

# Paul Braun

## List of Publications by Citations

**Source:** <https://exaly.com/author-pdf/9134475/paul-braun-publications-by-citations.pdf>

**Version:** 2024-02-28

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

213  
papers

13,714  
citations

57  
h-index

114  
g-index

229  
ext. papers

15,357  
ext. citations

11.7  
avg, IF

6.66  
L-index

#	Paper	IF	Citations
213	Force-induced activation of covalent bonds in mechanoresponsive polymeric materials. <i>Nature</i> , <b>2009</b> , 459, 68-72	50.4	1211
212	Nanoscale thermal transport. II. 2003-2012. <i>Applied Physics Reviews</i> , <b>2014</b> , 1, 011305	17.3	1050
211	Three-dimensional bicontinuous ultrafast-charge and -discharge bulk battery electrodes. <i>Nature Nanotechnology</i> , <b>2011</b> , 6, 277-81	28.7	940
210	Bioresorbable silicon electronic sensors for the brain. <i>Nature</i> , <b>2016</b> , 530, 71-6	50.4	582
209	Self-Healing Polymer Coatings. <i>Advanced Materials</i> , <b>2009</b> , 21, 645-649	24	575
208	Semiconducting superlattices templated by molecular assemblies. <i>Nature</i> , <b>1996</b> , 380, 325-328	50.4	472
207	High-power lithium ion microbatteries from interdigitated three-dimensional bicontinuous nanoporous electrodes. <i>Nature Communications</i> , <b>2013</b> , 4, 1732	17.4	449
206	Electrochemically grown photonic crystals. <i>Nature</i> , <b>1999</b> , 402, 603-604	50.4	387
205	Fabricating complex three-dimensional nanostructures with high-resolution conformable phase masks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2004</b> , 101, 12428-33	11.5	247
204	Embedded cavities and waveguides in three-dimensional silicon photonic crystals. <i>Nature Photonics</i> , <b>2008</b> , 2, 52-56	33.9	234
203	Three-dimensional metal scaffold supported bicontinuous silicon battery anodes. <i>Nano Letters</i> , <b>2012</b> , 12, 2778-83	11.5	229
202	Thermal conductivity of nanoparticle suspensions. <i>Journal of Applied Physics</i> , <b>2006</b> , 99, 084308	2.5	217
201	Force-induced redistribution of a chemical equilibrium. <i>Journal of the American Chemical Society</i> , <b>2010</b> , 132, 16107-11	16.4	213
200	Glucose-Sensitive Inverse Opal Hydrogels: Analysis of Optical Diffraction Response. <i>Langmuir</i> , <b>2004</b> , 20, 3096-3106	4	213
199	Cavity-enhanced localized plasmon resonance sensing. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 253116	3.4	208
198	Three-dimensional self-assembled photonic crystals with high temperature stability for thermal emission modification. <i>Nature Communications</i> , <b>2013</b> , 4, 2630	17.4	166
197	Hydrothermal Synthesis of Er-Doped Luminescent TiO <sub>2</sub> Nanoparticles. <i>Chemistry of Materials</i> , <b>2003</b> , 15, 1256-1263	9.6	157

196	Multidimensional architectures for functional optical devices. <i>Advanced Materials</i> , <b>2010</b> , 22, 1084-101	24	154
195	Conductivity and lithiophilicity gradients guide lithium deposition to mitigate short circuits. <i>Nature Communications</i> , <b>2019</b> , 10, 1896	17.4	150
194	Hydrogel-Based Glucose Sensors: Effects of Phenylboronic Acid Chemical Structure on Response. <i>Chemistry of Materials</i> , <b>2013</b> , 25, 3239-3250	9.6	146
193	Holographic patterning of high-performance on-chip 3D lithium-ion microbatteries. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 6573-8	11.5	144
192	Large-area MRI-compatible epidermal electronic interfaces for prosthetic control and cognitive monitoring. <i>Nature Biomedical Engineering</i> , <b>2019</b> , 3, 194-205	19	144
191	Selective wetting-induced micro-electrode patterning for flexible micro-supercapacitors. <i>Advanced Materials</i> , <b>2014</b> , 26, 5108-12	24	127
190	AuPd Metal Nanoparticles as Probes of Nanoscale Thermal Transport in Aqueous Solution. <i>Journal of Physical Chemistry B</i> , <b>2004</b> , 108, 18870-18875	3.4	121
189	Protein adsorption on poly(N-isopropylacrylamide) brushes: dependence on grafting density and chain collapse. <i>Langmuir</i> , <b>2011</b> , 27, 8810-8	4	120
188	Exploiting Force Sensitive Spiropyran as Molecular Level Probes. <i>Macromolecules</i> , <b>2013</b> , 46, 3746-3752	5.5	109
187	Interlayer Lithium Plating in Au Nanoparticles Pillared Reduced Graphene Oxide for Lithium Metal Anodes. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1804133	15.6	105
186	Three-dimensional mesostructures as high-temperature growth templates, electronic cellular scaffolds, and self-propelled microrobots. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, E9455-E9464	11.5	104
185	Mechanically and chemically robust sandwich-structured C@Si@C nanotube array Li-ion battery anodes. <i>ACS Nano</i> , <b>2015</b> , 9, 1985-94	16.7	103
184	Epitaxial growth of three-dimensionally architected optoelectronic devices. <i>Nature Materials</i> , <b>2011</b> , 10, 676-81	27	99
183	Nanoparticle-mediated epitaxial assembly of colloidal crystals on patterned substrates. <i>Langmuir</i> , <b>2004</b> , 20, 5262-70	4	94
182	Epitaxial Growth of High Dielectric Contrast Three-Dimensional Photonic Crystals. <i>Advanced Materials</i> , <b>2001</b> , 13, 721-724	24	93
181	Electrochemically tunable thermal conductivity of lithium cobalt oxide. <i>Nature Communications</i> , <b>2014</b> , 5, 4035	17.4	92
180	Extremely Durable, Flexible Supercapacitors with Greatly Improved Performance at High Temperatures. <i>ACS Nano</i> , <b>2015</b> , 9, 8569-77	16.7	87
179	Fabrication of Three-Dimensional Photonic Crystals Using Multibeam Interference Lithography and Electrodeposition. <i>Advanced Materials</i> , <b>2009</b> , 21, 3012-3015	24	87

178	Microcapsules containing suspensions of carbon nanotubes. <i>Journal of Materials Chemistry</i> , <b>2009</b> , 19, 6093		87
177	High energy flexible supercapacitors formed via bottom-up infilling of gel electrolytes into thick porous electrodes. <i>Nature Communications</i> , <b>2018</b> , 9, 2578	17.4	85
176	Optical diffraction and high-energy features in three-dimensional photonic crystals. <i>Physical Review B</i> , <b>2005</b> , 71,	3.3	82
175	Synergistically Enhanced Electrochemical Performance of Hierarchical MoS <sub>2</sub> /TiNbO <sub>5</sub> Hetero-nanostructures as Anode Materials for Li-Ion Batteries. <i>ACS Nano</i> , <b>2017</b> , 11, 1026-1033	16.7	80
174	3D Scaffolded Nickel-Tin Li-Ion Anodes with Enhanced Cyclability. <i>Advanced Materials</i> , <b>2016</b> , 28, 742-7	24	80
173	Interfacial thermal conductance in spun-cast polymer films and polymer brushes. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 011908	3.4	79
172	Solvent Swelling Activation of a Mechanophore in a Polymer Network. <i>Macromolecules</i> , <b>2014</b> , 47, 2690-2694	25.4	78
171	Electrochemical Fabrication of 3D Microperiodic Porous Materials. <i>Advanced Materials</i> , <b>2001</b> , 13, 482-485	4	77
170	Unveiling surface redox charge storage of interacting two-dimensional heteronanosheets in hierarchical architectures. <i>Nano Letters</i> , <b>2015</b> , 15, 2269-77	11.5	73
169	Electrodeposited 3D Tungsten Photonic Crystals with Enhanced Thermal Stability. <i>Chemistry of Materials</i> , <b>2011</b> , 23, 4783-4788	9.6	73
168	Carboxyl functionalization of ultrasmall luminescent silicon nanoparticles through thermal hydrosilylation. <i>Journal of Materials Chemistry</i> , <b>2006</b> , 16, 1421		71
167	Functionalized Hydrogel on Plasmonic Nanoantennas for Noninvasive Glucose Sensing. <i>ACS Photonics</i> , <b>2015</b> , 2, 475-480	6.3	70
166	Graphene Sandwiched Mesostructured Li-Ion Battery Electrodes. <i>Advanced Materials</i> , <b>2016</b> , 28, 7696-7024	24	68
165	Lyotropic Liquid Crystals as Nanoreactors for Nanoparticle Synthesis. <i>Chemistry of Materials</i> , <b>2004</b> , 16, 2201-2207	9.6	68
164	Protein Adsorption Modes Determine Reversible Cell Attachment on Poly(N-isopropyl acrylamide) Brushes. <i>Advanced Functional Materials</i> , <b>2012</b> , 22, 2394-2401	15.6	66
163	Quasi-ballistic Electronic Thermal Conduction in Metal Inverse Opals. <i>Nano Letters</i> , <b>2016</b> , 16, 2754-61	11.5	65
162	Transparent Self-Healing Polymers Based on Encapsulated Plasticizers in a Thermoplastic Matrix. <i>Advanced Functional Materials</i> , <b>2011</b> , 21, 4705-4711	15.6	64
161	Polymer-Based and Polymer-Filled Nanocomposites <b>2003</b> , 77-153		62

160	High and low thermal conductivity of amorphous macromolecules. <i>Physical Review B</i> , <b>2017</b> , 95,	3.3	61
159	Three-Dimensionally Mesostructured Fe <sub>2</sub> O <sub>3</sub> Electrodes with Good Rate Performance and Reduced Voltage Hysteresis. <i>Chemistry of Materials</i> , <b>2015</b> , 27, 2803-2811	9.6	60
158	Improved synthesis of TiCT MXenes resulting in exceptional electrical conductivity, high synthesis yield, and enhanced capacitance. <i>Nanoscale</i> , <b>2021</b> , 13, 3572-3580	7.7	59
157	High Volumetric Capacity Three-Dimensionally Sphere-Caged Secondary Battery Anodes. <i>Nano Letters</i> , <b>2016</b> , 16, 4501-7	11.5	58
156	Interrelationship between Densification, Crystallization, and Chemical Evolution in Sol-Gel Titania Thin Films. <i>Journal of the American Ceramic Society</i> , <b>1994</b> , 77, 1592-1596	3.8	57
155	Light-triggered thermal conductivity switching in azobenzene polymers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 5973-5978	11.5	56
154	High-Performance Mesostructured Organic Hybrid Pseudocapacitor Electrodes. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 903-910	15.6	52
153	Thermally Functional Liquid Crystal Networks by Magnetic Field Driven Molecular Orientation. <i>ACS Macro Letters</i> , <b>2016</b> , 5, 955-960	6.6	47
152	Materials Chemistry in 3D Templates for Functional Photonics. <i>Chemistry of Materials</i> , <b>2014</b> , 26, 277-286	9.6	46
151	Hydrothermal fabrication of three-dimensional secondary battery anodes. <i>Advanced Materials</i> , <b>2014</b> , 26, 7096-101	24	46
150	Electroplating lithium transition metal oxides. <i>Science Advances</i> , <b>2017</b> , 3, e1602427	14.3	45
149	Three dimensional silicon photonic crystals fabricated by two photon phase mask lithography. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 011101	3.4	44
148	Thin Film Condensation on Nanostructured Surfaces. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1707000	15.6	42
147	Reduced Graphene Oxide/LiI Composite Lithium Ion Battery Cathodes. <i>Nano Letters</i> , <b>2017</b> , 17, 6893-6899	11.5	41
146	Self-Folded Gripper-Like Architectures from Stimuli-Responsive Bilayers. <i>Advanced Materials</i> , <b>2018</b> , 30, e1801669	24	41
145	Triangular Elastomeric Stamps for Optical Applications: Near-Field Phase Shift Photolithography, 3D Proximity Field Patterning, Embossed Antireflective Coatings, and SERS Sensing. <i>Advanced Functional Materials</i> , <b>2012</b> , 22, 2927-2938	15.6	41
144	Counterion Effects in Liquid Crystal Templating of Nanostructured CdS. <i>Chemistry of Materials</i> , <b>1997</b> , 9, 1495-1498	9.6	41
143	Three-Dimensional Single Gyroid Photonic Crystals with a Mid-Infrared Bandgap. <i>ACS Photonics</i> , <b>2016</b> , 3, 1131-1137	6.3	40

142	Effects of surface termination on the band gap of ultrabright Si <sub>29</sub> nanoparticles: Experiments and computational models. <i>Physical Review B</i> , <b>2002</b> , 65,	3.3	39
141	Improved Performance in FeF <sub>2</sub> Conversion Cathodes through Use of a Conductive 3D Scaffold and Al <sub>2</sub> O <sub>3</sub> ALD Coating. <i>Advanced Functional Materials</i> , <b>2017</b> , 27, 1702783	15.6	38
140	Molecular Variables in the Self-Assembly of Supramolecular Nanostructures. <i>Macromolecules</i> , <b>2000</b> , 33, 3550-3556	5.5	36
139	Revealing the role of the cathode-electrolyte interface on solid-state batteries. <i>Nature Materials</i> , <b>2021</b> , 20, 1392-1400	27	36
138	Flexible Transient Optical Waveguides and Surface-Wave Biosensors Constructed from Monocrystalline Silicon. <i>Advanced Materials</i> , <b>2018</b> , 30, e1801584	24	36
137	Programming structure into 3D nanomaterials. <i>Materials Today</i> , <b>2009</b> , 12, 28-35	21.8	35
136	Soft, skin-interfaced microfluidic systems with integrated immunoassays, fluorometric sensors, and impedance measurement capabilities. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 27906-27915	11.5	35
135	High Volumetric and Gravimetric Capacity Electrodeposited Mesoporous Sb O Sodium Ion Battery Anodes. <i>Small</i> , <b>2019</b> , 15, e1900258	11	34
134	Heat capacity measurements of two-dimensional self-assembled hexadecanethiol monolayers on polycrystalline gold. <i>Applied Physics Letters</i> , <b>2004</b> , 84, 5198-5200	3.4	34
133	Soft, skin-interfaced microfluidic systems with integrated enzymatic assays for measuring the concentration of ammonia and ethanol in sweat. <i>Lab on A Chip</i> , <b>2020</b> , 20, 84-92	7.2	34
132	Coherent phonon-grain boundary scattering in silicon inverse opals. <i>Nano Letters</i> , <b>2013</b> , 13, 618-24	11.5	33
131	Electrode architectures for high capacity multivalent conversion compounds: iron (II and III) fluoride. <i>RSC Advances</i> , <b>2014</b> , 4, 6730	3.7	32
130	Rational Design of Hierarchically Open-Porous Spherical Hybrid Architectures for Lithium-Ion Batteries. <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1802816	21.8	32
129	Self-assembly of monodisperse starburst carbon spheres into hierarchically organized nanostructured supercapacitor electrodes. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2015</b> , 7, 9128-33	9.5	30
128	Transfer-Printing of Tunable Porous Silicon Microcavities with Embedded Emitters. <i>ACS Photonics</i> , <b>2014</b> , 1, 1144-1150	6.3	30
127	Linear and nonlinear rheology and structural relaxation in dense glassy and jammed soft repulsive pNIPAM microgel suspensions. <i>Soft Matter</i> , <b>2019</b> , 15, 1038-1052	3.6	29
126	Holographically fabricated photonic crystals with large reflectance. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 241103	3.4	29
125	High-Operating-Temperature Direct Ink Writing of Mesoscale Eutectic Architectures. <i>Advanced Materials</i> , <b>2017</b> , 29, 1604778	24	28

124	High strength metallic wood from nanostructured nickel inverse opal materials. <i>Scientific Reports</i> , <b>2019</b> , 9, 719	4.9	28
123	Tunable Visibly Transparent Optics Derived from Porous Silicon. <i>ACS Photonics</i> , <b>2017</b> , 4, 909-914	6.3	27
122	In Operando Strain Measurement of Bicontinuous Silicon-Coated Nickel Inverse Opal Anodes for Li-Ion Batteries. <i>Advanced Energy Materials</i> , <b>2015</b> , 5, 1500466	21.8	27
121	Direct laser writing of volumetric gradient index lenses and waveguides. <i>Light: Science and Applications</i> , <b>2020</b> , 9, 196	16.7	27
120	Effects of Particle Size on Mg Ion Intercalation into $\text{EMnO}$ Cathode Materials. <i>Nano Letters</i> , <b>2019</b> , 19, 4712-4720	11.5	26
119	Autonomic molecular transport by polymer films containing programmed chemical potential gradients. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 5066-73	16.4	26
118	Template-Directed Directionally Solidified 3D Mesostructured AgCl-KCl Eutectic Photonic Crystals. <i>Advanced Materials</i> , <b>2015</b> , 27, 4551-9	24	26
117	Flexible and Wearable Fiber Microsupercapacitors Based on Carbon Nanotube-Agarose Gel Composite Electrodes. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 19925-19933	9.5	25
116	Tin Sulfide-Based Nanohybrid for High-Performance Anode of Sodium-Ion Batteries. <i>Small</i> , <b>2017</b> , 13, 1700767	11	25
115	Acid-Triggered, Acid-Generating, and Self-Amplifying Degradable Polymers. <i>Journal of the American Chemical Society</i> , <b>2019</b> , 141, 2838-2842	16.4	25
114	Millimeter-scale liquid metal droplet thermal switch. <i>Applied Physics Letters</i> , <b>2018</b> , 112, 063505	3.4	25
113	Modulating Noncovalent Cross-links with Molecular Switches. <i>Journal of the American Chemical Society</i> , <b>2019</b> , 141, 3597-3604	16.4	24
112	Enhanced Electrical and Mechanical Properties of Chemically Cross-Linked Carbon-Nanotube-Based Fibers and Their Application in High-Performance Supercapacitors. <i>ACS Nano</i> , <b>2020</b> , 14, 632-639	16.7	24
111	Thermal Conductivity of Graphite Thin Films Grown by Low Temperature Chemical Vapor Deposition on Ni (111). <i>Advanced Materials Interfaces</i> , <b>2016</b> , 3, 1600234	4.6	24
110	Enhanced cycle stability of iron(II, III) oxide nanoparticles encapsulated with nitrogen-doped carbon and graphene frameworks for lithium battery anodes. <i>Carbon</i> , <b>2018</b> , 129, 621-630	10.4	22
109	Porous Silicon Gradient Refractive Index Micro-Optics. <i>Nano Letters</i> , <b>2016</b> , 16, 7402-7407	11.5	21
108	Integration of high capacity materials into interdigitated mesostructured electrodes for high energy and high power density primary microbatteries. <i>Journal of Power Sources</i> , <b>2016</b> , 315, 308-315	8.9	21
107	Resonant Mode Engineering of Photonic Crystal Sensors Clad with Ultralow Refractive Index Porous Silicon Dioxide. <i>Advanced Optical Materials</i> , <b>2017</b> , 5, 1700605	8.1	21



106	Colloidal Particles that Rapidly Change Shape via Elastic Instabilities. <i>Small</i> , <b>2015</b> , 11, 6051-7	11	21
105	Transfer of Preformed Three-Dimensional Photonic Crystals onto Dye-Sensitized Solar Cells. <i>Angewandte Chemie</i> , <b>2011</b> , 123, 5830-5833	3.6	21
104	Programmable shape transformation of elastic spherical domes. <i>Soft Matter</i> , <b>2016</b> , 12, 6184-95	3.6	21
103	Cationically Substituted BiFeOCl Nanosheets as Li Ion Battery Anodes. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 14187-14196	9.5	20
102	Hole-mask colloidal nanolithography combined with tilted-angle-rotation evaporation: A versatile method for fabrication of low-cost and large-area complex plasmonic nanostructures and metamaterials. <i>Beilstein Journal of Nanotechnology</i> , <b>2014</b> , 5, 577-86	3	20
101	Heteroepitaxial Growth of GaN on Unconventional Templates and Layer-Transfer Techniques for Large-Area, Flexible/Stretchable Light-Emitting Diodes. <i>Advanced Optical Materials</i> , <b>2016</b> , 4, 505-521	8.1	20
100	High-Performance Packaged 3D Lithium-Ion Microbatteries Fabricated Using Imprint Lithography. <i>Advanced Materials</i> , <b>2021</b> , 33, e2006229	24	20
99	Complex three-dimensional conformal surfaces formed by atomic layer deposition: computation and experimental verification. <i>Journal of Materials Chemistry</i> , <b>2009</b> , 19, 9126		18
98	Are artificial opals non-close-packed fcc structures?. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 241905	3.4	17
97	Kirigami-Inspired Self-Assembly of 3D Structures. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1909888	15.6	16
96	Soft Three-Dimensional Microscale Vibratory Platforms for Characterization of Nano-Thin Polymer Films. <i>ACS Nano</i> , <b>2019</b> , 13, 449-457	16.7	16
95	Reversible Conversion Reactions and Small First Cycle Irreversible Capacity Loss in Metal Sulfide-Based Electrodes Enabled by Solid Electrolytes. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1901719	15.6	15
94	Template-Directed Solidification of Eutectic Optical Materials. <i>Advanced Optical Materials</i> , <b>2018</b> , 6, 1800871	11	15
93	Deterministic Design of Chemistry and Mesostructure in Li-Ion Battery Electrodes. <i>ACS Nano</i> , <b>2018</b> , 12, 3060-3064	16.7	15
92	Tuning coherent radiative thermal conductance in multilayer photonic crystals. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 103106	3.4	15
91	An Integrated Liquid Metal Thermal Switch for Active Thermal Management of Electronics. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , <b>2019</b> , 9, 2341-2351	1.7	14
90	Monolithic tesla-level magnetic induction by self-rolled-up membrane technology. <i>Science Advances</i> , <b>2020</b> , 6, eaay4508	14.3	14
89	Micromechanical devices with controllable stiffness fabricated from regular 3D porous materials. <i>Journal of Micromechanics and Microengineering</i> , <b>2014</b> , 24, 105006	2	14



88	Enabling New Classes of Templated Materials through Mesoporous Carbon Colloidal Crystals. <i>Advanced Optical Materials</i> , <b>2013</b> , 1, 300-304	8.1	14
87	Repetitive Hole-Mask Colloidal Lithography for the Fabrication of Large-Area Low-Cost Plasmonic Multishape Single-Layer Metasurfaces. <i>Advanced Optical Materials</i> , <b>2015</b> , 3, 680-686	8.1	14
86	Colloidal Metal-Organic Framework Hexapods Prepared from Postsynthesis Etching with Enhanced Catalytic Activity and Rollable Packing. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 40990-40995	9.5	14
85	General Method for Forming Micrometer-Scale Lateral Chemical Gradients in Polymer Brushes. <i>Chemistry of Materials</i> , <b>2014</b> , 26, 2678-2683	9.6	13
84	High Full-Electrode Basis Capacity Template-Free 3D Nanocomposite Secondary Battery Anodes. <i>Small</i> , <b>2015</b> , 11, 6265-71	11	13
83	Epitaxial Growth of Three-Dimensionally Mesoporous Single-Crystalline Cu <sub>2</sub> O via Templated Electrodeposition. <i>Chemistry of Materials</i> , <b>2014</b> , 26, 7051-7058	9.6	13
82	Bulk Metal and Ceramics Nanocomposites <b>2003</b> , 1-75		13
81	A programmable soft chemo-mechanical actuator exploiting a catalyzed photochemical water-oxidation reaction. <i>Soft Matter</i> , <b>2017</b> , 13, 7312-7317	3.6	12
80	Metallic 1T phase MoS <sub>2</sub> /MnO composites with improved cyclability for lithium-ion battery anodes. <i>Journal of Alloys and Compounds</i> , <b>2019</b> , 796, 25-32	5.7	12
79	A composite phase change material thermal buffer based on porous metal foam and low-melting-temperature metal alloy. <i>Applied Physics Letters</i> , <b>2020</b> , 116, 071901	3.4	12
78	Tunable Antireflection Coating to Remove Index-Matching Requirement for Interference Lithography. <i>Advanced Optical Materials</i> , <b>2018</b> , 6, 1701049	8.1	12
77	Facile fabrication of graphene composite microwires via drying-induced size reduction of hydrogel filaments. <i>RSC Advances</i> , <b>2014</b> , 4, 20927-20931	3.7	12
76	Polymer brushes patterned with micrometer-scale chemical gradients using laminar co-flow. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2014</b> , 6, 14320-6	9.5	12
75	Electrodeposited high strength, thermally stable spectrally selective rhenium nickel inverse opals. <i>Nanoscale</i> , <b>2017</b> , 9, 11187-11194	7.7	12
74	Two-Dimensional Diffusion of Prodan on Self-Assembled Monolayers Studied by Fluorescence Recovery after Photobleaching. <i>Journal of Physical Chemistry B</i> , <b>2004</b> , 108, 13764-13770	3.4	12
73	Dynamic Gradient Directed Molecular Transport and Concentration in Hydrogel Films. <i>Angewandte Chemie - International Edition</i> , <b>2017</b> , 56, 5001-5006	16.4	11
72	Archimedean lattices emerge in template-directed eutectic solidification. <i>Nature</i> , <b>2020</b> , 577, 355-358	50.4	11
71	Enhanced emission from fcc fluorescent photonic crystals. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	11

70	Functional materials and devices by self-assembly. <i>MRS Bulletin</i> , <b>2020</b> , 45, 799-806	3.2	11
69	Phase Change Material Heat Sink for Transient Cooling of High-Power Devices. <i>International Journal of Heat and Mass Transfer</i> , <b>2021</b> , 170, 121033	4.9	11
68	Pack Aluminization Assisted Enhancement of Thermo-mechanical Properties in Nickel Inverse Opal Structures. <i>Chemistry of Materials</i> , <b>2018</b> , 30, 1648-1654	9.6	10
67	Carbon-Free, High-Capacity and Long Cycle Life 1D-2D NiMoO Nanowires/Metallic 1T MoS Composite Lithium-Ion Battery Anodes. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 44593-44600	9.5	10
66	Bifurcation of self-folded polygonal bilayers. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 104101	3.4	9
65	3D Holographic Photonic Crystals Containing Embedded Functional Features. <i>Advanced Optical Materials</i> , <b>2016</b> , 4, 1533-1540	8.1	9
64	Synthesis and Formation Mechanism of All-Organic Block Copolymer-Directed Templating of Laser-Induced Crystalline Silicon Nanostructures. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 42777-42789	9.5	9
63	Low-Temperature Hydrothermal Synthesis of Colloidal Crystal Templated Nanostructured Single-Crystalline ZnO. <i>Chemistry of Materials</i> , <b>2017</b> , 29, 9734-9741	9.6	8
62	Flexible Binder-Free CuS/Polydopamine-Coated Carbon Cloth for High Voltage Supercapacitors. <i>Energy Technology</i> , <b>2018</b> , 6, 1852-1858	3.5	8
61	Relationship between Water Desorption and Low-Temperature Densification of Colloidal Anatase Thin Films. <i>Journal of the American Ceramic Society</i> , <b>1993</b> , 76, 2529-2533	3.8	8
60	Polymer Composites Containing Phase-Change Microcapsules Displaying Deep Undercooling Exhibit Thermal History-Dependent Mechanical Properties. <i>Advanced Materials Technologies</i> , <b>2020</b> , 5, 2000286	6.8	8
59	Good Solid-State Electrolytes Have Low, Glass-Like Thermal Conductivity. <i>Small</i> , <b>2021</b> , 17, e2101693	11	8
58	Field Emitters Using Inverse Opal Structures. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1808571	15.6	8
57	Amplified Detection of Chemical Warfare Agents Using Two-Dimensional Chemical Potential Gradients. <i>ACS Omega</i> , <b>2018</b> , 3, 14665-14670	3.9	8
56	Epitaxial growth of three dimensionally structured III-V photonic crystal via hydride vapor phase epitaxy. <i>Journal of Applied Physics</i> , <b>2015</b> , 118, 224303	2.5	7
55	Natural Nanobiocomposites, Biomimetic Nanocomposites, and Biologically Inspired Nanocomposites <b>2003</b> , 155-214		7
54	A Lamellar Yolk-Shell Lithium-Sulfur Battery Cathode Displaying Ultralong Cycling Life, High Rate Performance, and Temperature Tolerance. <i>Advanced Science</i> , <b>2021</b> , 9, e2103517	13.6	7
53	Reconfigurable nanoscale soft materials. <i>Current Opinion in Solid State and Materials Science</i> , <b>2019</b> , 23, 41-49	12	7

52	Integration of colloids into a semi-flexible network of fibrin. <i>Soft Matter</i> , <b>2017</b> , 13, 1430-1443	3.6	6
51	Dynamic Gradient Directed Molecular Transport and Concentration in Hydrogel Films. <i>Angewandte Chemie</i> , <b>2017</b> , 129, 5083-5088	3.6	6
50	Thermoresponsive Stiffening with Microgel Particles in a Semiflexible Fibrin Network. <i>Macromolecules</i> , <b>2019</b> , 52, 3029-3041	5.5	6
49	Force-Modulated Equilibria of Mechanophore-Metal Coordinate Bonds. <i>Chemistry of Materials</i> , <b>2020</b> , 32, 3869-3878	9.6	6
48	Molecular transport directed via patterned functionalized surfaces. <i>Advanced Materials</i> , <b>2011</b> , 23, 1739-1744	4.1	6
47	Template directed assembly of dynamic micellar nanoparticles. <i>Soft Matter</i> , <b>2011</b> , 7, 10252	3.6	6
46	Trimethylsilyl Azide (TMSN <sub>3</sub> ) Enhanced LiO <sub>2</sub> Battery Electrolytes. <i>ACS Applied Energy Materials</i> , <b>2019</b> , 2, 2662-2671	6.1	5
45	Directed Molecular Collection by E-Jet Printed Microscale Chemical Potential Wells in Hydrogel Films. <i>Advanced Materials</i> , <b>2018</b> , 30, e1803140	24	5
44	Processing-Dependent Microstructure of AgCl <sub>2</sub> /AgCl <sub>2</sub> Eutectic Photonic Crystals. <i>Advanced Optical Materials</i> , <b>2018</b> , 6, 1701316	8.1	5
43	Selective Autonomous Molecular Transport and Collection by Hydrogel-Embedded Supramolecular Chemical Gradients. <i>Angewandte Chemie - International Edition</i> , <b>2019</b> , 58, 18165-18170	16.4	5
42	Optically anisotropic porous silicon microlenses with tunable refractive indexes and birefringence profiles. <i>Optical Materials Express</i> , <b>2020</b> , 10, 868	2.6	5
41	Biomimetic and Biologically Compliant Soft Architectures via 3D and 4D Assembly Methods: A Perspective.. <i>Advanced Materials</i> , <b>2022</b> , e2108391	24	5
40	Selective Autonomous Molecular Transport and Collection by Hydrogel-Embedded Supramolecular Chemical Gradients. <i>Angewandte Chemie</i> , <b>2019</b> , 131, 18333-18338	3.6	4
39	High Energy Density and Stable Three-Dimensionally Structured Se-Loaded Bicontinuous Porous Carbon Battery Electrodes. <i>Energy Technology</i> , <b>2021</b> , 9, 2100175	3.5	4
38	3D periodic polyimide nano-networks for ultrahigh-rate and sustainable energy storage. <i>Energy and Environmental Science</i> ,	35.4	4
37	High Energy Density CNT/NaI Composite Cathodes for Sodium-Ion Batteries. <i>Advanced Materials Interfaces</i> , <b>2018</b> , 5, 1801342	4.6	4
36	Linear and nonlinear viscoelasticity of concentrated thermoresponsive microgel suspensions. <i>Journal of Colloid and Interface Science</i> , <b>2021</b> , 601, 886-898	9.3	4
35	Lithium-Ion Batteries: Graphene Sandwiched Mesostructured Li-Ion Battery Electrodes (Adv. Mater. 35/2016). <i>Advanced Materials</i> , <b>2016</b> , 28, 7695-7695	24	3

34	Modeling of Nanocomposites <b>2003</b> , 215-222		3
33	Fiber Electrodes Mesostructured on Carbon Fibers for Energy Storage. <i>ACS Applied Energy Materials</i> ,	6.1	3
32	Autonomic Molecular Transport for Ultrasensitive Surface-Enhanced Infrared Absorption Spectroscopy. <i>ACS Applied Polymer Materials</i> , <b>2020</b> , 2, 3929-3935	4.3	3
31	Ultralow Thermal Conductivity in Nanoporous Crystalline Fe <sub>3</sub> O <sub>4</sub> . <i>Journal of Physical Chemistry C</i> , <b>2021</b> , 125, 6897-6908	3.8	3
30	Electrodeposition of atmosphere-sensitive ternary sodium transition metal oxide films for sodium-based electrochemical energy storage. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	3
29	Polymer Brush-Modified Microring Resonators for Partition-Enhanced Small Molecule Chemical Detection. <i>ChemistrySelect</i> , <b>2017</b> , 2, 1521-1524	1.8	2
28	Enhanced Secondary Battery Anodes Based on Si and Fe <sub>3</sub> O <sub>4</sub> Nanoparticle Infilled Monodisperse Carbon Starburst Colloidal Crystals. <i>Particle and Particle Systems Characterization</i> , <b>2015</b> , 32, 928-933	3.1	2
27	Programmed size-selected permeation of ssDNA into ZnS mesoporous hollow spheres. <i>Soft Matter</i> , <b>2012</b> , 8, 4396	3.6	2
26	Measuring Molecular Diffusion Through Thin Polymer Films with Dual-Band Plasmonic Antennas. <i>ACS Nano</i> , <b>2021</b> , 15, 10393-10405	16.7	2
25	A Nearly Packaging-Free Design Paradigm for Light, Powerful, and Energy-Dense Primary Microbatteries. <i>Advanced Materials</i> , <b>2021</b> , 33, e2101760	24	2
24	A bee pupa-infilled honeycomb structure-inspired LiMnSiO cathode for high volumetric energy density secondary batteries. <i>Chemical Communications</i> , <b>2019</b> , 55, 3582-3585	5.8	2
23	Control of lamellar eutectic orientation via template-directed solidification. <i>Acta Materialia</i> , <b>2019</b> , 166, 715-722	8.4	2
22	Low-Temperature Pack Aluminization Process on Pipeline Steel To Inhibit Asphaltene Deposition. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 47596-47605	9.5	2
21	Dendritic nanostructured FeS-based high stability and capacity Li-ion cathodes.. <i>RSC Advances</i> , <b>2018</b> , 8, 38745-38750	3.7	2
20	Three-dimensional mesostructured binder-free nickel-based TiO <sub>2</sub> /RGO lithium-ion battery negative electrodes with enhanced volumetric capacity. <i>Ceramics International</i> , <b>2021</b> , 47, 21381-21387	5.1	2
19	A Lipid-Inspired Highly Adhesive Interface for Durable Superhydrophobicity in Wet Environments and Stable Jumping Droplet Condensation.. <i>ACS Nano</i> , <b>2022</b> ,	16.7	2
18	Effect of Surface Chemistry and Roughness on the High-Temperature Deposition of a Model Asphaltene. <i>Energy &amp; Fuels</i> , <b>2019</b> , 33, 4104-4114	4.1	1
17	Optical Waveguides: Flexible Transient Optical Waveguides and Surface-Wave Biosensors Constructed from Monocrystalline Silicon (Adv. Mater. 32/2018). <i>Advanced Materials</i> , <b>2018</b> , 30, 1870239 <sup>24</sup>		1

16	Noninvasive optical glucose monitoring at physiological levels using a functionalized plasmonic sensor <b>2013</b> ,		1
15	Mechanical Deformation-Assisted Fabrication of Plasmonic Nanobowties with Broken Symmetry and Tunable Gaps. <i>Particle and Particle Systems Characterization</i> , <b>2020</b> , 37, 1900463	3.1	1
14	Exploiting Nonlinear Elasticity for Anomalous Magneto-responsive Stiffening. <i>ACS Macro Letters</i> , <b>2020</b> , 9, 1632-1637	6.6	1
13	Electrochemical Fabrication of Flat, Polymer-Embedded Porous Silicon 1D Gradient Refractive Index Microlens Arrays. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2018</b> , 215, 1800088	1.6	1
12	Thermal Reliability and Electrical Properties of Integrated Copper Inverse Opal Structures. <i>Advanced Engineering Materials</i> , 2100574	3.5	1
11	Note: Qualitative degradation of the pesticide coumaphos in solution, controlled aerosol, and solid phases on quaternary ammonium fluoride polymer brushes. <i>Polymers for Advanced Technologies</i> , <b>2017</b> , 28, 567-567	3.2	0
10	Qualitative degradation of the pesticide coumaphos in solution, controlled aerosol, and solid phases on quaternary ammonium fluoride polymer brushes. <i>Polymers for Advanced Technologies</i> , <b>2017</b> , 28, 73-79	3.2	0
9	Real-Time Measurement of Polymer Brush Dynamics Using Silicon Photonic Microring Resonators: Analyte Partitioning and Interior Brush Kinetics. <i>Langmuir</i> , <b>2020</b> , 36, 10351-10360	4	0
8	Direct and Divergent Solid-Phase Synthesis of Azobenzene and Spiropyran Derivatives. <i>Journal of Organic Chemistry</i> , <b>2021</b> , 86, 4391-4397	4.2	0
7	Toward the realization of subsurface volumetric integrated optical systems. <i>Applied Physics Letters</i> , <b>2021</b> , 119, 130503	3.4	0
6	Innentitelbild: Selective Autonomous Molecular Transport and Collection by Hydrogel-Embedded Supramolecular Chemical Gradients (Angew. Chem. 50/2019). <i>Angewandte Chemie</i> , <b>2019</b> , 131, 18046-18046	3.6	0
5	Photonic Crystals: Template-Directed Directionally Solidified 3D Mesostructured AgCl/Cl Eutectic Photonic Crystals (Adv. Mater. 31/2015). <i>Advanced Materials</i> , <b>2015</b> , 27, 4550-4550	24	
4	Imaging of self-assembly and self-assembled materials. <i>Microscopy and Microanalysis</i> , <b>2002</b> , 8, 316-317	0.5	
3	Microcapsules: Polymer Composites Containing Phase-Change Microcapsules Displaying Deep Undercooling Exhibit Thermal History-Dependent Mechanical Properties (Adv. Mater. Technol. 10/2020). <i>Advanced Materials Technologies</i> , <b>2020</b> , 5, 2070062	6.8	
2	Salt Water-Triggered Ionic Cross-Linking of Polymer Composites by Controlled Release of Functional Ions. <i>ACS Omega</i> , <b>2018</b> , 3, 16127-16133	3.9	
1	A Nearly Packaging-Free Design Paradigm for Light, Powerful, and Energy-Dense Primary Microbatteries (Adv. Mater. 35/2021). <i>Advanced Materials</i> , <b>2021</b> , 33, 2170275	24	