A. M.; Börjesson, K., All-Carbon-Linked Continuous Three-Dimensional Porous Aromatic Framework Films with Nanometer-Precise Controllable Thickness. Journal of the American Chemical Society 2020, 142 (14), 6548-6553.
250. Redfern, L.; Ducamp, M.; Wasson, M. C.; Robison, L.; Son, F.; Coudert, F.-X.; Farha, O.; Coudert, F.-X., Isolating the Role of the Node-Linker Bond in the Compression of UiO-66 Metal-Organic Frameworks. 2020.
251. Redfern, L. R.; Lo, W.-S.; Dillingham, I. J.; Eatman, J. G.; Mian, M. R.; Tsung, C.-K.; Farha, O. K., Enhancing Four-Carbon Olefin Production from Acetylene over Copper Nanoparticles in Metal–Organic Frameworks. ACS Applied Materials & Interfaces 2020, 12 (28), 31496-31502.
252. Ren, Q.-Q.; Baik, S.-I.; An, D.; Zhu, M.; Krakauer, B. W.; Seidman, D. N., Atom-probe tomographic and dilatometric studies of phase-transformations after inter-critical annealing of a low-carbon dual-phase steel. Materials Characterization 2020, 168, 110544.
253. Ribet, S.; Nandwana, V.; Dos Reis, R.; Abbott, T.; Roth, E.; Dravid, V., Multimodal Characterization of the Oleophilic Hydrophobic Magnetic (OHM) Sponge: A Nanocomposite Material for Oil Spill Remediation. Microscopy and Microanalysis 2020, 26 (S2), 2754-2756.
254. Roberts, K. F.; Brue, C. R.; Preston, A.; Baxter, D.; Herzog, E.; Varelas, E.; Meade, T. J., Cobalt(III) Schiff base complexes stabilize non-fibrillar amyloid-beta aggregates with reduced toxicity. Journal of Inorganic Biochemistry 2020, 213.
255. Robinson, S. A.; Hartman, E. C.; Ikwuagwu, B. C.; Francis, M. B.; Tullman-Ercek, D., Engineering a virus-like particle to display peptide insertions using an apparent fitness landscape. Biomacromolecules 2020, 21 (10), 4194-4204.
256. Robison, L.; Drout, R. J.; Redfern, L. R.; Son, F. A.; Wasson, M. C.; Goswami, S.; Chen, Z.; Olszewski, A.; Idrees, K. B.; Islamoglu, T., Designing Porous Materials to Resist Compression: Mechanical Reinforcement of a Zr-MOF with Structural Linkers. Chemistry of Materials 2020, 32 (8), 3545-3552.
257. Rwei, A. Y.; Lu, W.; Wu, C.; Human, K.; Suen, E.; Franklin, D.; Fabiani, M.; Gratton, G.; Xie, Z.; Deng, Y., A wireless, skin-interfaced biosensor for cerebral hemodynamic monitoring in pediatric care. Proceedings of the National Academy of Sciences 2020, 117 (50), 31674-31684.
258. Sai, H.; Erbas, A.; Dannenhoffer, A.; Huang, D.; Weingarten, A.; Siismets, E.; Jang, K.; Qu, K.; Palmer, L. C.; De La Cruz, M. O., Chromophore amphiphile–polyelectrolyte hybrid hydrogels for photocatalytic hydrogen production. Journal of Materials Chemistry A 2020, 8 (1), 158-168.

259. Sai, H.; Lau, G. C.; Dannenhoffer, A. J.; Chin, S. M.; Đorđević, L.; Stupp, S. I., Imaging Supramolecular Morphogenesis with Confocal Laser Scanning Microscopy at Elevated Temperatures. Nano Letters 2020.
260. Saidaminov, M. I.; Spanopoulos, I.; Abed, J.; Ke, W.; Wicks, J.; Kanatzidis, M. G.; Sargent, E. H., Conventional solvent oxidizes Sn (II) in perovskite inks. ACS Energy Letters 2020, 5 (4), 1153-1155.
261. Samanta, D.; Ebrahimi, S. B.; Kusmierz, C. D.; Cheng, H. F.; Mirkin, C. A., Protein Spherical Nucleic Acids for Live-Cell Chemical Analysis. Journal of the American Chemical Society 2020, 142 (31), 13350-13355.
262. Samek, I. A.; Bobbitt, N. S.; Snurr, R. Q.; Stair, P. C., Structure and activity of mixed VOx-CeO2 domains supported on alumina in cyclohexane oxidative dehydrogenation. Journal of Catalysis 2020, 384, 147-158.
263. Saneie, N.; Kulkarni, V.; Fezzaa, K.; Patankar, N.; Anand, S., Boiling transitions during droplet contact on superheated nano/micro-structured surfaces. arXiv preprint arXiv:2003.11171 2020.
264. Sanghvi, S.; Haile, S. M., Crystal structure, conductivity, and phase stability of Cs3 (H1. 5PO4) 2 under controlled humidity. Solid State Ionics 2020, 349, 115291.
265. Schlesinger, I.; Powers-Riggs, N. E.; Logsdon, J. L.; Qi, Y.; Miller, S. A.; Tempelaar, R.; Young, R. M.; Wasielewski, M. R., Charge-transfer biexciton annihilation in a donor–acceptor co-crystal yields high-energy long-lived charge carriers. Chemical Science 2020, 11 (35), 9532-9541.
266. Scipioni, R.; Isheim, D.; Barnett, S. A., Revealing the complex layered-mosaic structure of the cathode electrolyte interphase in Li-ion batteries. Applied Materials Today 2020, 20, 100748.
267. Scott, E. A.; Karabin, N. B.; Vincent, M.; Allen, S.; Bobbala, S.; Frey, M.; Yi, S.; Yang, Y., The Combination of Morphology and Surface Chemistry Defines the Biological Identity of Nanocarriers in Human Blood. bioRxiv 2020.
268. Sharon, D.; Bennington, P.; Dolejsi, M.; Webb, M. A.; Dong, B. X.; de Pablo, J. J.; Nealey, P. F.; Patel, S. N., Intrinsic Ion Transport Properties of Block Copolymer Electrolytes. ACS Nano 2020.
269. Sharon, D.; Bennington, P.; Patel, S. N.; Nealey, P. F., Stabilizing Dendritic Electrodeposition by Limiting Spatial Dimensions in Nanostructured Electrolytes. ACS Energy Letters 2020, 5 (9), 2889-2896.
270. Sheagren, C.; Barry, P.; Shirokoff, E.; Tang, Q. Y., Atomic layer deposition niobium nitride films for high-Q resonators. Journal of Low Temperature Physics 2020, 199 (3), 875-882.
271. Shen, B.; Huang, L.; Shen, J.; Meng, L.; Kluender, E. J.; Wolverton, C.; Tian, B.; Mirkin, C. A., Synthesis of Metal-Capped Semiconductor Nanowires from Heterodimer Nanoparticle Catalysts. Journal of the American Chemical Society 2020, 142 (43), 18324-18329.
272. Sheppard, D. T.; Jin, K.; Hamachi, L. S.; Dean, W.; Fortman, D. J.; Ellison, C. J.; Dichtel, W. R., Reprocessing Postconsumer Polyurethane Foam Using Carbamate Exchange Catalysis and Twin-Screw Extrusion. ACS Central Science 2020.
273. Shi, J.; Lopez-Dominguez, V.; Garesci, F.; Wang, C.; Almasi, H.; Grayson, M.; Finocchio, G.; Amiri, P. K., Electrical manipulation of the magnetic order in antiferromagnetic PtMn pillars. Nature Electronics 2020, 3 (2), 92-98.
274. Shi, Y.; Cao, J.; Ehmann, K., Generation of Surfaces with Isotropic and Anisotropic Wetting Properties by Curved Water Jet Guided Laser Micro-Machining. Journal of Micro and Nano-Manufacturing 2020.
275. Shi, Y.; Jiang, Z.; Cao, J.; Ehmann, K. F., Texturing of metallic surfaces for superhydrophobicity by water jet guided laser micro-machining. Applied Surface Science 2020, 500, 144286.
276. Shu, S.; De Luca, A.; Dunand, D. C.; Seidman, D. N., Individual and synergistic effects of Mn and Mo micro-additions on precipitation and strengthening of a dilute Al–Zr-Sc-Er-Si alloy. Materials Science and Engineering: A 2021, 800, 140288.

277. Slade, T. J.; Grovogui, J. A.; Kuo, J. J.; Anand, S.; Bailey, T. P.; Wood, M.; Uher, C.; Snyder, G. J.; Dravid, V. P.; Kanatzidis, M. G., Understanding the thermally activated charge transport in NaPb m SbQ m+ 2 (Q= S, Se, Te) thermoelectrics: weak dielectric screening leads to grain boundary dominated charge carrier scattering. Energy & Environmental Science 2020.
278. Slade, T. J.; Pal, K.; Grovogui, J. A.; Bailey, T. P.; Male, J.; Khoury, J. F.; Zhou, X.; Chung, D. Y.; Snyder, G. J.; Uher, C., Contrasting SnTe–NaSbTe2 and SnTe–NaBiTe2 Thermoelectric Alloys: High Performance Facilitated by Increased Cation Vacancies and Lattice Softening. Journal of the American Chemical Society 2020, 142 (28), 12524-12535.
279. Smeets, P.; dos Reis, R.; Pakzad, A.; Joester, D., Assessing the Structure-property Relationship in Enamel at the Nanoscale Using 4D-STEM. Microscopy and Microanalysis 2020, 26 (S2), 1484-1486.
280. Son, F. A.; Atilgan, A.; Idrees, K. B.; Islamoglu, T.; Farha, O. K., Solvent-assisted linker exchange enabled preparation of cerium-based metal–organic frameworks constructed from redox active linkers. Inorganic Chemistry Frontiers 2020, 7 (4), 984-990.
281. Son, F. A.; Wasson, M. C.; Islamoglu, T.; Chen, Z.; Gong, X.; Hanna, S. L.; Lyu, J.; Wang, X.; Idrees, K. B.; Mahle, J. J., Uncovering the Role of Metal–Organic Framework Topology on the Capture and Reactivity of Chemical Warfare Agents. Chemistry of Materials 2020.
282. Song, B.; Kenel, C.; Dunand, D. C., 3D ink-extrusion printing and sintering of Ti, Ti-TiB and Ti-TiC microlattices. Additive Manufacturing 2020, 35, 101412.
283. Song, Q.; Wang, X.-Q.; Holmes, T. R.; Bonkowski, M.; Roth, E. W.; Ponedal, A.; Mirkin, C.; Paller, A. S., Epidermal class A scavenger receptor complexes are lipid raft-based and promote nucleic acid nanoparticle uptake. Journal of Investigative Dermatology 2020.
284. Spina, T.; Tennis, B.; Lee, J.; Seidman, D.; Posen, S., Development and Understanding of Nb3Sn films for radiofrequency applications through a sample-host 9-cell cavity. Superconductor Science and Technology 2020, 34 (1), 015008.
285. Stack, T.; Vincent, M.; Vahabikashi, A.; Li, G.; Perkumas, K. M.; Stamer, W. D.; Johnson, M.; Scott, E., Targeted Delivery of Cell Softening Micelles to Schlemm's Canal Endothelial Cells for Treatment of Glaucoma. Small 2020, 16 (43), 2004205.
286. Strauss, M. J.; Evans, A. M.; Castano, I.; Li, R. L.; Dichtel, W. R., Supramolecular polymerization provides non-equilibrium product distributions of imine-linked macrocycles. Chemical Science 2020, 11 (7), 1957-1963.
287. Su, J. T.; Simpson, S. M.; Sung, S.; Tfaily, E. B.; Veazey, R.; Marzinke, M.; Qiu, J.; Watrous, D.; Widanapathirana, L.; Pearson, E., A subcutaneous implant of tenofovir alafenamide fumarate causes local inflammation and tissue necrosis in rabbits and macaques. Antimicrobial agents and chemotherapy 2020, 64 (3).
288. Sun, L.; Lin, H.; Li, Y.; Zhou, W.; Du, J. S.; Mirkin, C. A., Position-and Orientation-Controlled Growth of Wulff-Shaped Colloidal Crystals Engineered with DNA. Advanced Materials 2020, 32 (47), 2005316.
289. Sun, M.; Miyazawa, K.; Pendekanti, T.; Razmi, A.; Firlar, E.; Yang, S.; Shokuhfar, T.; Li, O.; Li, W.; Gupta, A. S., Combination targeting of 'platelets+ fibrin'enhances clot anchorage efficiency of nanoparticles for vascular drug delivery. Nanoscale 2020, 12 (41), 21255-21270.
290. Syed, Z. H.; Chen, Z.; Idrees, K. B.; Goetjen, T. A.; Wegener, E. C.; Zhang, X.; Chapman, K. W.; Kaphan, D. M.; Delferro, M.; Farha, O. K., Mechanistic Insights into C–H Borylation of Arenes with Organoiridium Catalysts Embedded in a Microporous Metal–Organic Framework. Organometallics 2020, 39 (7), 1123-1133.
291. Tang, Q.; Barry, P.; Cecil, T.; Shirokoff, E., Fabrication of OMT-Coupled Kinetic Inductance Detector for CMB Detection. Journal of Low Temperature Physics 2020, 199 (1), 362-368.
292. Tang, X.; Chen, M.; Ackerman, M. M.; Melnychuk, C.; Guyot-Sionnest, P., Direct Imprinting of Quasi-3D Nanophotonic Structures into Colloidal Quantum-Dot Devices. Advanced Materials 2020, 32 (9), 1906590.

293. Tang, X.; Chen, M.; Kamath, A.; Ackerman, M. M.; Guyot-Sionnest, P., Colloidal Quantum-Dots/Graphene/Silicon Dual-Channel Detection of Visible Light and Short-Wave Infrared. ACS Photonics 2020.
294. Teich, J.; Dvir, R.; Henning, A.; Hamo, E. R.; Moody, M. J.; Cohen, H.; Marks, T. J.; Rosen, B. A.; Lauhon, L. J.; Ismach, A., Light and complex 3D MoS 2/graphene heterostructures as efficient catalysts for the hydrogen evolution reaction. Nanoscale 2020, 12 (4), 2715-2725.
295. Tirado, F. L. R.; Taylor, S. V.; Dunand, D. C., Low-density, W-free Co–Nb–V–Al-based superalloys with γ/γ'microstructure. Materials Science and Engineering: A 2020, 796, 139977.
296. Tu, Q.; Spanopoulos, I.; Vasileiadou, E. S.; Li, X.; Kanatzidis, M. G.; Shekhawat, G. S.; Dravid, V. P., Exploring the Factors Affecting the Mechanical Properties of 2D Hybrid Organic–Inorganic Perovskites. ACS applied materials & interfaces 2020, 12 (18), 20440-20447.
297. Tullman-Ercek, D.; Robinson, S. A.; Hartman, E. C.; Ikwuagwu, B. C.; Francis, M. B., Engineering a virus-like particle to display peptide insertions using an apparent fitness landscape. bioRxiv 2020.
298. Um, T.; Wilke, S. K.; Choe, H.; Dunand, D. C., Effects of pore morphology on the cyclical oxidation/reduction of iron foams created via camphene-based freeze casting. Journal of Alloys and Compounds 2020, 845, 156278.
299. Urbach, Z. J.; Park, S. S.; Weigand, S. L.; Rix, J. E.; Lee, B.; Mirkin, C. A., Probing the Consequences of Cubic Particle Shape and Applied Field on Colloidal Crystal Engineering with DNA. Angewandte Chemie 2020.
300. Vincent, M. P.; Bobbala, S.; Karabin, N. B.; Frey, M.; Liu, Y.; Navidzadeh, J. O.; Stack, T.; Scott, E. A., Surface chemistry-mediated modulation of adsorbed albumin folding state specifies nanocarrier clearance by distinct macrophage subsets. bioRxiv 2020.
301. Wang, D.; Bourgeois, M. R.; Guan, J.; Fumani, A. K.; Schatz, G. C.; Odom, T. W., Lasing from finite plasmonic nanoparticle lattices. ACS Photonics 2020, 7 (3), 630-636.
302. Wang, L. S.; Patel, S. V.; Sanghvi, S. S.; Hu, Y.-Y.; Haile, S. M., Structure and Properties of Cs7 (H4PO4)(H2PO4) 8: A New Superprotonic Solid Acid Featuring the Unusual Polycation (H4PO4)+. Journal of the American Chemical Society 2020, 142 (47), 19992-20001.
303. Wang, M.; Li, Y.; Fang, J.; Villa, C. J.; Xu, Y.; Hao, S.; Li, J.; Liu, Y.; Wolverton, C.; Chen, X., Superior Oxygen Reduction Reaction on Phosphorus-Doped Carbon Dot/Graphene Aerogel for All-Solid-State Flexible Al–Air Batteries. Advanced Energy Materials 2020, 10 (3), 1902736.
304. Wang, Q.; Griffith, W. B.; Einsla, M.; Zhang, S.; Pacholski, M. L.; Shull, K. R., Bulk and Interfacial Contributions to the Adhesion of Acrylic Emulsion-Based Pressure-Sensitive Adhesives. Macromolecules 2020, 53 (16), 6975-6983.
305. Wang, R.; Bukowski, B. C.; Duan, J.; Sheridan, T. R.; Atilgan, A.; Zhang, K.; Snurr, R. Q.; Hupp, J. T., Investigating the Process and Mechanism of Molecular Transport within a Representative Solvent-Filled Metal–Organic Framework. Langmuir 2020, 36 (36), 10853-10859.
306. Wang, S.; Cavin, J.; Hemmat, Z.; Kumar, K.; Ruckel, A.; Majidi, L.; Gholivand, H.; Dawood, R.; Cabana, J.; Guisinger, N., Phase-Dependent Band Gap Engineering in Alloys of Metal-Semiconductor Transition Metal Dichalcogenides. Advanced Functional Materials 2020, 30 (51), 2004912.
307. Wang, S.; Park, S. S.; Buru, C. T.; Lin, H.; Chen, P.-C.; Roth, E. W.; Farha, O. K.; Mirkin, C. A., Colloidal crystal engineering with metal–organic framework nanoparticles and DNA. Nature Communications 2020, 11 (1), 1-8.
308. Wang, Y.; Wu, H.; Li, P.; Chen, S.; Jones, L. O.; Mosquera, M. A.; Zhang, L.; Cai, K.; Chen, H.; Chen, X.-Y., Two-photon excited deep-red and near-infrared emissive organic co-crystals. Nature communications 2020, 11 (1), 1-11.
309. Wang, Z.-Q.; Zhang, M.-J.; Hu, X.-B.; Dravid, V. P.; Xu, Z.-N.; Guo, G.-C., CeO 2− x quantum dots with massive oxygen vacancies as efficient catalysts for the synthesis of dimethyl carbonate. Chemical Communications 2020, 56 (3), 403-406.

310. Warburton, R. E.; Castro, F. C.; Deshpande, S.; Madsen, K. E.; Bassett, K. L.; Dos Reis, R.; Gewirth, A. A.; Dravid, V. P.; Greeley, J., Oriented LiMn2O4 Particle Fracture from Delithiation-Driven Surface Stress. ACS applied materials & interfaces 2020, 12 (43), 49182-49191.
311. Wasson, M. C.; Otake, K.-i.; Gong, X.; Strathman, A. R.; Islamoglu, T.; Gianneschi, N. C.; Farha, O. K., Modulation of crystal growth and structure within cerium-based metal–organic frameworks. CrystEngComm 2020, 22 (47), 8182-8188.
312. Wasson, M. C.; Zhang, X.; Otake, K.-i.; Rosen, A. S.; Alayoglu, S.; Krzyaniak, M. D.; Chen, Z.; Redfern, L. R.; Robison, L.; Son, F. A., Supramolecular Porous Assemblies of Atomically Precise Catalytically Active Cerium-Based Clusters. Chemistry of Materials 2020, 32 (19), 8522-8529.
313. Watterson, W. J.; Tanyeri, M.; Watson, A. R.; Cham, C. M.; Shan, Y.; Chang, E. B.; Eren, A. M.; Tay, S., Droplet-based high-throughput cultivation for accurate screening of antibiotic resistant gut microbes. Elife 2020, 9, e56998.
314. Wei, C.; Abedini Dereshgi, S.; Song, X.; Murthy, A.; Dravid, V. P.; Cao, T.; Aydin, K., Polarization Reflector/Color Filter at Visible Frequencies via Anisotropic α-MoO3. Advanced Optical Materials 2020, 2000088.
315. Wei, T.; Torkelson, J. M., Molecular Weight Dependence of the Glass Transition Temperature (T g)-Confinement Effect in Well-Dispersed Poly (2-vinyl pyridine)–Silica Nanocomposites: Comparison of Interfacial Layer T g and Matrix T g. Macromolecules 2020, 53 (19), 8725-8736.
316. Wester, J. R.; Lewis, J. A.; Freeman, R.; Sai, H.; Palmer, L. C.; Henrich, S. E.; Stupp, S. I., Supramolecular exchange among assemblies of opposite charge leads to hierarchical structures. Journal of the American Chemical Society 2020, 142 (28), 12216-12225.
317. Westmoreland, D. E.; López-Arteaga, R.; Weiss, E. A., N-Heterocyclic Carbenes as Reversible Exciton-Delocalizing Ligands for Photoluminescent Quantum Dots. Journal of the American Chemical Society 2020, 142 (5), 2690-2696.
318. Wilke, S. K.; Dunand, D. C., In operando tomography reveals degradation mechanisms in lamellar iron foams during redox cycling at 800° C. Journal of Power Sources 2020, 448, 227463.
319. Wilke, S. K.; Dunand, D. C., Fe–Ni foams self-heal during redox cycling via reversible formation/homogenization of a ductile Ni scaffold. Journal of Materials Chemistry A 2020, 8 (37), 19375-19386.
320. Wilke, S. K.; Dunand, D. C., Finite Element Model for Coupled Diffusion and Elastoplastic Deformation during High-Temperature Oxidation of Fe to FeO. Journal of The Electrochemical Society 2020, 167 (8), 080532.
321. Wilke, S. K.; Lundberg, R. A.; Dunand, D. C., Hierarchical Structural Changes during Redox Cycling of Fe-Based Lamellar Foams containing YSZ, CeO2, or ZrO2. ACS Applied Materials & Interfaces 2020.
322. Winegar, P. H.; Hayes, O. G.; McMillan, J. R.; Figg, C. A.; Focia, P. J.; Mirkin, C. A., DNA-Directed protein packing within single crystals. Chem 2020.
323. Witting, I. T.; Grovogui, J. A.; Dravid, V. P.; Snyder, G. J., Thermoelectric transport enhancement of Te-rich bismuth antimony telluride (Bi0. 5Sb1. 5Te3+ x) through controlled porosity. Journal of Materiomics 2020.
324. Wolek, A. T.; Ardagh, M. A.; Pham, H. N.; Alayoglu, S.; Datye, A. K.; Notestein, J. M., Creating Brønsted acidity at the SiO2-Nb2O5 interface. Journal of Catalysis 2020.
325. Wolfowicz, G.; Anderson, C. P.; Diler, B.; Poluektov, O. G.; Heremans, F. J.; Awschalom, D. D., Vanadium spin qubits as telecom quantum emitters in silicon carbide. Science Advances 2020, 6 (18), eaaz1192.
326. Won, Y.; Sadman, K.; Stein, G.; Sabba, F.; Shull, K. R.; Gray, K. A., Functionalizing a Polyelectrolyte Complex with Chitosan Derivatives to Tailor Membrane Surface Properties. Langmuir 2020, 36 (43), 12784-12794.

327. Wood, M.; Imasato, K.; Anand, S.; Yang, J.; Snyder, G. J., The importance of the Mg–Mg interaction in Mg 3 Sb 2–Mg 3 Bi 2 shown through cation site alloying. Journal of Materials Chemistry A 2020, 8 (4), 2033-2038.
328. Woods, E. F.; Berl, A. J.; Kalow, J. A., Photocontrolled synthesis of n-type conjugated polymers. Angewandte Chemie 2020, 132 (15), 6118-6123.
329. Wu, H.; Wang, Y.; Jones, L. O.; Liu, W.; Song, B.; Cui, Y.; Cai, K.; Zhang, L.; Shen, D.; Chen, X.-Y., Ring-in-ring (s) complexes exhibiting tunable multicolor photoluminescence. Journal of the American Chemical Society 2020, 142 (39), 16849-16860.
330. Xi, J.; Spanopoulos, I.; Bang, K.; Xu, J.; Dong, H.; Yang, Y.; Malliakas, C. D.; Hoffman, J. M.; Kanatzidis, M. G.; Wu, Z., Alternative Organic Spacers for More Efficient Perovskite Solar Cells Containing Ruddlesden–Popper Phases. Journal of the American Chemical Society 2020, 142 (46), 19705-19714.
331. Xie, H.; Hao, S.; Cai, S.; Bailey, T. P.; Uher, C.; Wolverton, C.; Dravid, V. P.; Kanatzidis, M. G., Ultralow thermal conductivity in diamondoid lattices: high thermoelectric performance in chalcopyrite Cu 0.8+ y Ag 0.2 In 1− y Te 2. Energy & Environmental Science 2020, 13 (10), 3693-3705.
332. Xu, X.; Liu, Y.; Wang, J.; Isheim, D.; Dravid, V. P.; Phatak, C.; Haile, S. M., Variability and origins of grain boundary electric potential detected by electron holography and atom-probe tomography. Nature materials 2020, 1-7.
333. Xu, Y.; Yan, H.; Li, T.; Liu, Y.; Luo, J.; Li, W.; Cui, X.; Chen, L.; Yue, Q.; Kang, Y., Can carbon sponge be used as separator in Li metal batteries? Energy Storage Materials 2020.
334. Xu, Y.; Zhou, Y.; Li, T.; Jiang, S.; Qian, X.; Yue, Q.; Kang, Y., Multifunctional covalent organic frameworks for high capacity and dendrite-free lithium metal batteries. Energy Storage Materials 2020, 25, 334-341.
335. y Puente, A. P.; Dunand, D., Effect of Cr content on interdiffusion and Kirkendall pore formation during homogenization of pack-aluminized Ni and Ni–Cr wires. Intermetallics 2020, 117, 106634.
336. Yadav, R. K.; Bourgeois, M. R.; Cherqui, C.; Juarez, X. G.; Wang, W.; Odom, T. W.; Schatz, G. C.; Basu, J. K., Room Temperature Weak-to-Strong Coupling and the Emergence of Collective Emission from Quantum Dots Coupled to Plasmonic Arrays. ACS Nano 2020.
337. Yaddehige, M. L.; Chandrasiri, I.; Barker, A.; Kotha, A. K.; Dal Williams, J. S.; Simms, B.; Kucheryavy, P.; Abebe, D. G.; Chougule, M. B.; Watkins, D. L., Structural and Surface Properties of Polyamidoamine (PAMAM)–Fatty Acid-based Nanoaggregates Derived from Self-assembling Janus Dendrimers. ChemNanoMat 2020.
338. Yan, X.; Ogrenci-Memik, S.; Grayson, M. A., Micro-Scale 2D Thermal Gradiometer. IEEE Electron Device Letters 2020, 41 (5), 761-764.
339. Yang, Q.; Lee, S.; Xue, Y.; Yan, Y.; Liu, T. L.; Kang, S. K.; Lee, Y. J.; Lee, S. H.; Seo, M. H.; Lu, D., Materials, Mechanics Designs, and Bioresorbable Multisensor Platforms for Pressure Monitoring in the Intracranial Space. Advanced Functional Materials 2020, 30 (17), 1910718.
340. Yang, Y.; Zhang, X.; Kanchanakungwankul, S.; Lu, Z.; Noh, H.; Syed, Z. H.; Farha, O. K.; Truhlar, D. G.; Hupp, J. T., Unexpected “Spontaneous” Evolution of Catalytic, MOF-Supported Single Cu (II) Cations to Catalytic, MOF-Supported Cu (0) Nanoparticles. Journal of the American Chemical Society 2020.
341. Yi, S.; Karabin, N. B.; Zhu, J.; Bobbala, S.; Lyu, H.; Li, S.; Liu, Y.; Frey, M.; Vincent, M.; Scott, E. A., An injectable hydrogel platform for sustained delivery of anti-inflammatory nanocarriers and induction of regulatory T cells in atherosclerosis. Frontiers in Bioengineering and Biotechnology 2020, 8.
342. Yu, C.-J.; Von Kugelgen, S.; Krzyaniak, M. D.; Ji, W.; Dichtel, W. R.; Wasielewski, M. R.; Freedman, D. E., Spin and Phonon Design in Modular Arrays of Molecular Qubits. Chemistry of Materials 2020, 32 (23), 10200-10206.

343. Yuan, W.; Haile, S. M., Insensitivity of the extent of surface reduction of ceria on termination: comparison of (001),(110), and (111) faces. MRS Communications 2020, 10 (4), 636-641.
344. Yuan, W.; Ma, Q.; Liang, Y.; Sun, C.; Narayanachari, K.; Bedzyk, M. J.; Takeuchi, I.; Haile, S. M., Unexpected trends in the enhanced Ce 3+ surface concentration in ceria–zirconia catalyst materials. Journal of Materials Chemistry A 2020, 8 (19), 9850-9858.
345. Zee, D. Z.; Harris, T. D., Enhancing catalytic alkane hydroxylation by tuning the outer coordination sphere in a heme-containing metal–organic framework. Chemical Science 2020, 11 (21), 5447-5452.
346. Zhang, C.; dos Reis, R.; Flynn, S.; Poeppelmeier, K.; Dravid, V., Identification of Structure and Chemical Occupancy of Emerging Complex Compounds via Analytical Electron Microscopy. Microscopy and Microanalysis 2020, 26 (S2), 744-746.
347. Zhang, F.; Hu, X.; Roth, E. W.; Kim, Y.; Nguyen, S. T., Template-Assisted, Seed-Mediated Synthesis of Hierarchically Mesoporous Core–Shell UiO-66: Enhancing Adsorption Capacity and Catalytic Activity through Iterative Growth. Chemistry of Materials 2020, 32 (10), 4292-4302.
348. Zhang, H.; Chakram, S.; Roy, T.; Earnest, N.; Lu, Y.; Huang, Z.; Weiss, D.; Koch, J.; Schuster, D. I., Universal fast flux control of a coherent, low-frequency qubit. arXiv preprint arXiv:2002.10653 2020.
349. Zhang, R.; Qiang, Z.; Wang, M., Integration of Polymer Synthesis and Self-Assembly for Controlled Periodicity and Photonic Properties. Advanced Functional Materials 2020, 2005819.
350. Zhang, S.-L.; Wang, H.; Yang, T.; Lu, M. Y.; Li, C.-X.; Li, C.-J.; Barnett, S. A., Advanced oxygen-electrode-supported solid oxide electrochemical cells with Sr (Ti, Fe) O 3− δ-based fuel electrodes for electricity generation and hydrogen production. Journal of Materials Chemistry A 2020, 8 (48), 25867-25879.
351. Zhang, X.; Li, P.; Krzyaniak, M.; Knapp, J.; Wasielewski, M. R.; Farha, O. K., Stabilization of Photocatalytically Active Uranyl Species in a Uranyl–Organic Framework for Heterogeneous Alkane Fluorination Driven by Visible Light. Inorganic Chemistry 2020.
352. Zhang, Y.; Zhang, X.; Chen, Z.; Otake, K.-i.; Peterson, G.; Chen, Y.; Wang, X.; Redfern, L.; Goswami, S.; Li, P., A Flexible Interpenetrated Zirconium-Based Metal-Organic Framework with High Affinity toward Ammonia. ChemSusChem 2020.
353. Zhang, Z.; Yao, S.; Hu, X.; Okejiri, F.; He, K.; Liu, P.; Tian, Z.; Dravid, V. P.; Fu, J.; Zhu, X., Sacrificial Synthesis of Supported Ru Single Atoms and Clusters on N-doped Carbon Derived from Covalent Triazine Frameworks: A Charge Modulation Approach. Advanced Science 2020, 2001493.
354. Zhao, X.; Bae, Y. J.; Chen, M.; Harvey, S. M.; Lin, C.; Zhou, J.; Schaller, R. D.; Young, R. M.; Wasielewski, M. R., Singlet fission in core-linked terrylenediimide dimers. The Journal of Chemical Physics 2020, 153 (24), 244306.
355. Zhong, W.; Sridharan, N.; Isheim, D.; Field, K. G.; Yang, Y.; Terrani, K.; Tan, L., Microstructures and mechanical properties of a modified 9Cr ferritic-martensitic steel in the as-built condition after additive manufacturing. Journal of Nuclear Materials 2020, 152742.
356. Zhou, C.; Tambo, N.; Ashley, E. M.; Liao, Y.; Shiomi, J.; Takahashi, K.; Craig, G. S.; Nealey, P. F., Enhanced Reduction of Thermal Conductivity in Amorphous Silicon Nitride Containing Phononic Crystals Fabricated Using Directed Self-Assembly of Block Copolymers. ACS Nano 2020.
357. Zhou, C.; Tambo, N.; Ashley, E. M.; Liao, Y.; Shiomi, J.; Takahashi, K.; Craig, G. S.; Nealey, P. F., Enhanced reduction of thermal conductivity in amorphous silicon nitride-containing phononic crystals fabricated using directed self-assembly of block copolymers. ACS nano 2020, 14 (6), 6980-6989.
358. Zhou, Y.-G.; Kang, Y.; Huang, J., Fluidized Electrocatalysis. CCS Chemistry 2020, 2 (1), 31-41.

359. Zhu, J.; Lin, H.; Kim, Y.; Yang, M.; Skakuj, K.; Du, J. S.; Lee, B.; Schatz, G. C.; Van Duyne, R. P.; Mirkin, C. A., Light-Responsive Colloidal Crystals Engineered with DNA. Advanced Materials 2020, 32 (8), 1906600.
360. Zhu, W.; Spencer, A. P.; Mukherjee, S.; Alzola, J. M.; Sangwan, V. K.; Amsterdam, S. H.; Swick, S. M.; Jones, L. O.; Heiber, M. C.; Herzing, A. A., Crystallography, morphology, electronic structure, and transport in non-fullerene/non-indacenodithienothiophene polymer: Y6 solar cells. Journal of the American Chemical Society 2020, 142 (34), 14532-14547.
361. Zhuang, X.; Patel, S.; Zhang, C.; Wang, B.; Chen, Y.; Liu, H.; Dravid, V. P.; Yu, J.; Hu, Y.-Y.; Huang, W., Frequency-Agile Low-Temperature Solution-Processed Alumina Dielectrics for Inorganic and Organic Electronics Enhanced by Fluoride Doping. Journal of the American Chemical Society 2020, 142 (28), 12440-12452.
362. Zokaei, S.; Kroon, R.; Gladisch, J.; Paulsen, B. D.; Sohn, W.; Hofmann, A. I.; Persson, G.; Stamm, A.; Syrén, P. O.; Olsson, E., Toughening of a Soft Polar Polythiophene through Copolymerization with Hard Urethane Segments. Advanced Science 2020, 2002778.

External User Papers (39)

1. Beline, T.; de Almeida, A. B.; Neto, N. F. A.; Matos, A. O.; Ricomini-Filho, A. P.; Sukotjo, C.; Smeets, P. J.; da Silva, J. H.; Nociti Jr, F. H.; Barão, V. A., β-Ta2O5 thin film for implant surface modification triggers superior anti-corrosion performance and cytocompatibility of titanium. Applied Surface Science 2020, 146326.
2. Bourassa, A.; Anderson, C. P.; Miao, K. C.; Onizhuk, M.; Ma, H.; Crook, A. L.; Abe, H.; Ul-Hassan, J.; Ohshima, T.; Son, N. T., Entanglement and control of single nuclear spins in isotopically engineered silicon carbide. Nature Materials 2020, 19 (12), 1319-1325.
3. Catlin, D. S.; Reidl, C. T.; Trzupek, T. R.; Silverman, R. B.; Cannon, B. L.; Becker, D. P.; Liu, D., (S)-4-Amino-5-phenoxypentanoate designed as a potential selective agonist of the bacterial transcription factor GabR. Protein Science 2020, 29 (8), 1816-1828.
4. Chatterjee, K.; Bueno, S.; Skrabalak, S.; Dravid, V.; Dos Reis, R., Nanoscale Investigation of Layered Oxychloride Intergrowth Photocatalysts for Visible Light Driven Water Splitting. Microscopy and Microanalysis 2020, 26 (S2), 376-379.
5. Chatterjee, K.; Dos Reis, R.; Harada, J. K.; Mathiesen, J. K.; Bueno, S. L.; Jensen, K. M.; Rondinelli, J. M.; Dravid, V.; Skrabalak, S. E., Durable Multimetal Oxychloride Intergrowths for Visible Light-Driven Water Splitting. Chemistry of Materials 2020.
6. Chen, X.; Shang, M.; Niu, J., Inter-layer-calated Thin Li Metal Electrode with Improved Battery Capacity Retention and Dendrite Suppression. Nano letters 2020, 20 (4), 2639-2646.
7. Chen, Y.; Zhuang, X.; Goldfine, E. A.; Dravid, V. P.; Bedzyk, M. J.; Huang, W.; Facchetti, A.; Marks, T. J., Printable Organic-Inorganic Nanoscale Multilayer Gate Dielectrics for Thin-Film Transistors Enabled by a Polymeric Organic Interlayer. Advanced Functional Materials 2020, 30 (40), 2005069.
8. Crook, A. L.; Anderson, C. P.; Miao, K. C.; Bourassa, A.; Lee, H.; Bayliss, S. L.; Bracher, D. O.; Zhang, X.; Abe, H.; Ohshima, T., Purcell enhancement of a single silicon carbide color center with coherent spin control. Nano Letters 2020.
9. Driscoll, J. A.; Lubbe, R.; Jakus, A. E.; Chang, K.; Haleem, M.; Yun, C.; Singh, G.; Schneider, A. D.; Katchko, K. M.; Soriano, C., 3D-printed ceramic-demineralized bone matrix hyperelastic bone composite scaffolds for spinal fusion. Tissue Engineering Part A 2020, 26 (3-4), 157-166.

10. Fang, Y.; Han, E.; Zhang, X.-X.; Jiang, Y.; Lin, Y.; Shi, J.; Wu, J.; Meng, L.; Gao, X.; Griffin, P. J., Dynamic and programmable cellular-scale granules enable tissue-like materials. Matter 2020.
11. Grange, T.; Mukherjee, S.; Capellini, G.; Montanari, M.; Persichetti, L.; Di Gaspare, L.; Birner, S.; Attiaoui, A.; Moutanabbir, O.; Virgilio, M., Atomic-Scale Insights into Semiconductor Heterostructures: From Experimental Three-Dimensional Analysis of the Interface to a Generalized Theory of Interfacial Roughness Scattering. Physical Review Applied 2020, 13 (4), 044062.
12. Greer, J.; Rout, S. S.; Isheim, D.; Seidman, D. N.; Wieler, R.; Heck, P. R., Atom probe tomography of space-weathered lunar ilmenite grain surfaces. Meteoritics & Planetary Science 2020, 55 (2), 426-440.
13. Hemmat, Z.; Cavin, J.; Ahmadiparidari, A.; Ruckel, A.; Rastegar, S.; Misal, S. N.; Majidi, L.; Kumar, K.; Wang, S.; Guo, J., Quasi-Binary Transition Metal Dichalcogenide Alloys: Thermodynamic Stability Prediction, Scalable Synthesis, and Application. Advanced Materials 2020, 1907041.
14. Huang, R.; Zhong, X.-F.; Koza, J.; Zhang, B.; Xu, G.; Simmons, S. In Development of planarizing spin-on carbon materials for high-temperature processes, Advances in Patterning Materials and Processes XXXVII, International Society for Optics and Photonics: 2020; p 113261O.
15. Kani, N. C.; Prajapati, A.; Collins, B. A.; Goodpaster, J. D.; Singh, M. R., Competing Effects of pH, Cation Identity, H2O Saturation, and N2 Concentration on the Activity and Selectivity of Electrochemical Reduction of N2 to NH3 on Electrodeposited Cu at Ambient Conditions. ACS Catalysis 2020, 10 (24), 14592-14603.
16. Kassam, H. A.; Gillis, D. C.; Dandurand, B. R.; Karver, M. R.; Tsihlis, N. D.; Stupp, S. I.; Kibbe, M. R., Development of fractalkine-targeted nanofibers that localize to sites of arterial injury. Nanomaterials 2020, 10 (3), 420.
17. Klein, M. K.; Kassam, H. A.; Lee, R. H.; Bergmeier, W.; Peters, E. B.; Gillis, D. C.; Dandurand, B. R.; Rouan, J. R.; Karver, M. R.; Struble, M. D., Development of Optimized Tissue Factor-Targeted Peptide Amphiphile Nanofibers to Slow Non-Compressible Torso Hemorrhage. ACS Nano 2020.
18. Knipfer, B.; Rajeev, A.; Isheim, D.; Kirch, J.; Babcock, S.; Kuech, T.; Earles, T.; Botez, D.; Mawst, L., Layer-thickness dependence of the compositions in strained III–V superlattices by atom probe tomography. Journal of Crystal Growth 2020, 535, 125550.
19. Koelling, S.; Assali, S.; Atalla, M.; Kumar, A.; Attiaoui, A.; Lodari, M.; Sammak, A.; Scappucci, G.; Moutanabbir, O., Probing Semiconductor Heterostructures from the Atomic to the Micrometer Scale. ECS Transactions 2020, 98 (5), 447.
20. Kondori, A.; Jiang, Z.; Esmaeilirad, M.; Tamadoni Saray, M.; Kakekhani, A.; Kucuk, K.; Navarro Munoz Delgado, P.; Maghsoudipour, S.; Hayes, J.; Johnson, C. S., Kinetically Stable Oxide Overlayers on Mo3P Nanoparticles Enabling Lithium–Air Batteries with Low Overpotentials and Long Cycle Life. Advanced Materials 2020, 32 (50), 2004028.
21. Langley, A.; Muir, K.; Sutherland, K., Scenes from the life of Picasso's Still Life (1922): history, materials, and conservation. SN Applied Sciences 2020, 2 (8), 1-7.
22. Lee, J.; Mao, Z. G.; He, K.; Sung, Z.; Spina, T.; Baik, S. I.; Hall, D. L.; Liepe, M.; Seidman, D. N.; Posen, S., Grain-boundary structure and segregation in Nb3Sn coatings on Nb for high-performance superconducting radiofrequency cavity applications. Acta Materialia 2020, 188, 155-165.

23. Lu, B.; Wang, B.; Chen, Y.; Facchetti, A.; Marks, T. J.; Balogun, O., Cross-Plane Thermal Conductance of Phosphonate-Based Self-Assembled Monolayers and Self-Assembled Nanodielectrics. ACS applied materials & interfaces 2020, 12 (31), 34901-34909.
24. Lu, Q.; Li, K.; Chen, H.; Yang, M.; Lan, X.; Yang, T.; Liu, S.; Song, M.; Cao, L.; Du, Y., Simultaneously enhanced strength and ductility of 6xxx Al alloys via manipulating meso-scale and nano-scale structures guided with phase equilibrium. Journal of Materials Science & Technology 2020, 41, 139-148.
25. Mao, L.; Guo, P.; Kepenekian, M.; Spanopoulos, I.; He, Y.; Katan, C.; Even, J.; Schaller, R. D.; Seshadri, R.; Stoumpos, C. C., Organic Cation Alloying on Intralayer A and Interlayer A'sites in 2D Hybrid Dion–Jacobson Lead Bromide Perovskites (A')(A) Pb2Br7. Journal of the American Chemical Society 2020, 142 (18), 8342-8351.
26. Miao, K. C.; Blanton, J. P.; Anderson, C. P.; Bourassa, A.; Crook, A. L.; Wolfowicz, G.; Abe, H.; Ohshima, T.; Awschalom, D. D., Universal coherence protection in a solid-state spin qubit. arXiv preprint arXiv:2005.06082 2020.
27. Mohammad, T. S. H.; Reidl, C. T.; Zeller, M.; Becker, D. P., Synthesis of a protected 2-aminocyclobutanone as a modular transition state synthon for medicinal chemistry. Tetrahedron Letters 2020, 61 (12), 151632.
28. Nair, V.; Yi, J.; Isheim, D.; Rotenberg, M.; Meng, L.; Shi, F.; Chen, X.; Gao, X.; Prominski, A.; Jiang, Y., Laser writing of nitrogen-doped silicon carbide for biological modulation. Science advances 2020, 6 (34), eaaz2743.
29. Nelson, P.; Adimabua, P.; Wang, A.; Zou, S.; Shah, N. C., Surface-Enhanced Raman Spectroscopy for Rapid Screening of Cinnamon Essential Oils. Applied spectroscopy 2020, 74 (11), 1341-1349.
30. Onizhuk, M.; Miao, K. C.; Blanton, J. P.; Ma, H.; Anderson, C. P.; Bourassa, A.; Awschalom, D. D.; Galli, G., Probing the coherence of solid-state qubits at avoided crossings. arXiv preprint arXiv:2010.11077 2020.
31. Rasul, M. G.; Kiziltas, A.; Malliakas, C. D.; Rojaee, R.; Sharifi-Asl, S.; Foroozan, T.; Shahbazian-Yassar, R.; Arfaei, B., Polyethylene-BN Nanosheets Nanocomposites with Enhanced Thermal and Mechanical Properties. Composites Science and Technology 2020, 108631.
32. Shang, M.; Chen, X.; Li, B.; Niu, J., A fast charge/discharge and wide-temperature battery with a germanium oxide layer on a ti3c2 mxene matrix as anode. ACS nano 2020, 14 (3), 3678-3686.
33. Shastri, S. D.; Moldovan, N., Submicron focusing of high-energy X-rays with silicon saw-tooth refractive lenses: fabrication and aberrations. Optics Express 2020, 28 (24), 36505-36515.
34. Shen, B.; Huang, L.; Shen, J.; Meng, L.; Kluender, E. J.; Wolverton, C.; Tian, B.; Mirkin, C. A., Synthesis of Metal-Capped Semiconductor Nanowires from Heterodimer Nanoparticle Catalysts. Journal of the American Chemical Society 2020, 142 (43), 18324-18329.
35. Song, B.; Yang, Y.; Rabbani, M.; Yang, T. T.; He, K.; Hu, X.; Yuan, Y.; Ghildiyal, P.; Dravid, V. P.; Zachariah, M. R., In Situ Oxidation Studies of High-Entropy Alloy Nanoparticles. ACS nano 2020, 14 (11), 15131-15143.
36. Spanopoulos, I.; Hadar, I.; Ke, W.; Guo, P.; Sidhik, S.; Kepenekian, M.; Even, J.; Mohite, A. D.; Schaller, R. D.; Kanatzidis, M. G., Water-Stable 1D Hybrid Tin (II) Iodide Emits Broad Light with 36% Photoluminescence Quantum Efficiency. Journal of the American Chemical Society 2020, 142 (19), 9028-9038.
37. Wang, S.; Cavin, J.; Hemmat, Z.; Kumar, K.; Ruckel, A.; Majidi, L.; Gholivand, H.; Dawood, R.; Cabana, J.; Guisinger, N., Phase-Dependent Band Gap Engineering in Alloys of

Metal-Semiconductor Transition Metal Dichalcogenides. Advanced Functional Materials 2020, 30 (51), 2004912.
38. Wolfowicz, G.; Anderson, C. P.; Diler, B.; Poluektov, O. G.; Heremans, F. J.; Awschalom, D. D., Vanadium spin qubits as telecom quantum emitters in silicon carbide. Science Advances 2020, 6 (18), eaaz1192.
39. Xu, X.; Sumption, M. D.; Lee, J.; Rochester, J.; Peng, X., Persistent compositions of non-stoichiometric compounds with low bulk diffusivity: A theory and application to Nb3Sn superconductors. Journal of Alloys and Co