

# Sarah H Tolbert

## List of Publications by Year in descending order

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149  
papers

21,600  
citations

26630

56  
h-index

9345

143  
g-index

151  
all docs

151  
docs citations

151  
times ranked

21159  
citing authors

#	ARTICLE	IF	CITATIONS
1	High-rate electrochemical energy storage through Li <sup>+</sup> intercalation pseudocapacitance. <i>Nature Materials</i> , 2013, 12, 518-522.	27.5	4,021
2	Ordered mesoporous $\gamma$ -MoO <sub>3</sub> with iso-oriented nanocrystalline walls for thin-film pseudocapacitors. <i>Nature Materials</i> , 2010, 9, 146-151.	27.5	2,801
3	Oxygen vacancies enhance pseudocapacitive charge storage properties of MoO <sub>3</sub> $\cdot$ x. <i>Nature Materials</i> , 2017, 16, 454-460.	27.5	1,632
4	Templated Nanocrystal-Based Porous TiO <sub>2</sub> Films for Next-Generation Electrochemical Capacitors. <i>Journal of the American Chemical Society</i> , 2009, 131, 1802-1809.	13.7	887
5	Synthesis of Ultra-Incompressible Superhard Rhenium Diboride at Ambient Pressure. <i>Science</i> , 2007, 316, 436-439.	12.6	735
6	MATERIALS SCIENCE: Designing Superhard Materials. <i>Science</i> , 2005, 308, 1268-1269.	12.6	657
7	Control of Energy Transfer in Oriented Conjugated Polymer-Mesoporous Silica Composites. <i>Science</i> , 2000, 288, 652-656.	12.6	642
8	High Performance Pseudocapacitor Based on 2D Layered Metal Chalcogenide Nanocrystals. <i>Nano Letters</i> , 2015, 15, 1911-1917.	9.1	495
9	A fundamental look at electrocatalytic sulfur reduction reaction. <i>Nature Catalysis</i> , 2020, 3, 762-770.	34.4	455
10	Osmium Diboride, An Ultra-Incompressible, Hard Material. <i>Journal of the American Chemical Society</i> , 2005, 127, 7264-7265.	13.7	439
11	7.7% Efficient All-Polymer Solar Cells. <i>Advanced Materials</i> , 2015, 27, 4578-4584.	21.0	414
12	Mesoporous MoS <sub>2</sub> as a Transition Metal Dichalcogenide Exhibiting Pseudocapacitive Li and Na <sup>+</sup> Ion Charge Storage. <i>Advanced Energy Materials</i> , 2016, 6, 1501937.	19.5	395
13	The wurtzite to rock salt structural transformation in CdSe nanocrystals under high pressure. <i>Journal of Chemical Physics</i> , 1995, 102, 4642-4656.	3.0	356
14	Pseudocapacitive Contributions to Charge Storage in Highly Ordered Mesoporous Group V Transition Metal Oxides with Iso-Oriented Layered Nanocrystalline Domains. <i>Journal of the American Chemical Society</i> , 2010, 132, 6982-6990.	13.7	320
15	Advancements in the Search for Superhard Ultra-Incompressible Metal Borides. <i>Advanced Functional Materials</i> , 2009, 19, 3519-3533.	14.9	313
16	Reappraising the Need for Bulk Heterojunctions in Polymer-Fullerene Photovoltaics: The Role of Carrier Transport in All-Solution-Processed P3HT/PCBM Bilayer Solar Cells. <i>Journal of Physical Chemistry C</i> , 2009, 113, 20050-20060.	3.1	303
17	Tungsten tetraboride, an inexpensive superhard material. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 10958-10962.	7.1	299
18	Enhancing Pseudocapacitive Charge Storage in Polymer Templated Mesoporous Materials. <i>Accounts of Chemical Research</i> , 2013, 46, 1113-1124.	15.6	254

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19	Mesoporous $\text{LiMn}_2\text{O}_4$ Thin Film Cathodes for Lithium-Ion Pseudocapacitors. <i>ACS Nano</i> , 2016, 10, 7572-7581.	14.6	247
20	Pseudocapacitive Charge Storage in Thick Composite $\text{MoS}_2$ Nanocrystal-Based Electrodes. <i>Advanced Energy Materials</i> , 2017, 7, 1601283.	19.5	230
21	Pressure-Induced Structural Transformations in Si Nanocrystals: Surface and Shape Effects. <i>Physical Review Letters</i> , 1996, 76, 4384-4387.	7.8	221
22	The Effects of Crystallinity on Charge Transport and the Structure of Sequentially Processed $\text{F}_4\text{TCNQ}$ -Doped Conjugated Polymer Films. <i>Advanced Functional Materials</i> , 2017, 27, 1702654.	14.9	190
23	Correlation between hardness and elastic moduli of the ultraincompressible transition metal diborides $\text{RuB}_2$ , $\text{OsB}_2$ , and $\text{ReB}_2$ . <i>Applied Physics Letters</i> , 2008, 92, .	3.3	183
24	Overcoming Film Quality Issues for Conjugated Polymers Doped with $\text{F}_4\text{TCNQ}$ by Solution Sequential Processing: Hall Effect, Structural, and Optical Measurements. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 4786-4793.	4.6	175
25	Highly Polarized Luminescence from Optical Quality Films of a Semiconducting Polymer Aligned within Oriented Mesoporous Silica. <i>Journal of the American Chemical Society</i> , 2004, 126, 4476-4477.	13.7	173
26	The Development of Pseudocapacitive Properties in Nanosized- $\text{MoO}_2$ . <i>Journal of the Electrochemical Society</i> , 2015, 162, A5083-A5090.	2.9	170
27	Improving the Reproducibility of P3HT:PCBM Solar Cells by Controlling the PCBM/Cathode Interface. <i>Journal of Physical Chemistry C</i> , 2009, 113, 18978-18982.	3.1	150
28	Physical Interpretations of Electrochemical Impedance Spectroscopy of Redox Active Electrodes for Electrical Energy Storage. <i>Journal of Physical Chemistry C</i> , 2018, 122, 24499-24511.	3.1	149
29	Ordered Mesoporous Silicon through Magnesium Reduction of Polymer Templated Silica Thin Films. <i>Nano Letters</i> , 2008, 8, 3075-3079.	9.1	140
30	On the Correlation between Mechanical Flexibility, Nanoscale Structure, and Charge Storage in Periodic Mesoporous $\text{CeO}_2$ Thin Films. <i>ACS Nano</i> , 2010, 4, 967-977.	14.6	127
31	Ordered Mesoporous $\gamma\text{-Fe}_2\text{O}_3$ (Hematite) Thin Film Electrodes for Application in High Rate Rechargeable Lithium Batteries. <i>Small</i> , 2011, 7, 407-414.	10.0	127
32	Toward Inexpensive Superhard Materials: Tungsten Tetraboride-Based Solid Solutions. <i>Journal of the American Chemical Society</i> , 2012, 134, 20660-20668.	13.7	105
33	Controlling optical gain in semiconducting polymers with nanoscale chain positioning and alignment. <i>Nature Nanotechnology</i> , 2007, 2, 647-652.	31.5	102
34	On the Correlation between Nanoscale Structure and Magnetic Properties in Ordered Mesoporous Cobalt Ferrite ( $\text{CoFe}_2\text{O}_4$ ) Thin Films. <i>Nano Letters</i> , 2010, 10, 2982-2988.	9.1	101
35	Tungsten Nitride Inverse Opals by Atomic Layer Deposition. <i>Nano Letters</i> , 2003, 3, 1293-1297.	9.1	97
36	Room to Improve Conjugated Polymer-Based Solar Cells: Understanding How Thermal Annealing Affects the Fullerene Component of a Bulk Heterojunction Photovoltaic Device. <i>Journal of Physical Chemistry C</i> , 2008, 112, 18711-18716.	3.1	94

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37	Enhancement of voltage-controlled magnetic anisotropy through precise control of Mg insertion thickness at CoFeB/MgO interface. Applied Physics Letters, 2017, 110, .	3.3	92
38	Exploring the high-pressure behavior of superhard tungsten tetraboride. Physical Review B, 2012, 85, .	3.2	90
39	Dodecaborane-Based Dopants Designed to Shield Anion Electrostatics Lead to Increased Carrier Mobility in a Doped Conjugated Polymer. Advanced Materials, 2019, 31, e1805647.	21.0	90
40	Interchain and intrachain exciton transport in conjugated polymers: ultrafast studies of energy migration in aligned MEH-PPV/mesoporous silica composites. Synthetic Metals, 2001, 116, 35-40.	3.9	87
41	General Method for the Synthesis of Hierarchical Nanocrystal-Based Mesoporous Materials. ACS Nano, 2012, 6, 6386-6399.	14.6	85
42	Sequential Processing for Organic Photovoltaics: Design Rules for Morphology Control by Tailored Semi-Orthogonal Solvent Blends. Advanced Energy Materials, 2015, 5, 1402020.	19.5	82
43	Structure of superhard tungsten tetraboride: A missing link between MB <sub>2</sub> and MB <sub>12</sub> higher borides. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 3223-3228.	7.1	82
44	Nanostructured Pseudocapacitors Based on Atomic Layer Deposition of V <sub>2</sub> O <sub>5</sub> onto Conductive Nanocrystal-based Mesoporous ITO Scaffolds. Advanced Functional Materials, 2014, 24, 6717-6728.	14.9	76
45	Superhard Monoborides: Hardness Enhancement through Alloying in W <sub>1-x</sub> Ta <sub>x</sub> B. Advanced Materials, 2016, 28, 6993-6998.	21.0	75
46	Dzyaloshinskii-Moriya Interaction across an Antiferromagnet-Ferromagnet Interface. Physical Review Letters, 2017, 119, 027202.	7.8	75
47	Incompressibility and Hardness of Solid Solution Transition Metal Diborides: Os <sub>1-x</sub> Ru <sub>x</sub> B <sub>2</sub> . Chemistry of Materials, 2009, 21, 1915-1921.	6.7	70
48	Scalable Synthesis of Ultrathin Mn <sub>3</sub> N <sub>2</sub> Exhibiting Room-Temperature Antiferromagnetism. Advanced Functional Materials, 2019, 29, 1809001.	14.9	67
49	Thermal conductivity of cubic and hexagonal mesoporous silica thin films. Journal of Applied Physics, 2009, 106, .	2.5	66
50	Magnetolectric Control of Superparamagnetism. Nano Letters, 2013, 13, 884-888.	9.1	66
51	A Metal-Organic Framework with Tetrahedral Aluminate Sites as a Single-Li <sup>+</sup> Solid Electrolyte. Angewandte Chemie - International Edition, 2018, 57, 16683-16687.	13.8	65
52	Lithium-Ion Insertion Properties of Solution-Exfoliated Germanane. ACS Nano, 2017, 11, 7995-8001.	14.6	63
53	Dopant-Induced Ordering of Amorphous Regions in Regiorandom P3HT. Journal of Physical Chemistry Letters, 2019, 10, 4929-4934.	4.6	63
54	Enhancing the Hardness of Superhard Transition-Metal Borides: Molybdenum-Doped Tungsten Tetraboride. Chemistry of Materials, 2016, 28, 632-637.	6.7	60

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55	Nanoporous Tin with a Granular Hierarchical Ligament Morphology as a Highly Stable Li-Ion Battery Anode. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 293-303.	8.0	60
56	Control of Inorganic Layer Thickness in Self-Assembled Iron Oxide/Surfactant Composites. <i>Journal of the American Chemical Society</i> , 1997, 119, 8652-8661.	13.7	57
57	Mesoporous bismuth ferrite with amplified magnetoelectric coupling and electric field-induced ferrimagnetism. <i>Nature Communications</i> , 2015, 6, 6562.	12.8	57
58	Designing Conjugated Polymers for Molecular Doping: The Roles of Crystallinity, Swelling, and Conductivity in Sequentially-Doped Selenophene-Based Copolymers. <i>Chemistry of Materials</i> , 2019, 31, 73-82.	6.7	56
59	Next generation pseudocapacitor materials from sol-gel derived transition metal oxides. <i>Journal of Sol-Gel Science and Technology</i> , 2011, 57, 330-335.	2.4	55
60	Evaporation vs Solution Sequential Doping of Conjugated Polymers: F <sub>4</sub> TCNQ Doping of Micrometer-Thick P3HT Films for Thermoelectrics. <i>Journal of Physical Chemistry C</i> , 2019, 123, 22711-22724.	3.1	55
61	Long-lived photoinduced polaron formation in conjugated polyelectrolyte-fullerene assemblies. <i>Science</i> , 2015, 348, 1340-1343.	12.6	53
62	Tunable Dopants with Intrinsic Counterion Separation Reveal the Effects of Electron Affinity on Dopant Intercalation and Free Carrier Production in Sequentially Doped Conjugated Polymer Films. <i>Advanced Functional Materials</i> , 2020, 30, 2001800.	14.9	53
63	Using Nanoscale Domain Size To Control Charge Storage Kinetics in Pseudocapacitive Nanoporous LiMn <sub>2</sub> O <sub>4</sub> Powders. <i>ACS Energy Letters</i> , 2017, 2, 2293-2298.	17.4	51
64	Enhanced Cycling Stability of Macroporous Bulk Antimony-Based Sodium-Ion Battery Anodes Enabled through Active/Inactive Composites. <i>Advanced Energy Materials</i> , 2018, 8, 1801781.	19.5	51
65	Comparing Matched Polymer:Fullerene Solar Cells Made by Solution-Sequential Processing and Traditional Blend Casting: Nanoscale Structure and Device Performance. <i>Journal of Physical Chemistry C</i> , 2014, 118, 17413-17425.	3.1	50
66	Controlling Optical Properties and Interchain Interactions in Semiconducting Polymers by Encapsulation in Periodic Nanoporous Silicas with Different Pore Sizes. <i>Journal of Physical Chemistry B</i> , 2005, 109, 17879-17886.	2.6	49
67	Superhard Rhenium/Tungsten Diboride Solid Solutions. <i>Journal of the American Chemical Society</i> , 2016, 138, 14398-14408.	13.7	48
68	Using X-ray Microscopy To Understand How Nanoporous Materials Can Be Used To Reduce the Large Volume Change in Alloy Anodes. <i>Nano Letters</i> , 2017, 17, 870-877.	9.1	48
69	Tuning Porosity and Surface Area in Mesoporous Silicon for Application in Li-Ion Battery Electrodes. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 19063-19073.	8.0	48
70	Application of Poly(3-hexylthiophene-2,5-diyl) as a Protective Coating for High Rate Cathode Materials. <i>Chemistry of Materials</i> , 2018, 30, 2589-2599.	6.7	47
71	Crystallinity Effects in Sequentially Processed and Blend-Cast Bulk-Heterojunction Polymer/Fullerene Photovoltaics. <i>Journal of Physical Chemistry C</i> , 2014, 118, 18424-18435.	3.1	46
72	Thermal Conductivity of Ordered Mesoporous Titania Films Made from Nanocrystalline Building Blocks and Sol-gel Reagents. <i>Journal of Physical Chemistry C</i> , 2010, 114, 12451-12458.	3.1	43

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73	Dihexyl-Substituted Poly(3,4-Propylenedioxythiophene) as a Dual Ionic and Electronic Conductive Cathode Binder for Lithium-Ion Batteries. <i>Chemistry of Materials</i> , 2020, 32, 9176-9189.	6.7	42
74	Extensive Penetration of Evaporated Electrode Metals into Fullerene Films: Intercalated Metal Nanostructures and Influence on Device Architecture. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 25247-25258.	8.0	40
75	Controlling the Formation of Charge Transfer Complexes in Chemically Doped Semiconducting Polymers. <i>Chemistry of Materials</i> , 2021, 33, 2343-2356.	6.7	40
76	Suppression of Electrochemically Driven Phase Transitions in Nanostructured MoS <sub>2</sub> Pseudocapacitors Probed Using <i>in Operando</i> X-ray Diffraction. <i>ACS Nano</i> , 2019, 13, 1223-1231.	14.6	36
77	Thermal Conductivity of Highly-Ordered Mesoporous Titania Thin Films from 30 to 320 K. <i>Journal of Physical Chemistry C</i> , 2011, 115, 14606-14614.	3.1	35
78	Thermal Conductivity of Ordered Mesoporous Nanocrystalline Silicon Thin Films Made from Magnesium Reduction of Polymer-Templated Silica. <i>Journal of Physical Chemistry C</i> , 2012, 116, 12926-12933.	3.1	34
79	Lattice stress states of superhard tungsten tetraboride from radial x-ray diffraction under nonhydrostatic compression. <i>Physical Review B</i> , 2014, 90, .	3.2	34
80	Beyond PCBM: methoxylated 1,4-bisbenzyl[60]fullerene adducts for efficient organic solar cells. <i>Journal of Materials Chemistry A</i> , 2016, 4, 416-424.	10.3	34
81	Metallic muscles and beyond: nanofoams at work. <i>Journal of Materials Science</i> , 2016, 51, 615-634.	3.7	33
82	Understanding Local and Macroscopic Electron Mobilities in the Fullerene Network of Conjugated Polymer-Based Solar Cells: Time-Resolved Microwave Conductivity and Theory. <i>Advanced Functional Materials</i> , 2014, 24, 784-792.	14.9	31
83	From a Colloidal Crystal to an Interconnected Colloidal Array: A Mechanism for a Spontaneous Rearrangement. <i>Langmuir</i> , 2003, 19, 7852-7861.	3.5	30
84	Comparing methods for measuring thickness, refractive index, and porosity of mesoporous thin films. <i>Microporous and Mesoporous Materials</i> , 2020, 291, 109677.	4.4	27
85	Poly(3-alkylthiophene)- <i>block</i> -poly(3-alkylselenophene)s: Conjugated Diblock Co-polymers with Atypical Self-Assembly Behavior. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 7174-7183.	8.0	25
86	Fjord-Edge Graphene Nanoribbons with Site-Specific Nitrogen Substitution. <i>Journal of the American Chemical Society</i> , 2020, 142, 18093-18102.	13.7	24
87	Enhancing the Ionic Conductivity of Poly(3,4-propylenedioxythiophenes) with Oligoether Side Chains for Use as Conductive Cathode Binders in Lithium-Ion Batteries. <i>Chemistry of Materials</i> , 2022, 34, 2672-2686.	6.7	23
88	Using Pentaarylfullerenes to Understand Network Formation in Conjugated Polymer-Based Bulk-Heterojunction Solar Cells. <i>Journal of Physical Chemistry C</i> , 2011, 115, 22563-22571.	3.1	22
89	Growth Temperature and Electrochemical Performance in Vapor-Deposited Poly(3,4-ethylenedioxythiophene) Thin Films for High-Rate Electrochemical Energy Storage. <i>ACS Applied Energy Materials</i> , 2018, 1, 7093-7105.	5.1	22
90	Driving Force and Optical Signatures of Bipolaron Formation in Chemically Doped Conjugated Polymers. <i>Advanced Materials</i> , 2021, 33, e2000228.	21.0	21

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91	Exploring hardness enhancement in superhard tungsten tetraboride-based solid solutions using radial X-ray diffraction. <i>Applied Physics Letters</i> , 2015, 107, .	3.3	20
92	Tuning ligament shape in dealloyed nanoporous tin and the impact of nanoscale morphology on its applications in Na-ion alloy battery anodes. <i>Physical Review Materials</i> , 2018, 2, .	2.4	20
93	Hardening Effects in Superhard Transition-Metal Borides. <i>Accounts of Materials Research</i> , 2022, 3, 100-109.	11.7	20
94	Panoramic View of Electrochemical Pseudocapacitor and Organic Solar Cell Research in Molecularly Engineered Energy Materials (MEEM). <i>Journal of Physical Chemistry C</i> , 2014, 118, 19505-19523.	3.1	19
95	Exploring the Effect of Porous Structure on Thermal Conductivity in Templated Mesoporous Silica Films. <i>Journal of Physical Chemistry C</i> , 2019, 123, 21721-21730.	3.1	19
96	A Perspective on interfacial engineering of lithium metal anodes and beyond. <i>Applied Physics Letters</i> , 2020, 117, .	3.3	18
97	Tuning magnetoelectric coupling using porosity in multiferroic nanocomposites of ALD-grown Pb(Zr,Ti)O <sub>3</sub> and templated mesoporous CoFe <sub>2</sub> O <sub>4</sub> . <i>Applied Physics Letters</i> , 2016, 109, .	3.3	17
98	Low-Vapor-Pressure Solvent Additives Function as Polymer Swelling Agents in Bulk Heterojunction Organic Photovoltaics. <i>Journal of Physical Chemistry C</i> , 2018, 122, 16574-16588.	3.1	17
99	Quantitatively Designing Porous Copper Current Collectors for Lithium Metal Anodes. <i>ACS Applied Energy Materials</i> , 2021, 4, 6454-6465.	5.1	17
100	Thick Transparent Nanoparticle-Based Mesoporous Silica Monolithic Slabs for Thermally Insulating Window Materials. <i>ACS Applied Nano Materials</i> , 2019, 2, 4547-4555.	5.0	16
101	Directing anisotropic charge transport of layered organic-inorganic hybrid perovskite semiconductors in porous templates. <i>Journal of Materials Chemistry C</i> , 2013, 1, 1423.	5.5	15
102	High-Capacity Li <sup>+</sup> Storage through Multielectron Redox in the Fast-Charging Wadsley-Roth Phase (W <sub>0.2</sub> V <sub>0.8</sub> ) <sub>3</sub> O <sub>7</sub> . <i>Chemistry of Materials</i> , 2020, 32, 9415-9424.	6.7	15
103	Elastic and plastic mechanical properties of nanoparticle-based silica aerogels and xerogels. <i>Microporous and Mesoporous Materials</i> , 2022, 330, 111569.	4.4	15
104	Structure and Conductivity of Semiconducting Polymer Hydrogels. <i>Journal of Physical Chemistry B</i> , 2016, 120, 6215-6224.	2.6	14
105	Understanding How Polymer Properties Control OPV Device Performance: Regioregularity, Swelling, and Morphology Optimization Using Random Poly(3-butylthiophene-co-3-octylthiophene) Polymers. <i>Journal of Physical Chemistry C</i> , 2016, 120, 22115-22125.	3.1	14
106	Enhanced magnetoelectric coupling in a composite multiferroic system via interposing a thin film polymer. <i>AIP Advances</i> , 2018, 8, .	1.3	14
107	Processing Methods for Obtaining a Face-On Crystalline Domain Orientation in Conjugated Polymer-Based Photovoltaics. <i>Journal of Physical Chemistry C</i> , 2018, 122, 15078-15089.	3.1	14
108	Fast-Charging Cathodes from Polymer-Templated Mesoporous LiVPO <sub>4</sub> F. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 33775-33784.	8.0	14



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109	Li <sup>+</sup> and Oxidant Addition To Control Ionic and Electronic Conduction in Ionic Liquid-Functionalized Conjugated Polymers. <i>Chemistry of Materials</i> , 2021, 33, 6464-6474.	6.7	13
110	Cr metal thin film memory. <i>Journal of Applied Physics</i> , 2011, 110, .	2.5	12
111	Synthesis and High-Pressure Mechanical Properties of Superhard Rhenium/Tungsten Diboride Nanocrystals. <i>ACS Nano</i> , 2019, 13, 10036-10048.	14.6	12
112	Radial X-ray Diffraction Study of Superhard Early Transition Metal Dodecaborides under High Pressure. <i>Advanced Functional Materials</i> , 2019, 29, 1900293.	14.9	12
113	Three-dimensional microbatteries for MEMS/NEMS technology. , 2010, , .		11
114	Directed Self-Assembly as a Route to Ferromagnetic and Superparamagnetic Nanoparticle Arrays. <i>Advanced Functional Materials</i> , 2014, 24, 6956-6962.	14.9	11
115	Effect of surface hydroxyl groups on heat capacity of mesoporous silica. <i>Applied Physics Letters</i> , 2018, 112, .	3.3	11
116	Engineering mesoporous silica for superior optical and thermal properties. <i>MRS Energy &amp; Sustainability</i> , 2020, 7, 1.	3.0	11
117	Molecular Dynamics Study of the Thermodynamics of Integer Charge Transfer vs Charge-Transfer Complex Formation in Doped Conjugated Polymers. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 26988-27001.	8.0	11
118	Understanding How Bonding Controls Strength Anisotropy in Hard Materials by Comparing the High-Pressure Behavior of Orthorhombic and Tetragonal Tungsten Monoboride. <i>Journal of Physical Chemistry C</i> , 2018, 122, 5647-5656.	3.1	10
119	Seeded-Growth Experiment Demonstrating Size- and Shape-Dependence on Gold Nanoparticle-Light Interactions. <i>Journal of Chemical Education</i> , 2021, 98, 546-552.	2.3	10
120	Understanding the mechanism of hardness enhancement in tantalum-substituted tungsten monoboride solid solutions. <i>Journal of Applied Physics</i> , 2019, 125, .	2.5	9
121	Understanding Stabilization in Nanoporous Intermetallic Alloy Anodes for Li-Ion Batteries Using Operando Transmission X-ray Microscopy. <i>ACS Nano</i> , 2020, 14, 14820-14830.	14.6	9
122	A Metal-Organic Framework with Tetrahedral Aluminate Sites as a Single-Ion Li <sup>+</sup> Solid Electrolyte. <i>Angewandte Chemie</i> , 2018, 130, 16925-16929.	2.0	8
123	Controlling Thermal Conductivity in Mesoporous Silica Films Using Pore Size and Nanoscale Architecture. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 3731-3737.	4.6	8
124	Synthesis and characterization of tin telluride inorganic/organic composite materials with nanoscale periodicity through solution-phase self-assembly: a new class of composite materials based on Zintl cluster self-oligomerization. <i>Research on Chemical Intermediates</i> , 2007, 33, 111-124.	2.7	7
125	Thermoelastic properties of ReB <sub>2</sub> at high pressures and temperatures and comparison with Pt, Os, and Re. <i>Journal of Applied Physics</i> , 2011, 110, .	2.5	7
126	Lattice strain of osmium diboride under high pressure and nonhydrostatic stress. <i>Journal of Applied Physics</i> , 2012, 112, .	2.5	7



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127	Transparent silica aerogel slabs synthesized from nanoparticle colloidal suspensions at near ambient conditions on omniphobic liquid substrates. <i>Journal of Colloid and Interface Science</i> , 2022, 606, 884-897.	9.4	6
128	Raman scattering from superhard rhenium diboride under high pressure. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	4
129	Organization and controlled coupling between soft and hard magnetic nanocrystals using mesoporous materials. <i>APL Materials</i> , 2014, 2, 113309.	5.1	4
130	Examining the Role of Atomic Scale Heterogeneity on the Thermal Conductivity of Transparent, Thermally Insulating, Mesoporous Silica-Titania Thin Films. <i>Journal of Physical Chemistry C</i> , 2020, 124, 27442-27452.	3.1	4
131	Understanding the Effects of Confinement and Crystallinity on HJ-Coupling in Conjugated Polymers via Alignment and Isolation in an Oriented Mesoporous Silica Host. <i>Journal of Physical Chemistry C</i> , 2021, 125, 23240-23249.	3.1	4
132	Thermodynamics-driven interfacial engineering of alloy-type anode materials. <i>Cell Reports Physical Science</i> , 2022, 3, 100694.	5.6	4
133	Tuning the Porous Structure in PMMA-Templated Mesoporous MoO <sub>2</sub> for Pseudocapacitive Li-Ion Electrodes. <i>Journal of the Electrochemical Society</i> , 2022, 169, 040545.	2.9	4
134	Strain transfer in porous multiferroic composites of CoFe <sub>2</sub> O <sub>4</sub> and PbZr <sub>x</sub> Ti <sub>1-x</sub> O <sub>3</sub> . <i>Applied Physics Letters</i> , 2022, 120, 192902.	3.3	4
135	Mesoporous MoO <sub>2</sub> thin films for high rate Li <sup>+</sup> storage: Effect of crystallinity and porous structure. <i>Solid State Sciences</i> , 2022, 129, 106890.	3.2	3
136	Simulating the non-monotonic strain response of nanoporous multiferroic composites under electric field control. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	3
137	Room-Temperature Electrochemical Fluoride (De)insertion into CsMnFeF <sub>6</sub> . <i>ACS Energy Letters</i> , 2022, 7, 2340-2348.	17.4	3
138	Covalent Bonding-Based Adhesion Method for Rigidly Coupling Metal Nanocrystals to Metal and Metal Oxide Surfaces. <i>ACS Applied Nano Materials</i> , 2021, 4, 3426-3433.	5.0	2
139	Cryogenic Milling Method to Fabricate Nanostructured Anodes. <i>ACS Applied Energy Materials</i> , 2020, 3, 11285-11292.	5.1	2
140	Enhanced Hardening Effects on Molybdenum-Doped WB <sub>2</sub> and WB <sub>2</sub> -SiC/B <sub>4</sub> C Composites. <i>Chemistry of Materials</i> , 2022, 34, 5461-5470.	6.7	2
141	Nanoscience and Nanotechnology at UCLA. <i>ACS Nano</i> , 2019, 13, 6127-6129.	14.6	1
142	Room temperature rectification in tapered-channel thermal diodes through nanoscale confinement-induced liquid-solid phase change. <i>Journal of Applied Physics</i> , 2021, 129, 075103.	2.5	1
143	(Invited) Using Nanoporous and Nanostructured Materials to Improve Fast Charging and High Capacity Battery Materials. <i>ECS Meeting Abstracts</i> , 2019, MA2019-03, 87-87.	0.0	1
144	Promoting Reversibility of Multielectron Redox in Alkali-Rich Sulfide Cathodes through Cryomilling. <i>Chemistry of Materials</i> , 2022, 34, 3236-3245.	6.7	1

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145	Increasing the Capacity of Nano-Structured LiMn <sub>2</sub> O <sub>4</sub> Pseudocapacitors by Selective Crystallization of Dissolution Resistant Surface Facets. ECS Meeting Abstracts, 2018, , .	0.0	0
146	(Invited) Nanoporous Materials for Fast and Reversible Electrochemical Energy Storage. ECS Meeting Abstracts, 2018, , .	0.0	0
147	Nanostructured NCA As a Fast Charging High Rate Cathode Material for Lithium-Ion Batteries. ECS Meeting Abstracts, 2020, MA2020-01, 233-233.	0.0	0
148	Quantitatively Designing Porous Copper Current Collectors for Lithium Metal Anodes. ECS Meeting Abstracts, 2021, MA2021-02, 721-721.	0.0	0
149	Tuning Exchange Coupling in a New Family of Nanocrystal-Based Granular Multiferroics Using an Applied Electric Field. ACS Applied Materials & Interfaces, 2022, 14, 16505-16514.	8.0	0