

# Sang Hyuk Im

## List of Publications by Citations

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

264 papers	22,394 citations	57 h-index	147 g-index
278 ext. papers	24,478 ext. citations	8.4 avg, IF	7.17 L-index

#	Paper	IF	Citations
264	Chemical management for colorful, efficient, and stable inorganic-organic hybrid nanostructured solar cells. <i>Nano Letters</i> , <b>2013</b> , 13, 1764-9	11.5	3520
263	Efficient inorganic-organic hybrid heterojunction solar cells containing perovskite compound and polymeric hole conductors. <i>Nature Photonics</i> , <b>2013</b> , 7, 486-491	33.9	2185
262	Overcoming the electroluminescence efficiency limitations of perovskite light-emitting diodes. <i>Science</i> , <b>2015</b> , 350, 1222-5	33.3	1963
261	Hysteresis-less inverted CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> planar perovskite hybrid solar cells with 18.1% power conversion efficiency. <i>Energy and Environmental Science</i> , <b>2015</b> , 8, 1602-1608	35.4	973
260	Multicolored organic/inorganic hybrid perovskite light-emitting diodes. <i>Advanced Materials</i> , <b>2015</b> , 27, 1248-54	24	938
259	Maneuvering the surface plasmon resonance of silver nanostructures through shape-controlled synthesis. <i>Journal of Physical Chemistry B</i> , <b>2006</b> , 110, 15666-75	3.4	814
258	Enhanced electronic properties in mesoporous TiO <sub>2</sub> via lithium doping for high-efficiency perovskite solar cells. <i>Nature Communications</i> , <b>2016</b> , 7, 10379	17.4	626
257	Organolead Halide Perovskite: New Horizons in Solar Cell Research. <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 5615-5625	3.8	549
256	Large-scale synthesis of silver nanocubes: the role of HCl in promoting cube perfection and monodispersity. <i>Angewandte Chemie - International Edition</i> , <b>2005</b> , 44, 2154-7	16.4	528
255	Polymer hollow particles with controllable holes in their surfaces. <i>Nature Materials</i> , <b>2005</b> , 4, 671-5	27	491
254	High-performance nanostructured inorganic-organic heterojunction solar cells. <i>Nano Letters</i> , <b>2010</b> , 10, 2609-12	11.5	480
253	Planar CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> hybrid solar cells with 10.4% power conversion efficiency, fabricated by controlled crystallization in the spin-coating process. <i>Advanced Materials</i> , <b>2014</b> , 26, 8179-83	24	410
252	Planar CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Solar Cells with Constant 17.2% Average Power Conversion Efficiency Irrespective of the Scan Rate. <i>Advanced Materials</i> , <b>2015</b> , 27, 3424-30	24	401
251	Enhancement of donor-acceptor polymer bulk heterojunction solar cell power conversion efficiencies by addition of Au nanoparticles. <i>Angewandte Chemie - International Edition</i> , <b>2011</b> , 50, 5519-23	16.4	310
250	Highly Efficient Light-Emitting Diodes of Colloidal Metal-Halide Perovskite Nanocrystals beyond Quantum Size. <i>ACS Nano</i> , <b>2017</b> , 11, 6586-6593	16.7	233
249	Hysteresis-less mesoscopic CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite hybrid solar cells by introduction of Li-treated TiO <sub>2</sub> electrode. <i>Nano Energy</i> , <b>2015</b> , 15, 530-539	17.1	221
248	Toward interaction of sensitizer and functional moieties in hole-transporting materials for efficient semiconductor-sensitized solar cells. <i>Nano Letters</i> , <b>2011</b> , 11, 4789-93	11.5	220

247	Panchromatic photon-harvesting by hole-conducting materials in inorganic-organic heterojunction sensitized-solar cell through the formation of nanostructured electron channels. <i>Nano Letters</i> , <b>2012</b> , 12, 1863-7	11.5	203
246	Highly efficient low temperature solution processable planar type CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite flexible solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 1572-1578	13	191
245	High-Performance Next-Generation Perovskite Nanocrystal Scintillator for Nondestructive X-Ray Imaging. <i>Advanced Materials</i> , <b>2018</b> , 30, e1801743	24	185
244	Highly efficient CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /Clx mixed halide perovskite solar cells prepared by re-dissolution and crystal grain growth via spray coating. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 17636-17642	13	178
243	CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> -CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite-Perovskite Tandem Solar Cells with Exceeding 2.2 V Open Circuit Voltage. <i>Advanced Materials</i> , <b>2016</b> , 28, 5121-5	24	164
242	From flat to nanostructured photovoltaics: balance between thickness of the absorber and charge screening in sensitized solar cells. <i>ACS Nano</i> , <b>2012</b> , 6, 873-80	16.7	156
241	Highly Efficient Organic Hole Transporting Materials for Perovskite and Organic Solar Cells with Long-Term Stability. <i>Advanced Materials</i> , <b>2016</b> , 28, 686-93	24	151
240	Highly reproducible planar SbBr <sub>3</sub> -sensitized solar cells based on atomic layer deposition. <i>Nanoscale</i> , <b>2014</b> , 6, 14549-54	7.7	147
239	Synthesis and characterization of a thiazolo[5,4-d]thiazole-based copolymer for high performance polymer solar cells. <i>Chemical Communications</i> , <b>2011</b> , 47, 1791-3	5.8	127
238	Sb(2)Se(3) -sensitized inorganic-organic heterojunction solar cells fabricated using a single-source precursor. <i>Angewandte Chemie - International Edition</i> , <b>2014</b> , 53, 1329-33	16.4	124
237	Hollow ZIF-8 nanoparticles improve the permeability of mixed matrix membranes for CO <sub>2</sub> /CH <sub>4</sub> gas separation. <i>Journal of Membrane Science</i> , <b>2015</b> , 480, 11-19	9.6	122
236	Novel Dendritic Chromophores for Electro-optics: Influence of Binding Mode and Attachment Flexibility on Electro-optic Behavior. <i>Chemistry of Materials</i> , <b>2006</b> , 18, 344-351	9.6	122
235	CdS or CdSe decorated TiO <sub>2</sub> nanotube arrays from spray pyrolysis deposition: use in photoelectrochemical cells. <i>Chemical Communications</i> , <b>2010</b> , 46, 2385-7	5.8	120
234	Large-Scale Synthesis of Silver Nanocubes: The Role of HCl in Promoting Cube Perfection and Monodispersity. <i>Angewandte Chemie</i> , <b>2005</b> , 117, 2192-2195	3.6	117
233	Efficient Inorganic-Organic Heterojunction Solar Cells Employing Sb <sub>2</sub> (Sx/Se1-x) <sub>3</sub> Graded-Composition Sensitizers. <i>Advanced Energy Materials</i> , <b>2014</b> , 4, 1301680	21.8	102
232	Synthesis and characterization of monodisperse silica colloids loaded with superparamagnetic iron oxide nanoparticles. <i>Chemical Physics Letters</i> , <b>2005</b> , 401, 19-23	2.5	100
231	Stable semi-transparent CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> planar sandwich solar cells. <i>Energy and Environmental Science</i> , <b>2015</b> , 8, 2922-2927	35.4	94
230	All solid state multiply layered PbS colloidal quantum-dot-sensitized photovoltaic cells. <i>Energy and Environmental Science</i> , <b>2011</b> , 4, 4181	35.4	89

229	Roles of SnX (X = F, Cl, Br) Additives in Tin-Based Halide Perovskites toward Highly Efficient and Stable Lead-Free Perovskite Solar Cells. <i>Journal of Physical Chemistry Letters</i> , <b>2018</b> , 9, 6024-6031	6.4	88
228	Highly efficient metal halide substituted CH <sub>3</sub> NH <sub>3</sub> I(PbI <sub>2</sub> ) <sub>1-x</sub> (CuBr <sub>2</sub> ) <sub>x</sub> planar perovskite solar cells. <i>Nano Energy</i> , <b>2016</b> , 27, 330-339	17.1	85
227	Synthesis and Characterization of New Selenophene-Based Donor-Acceptor Low-Bandgap Polymers for Organic Photovoltaic Cells. <i>Macromolecules</i> , <b>2012</b> , 45, 1303-1312	5.5	85
226	Enhancement of Donor-Acceptor Polymer Bulk Heterojunction Solar Cell Power Conversion Efficiencies by Addition of Au Nanoparticles. <i>Angewandte Chemie</i> , <b>2011</b> , 123, 5633-5637	3.6	83
225	Thickness Control of Colloidal Crystals with a Substrate Dipped at a Tilted Angle into a Colloidal Suspension. <i>Chemistry of Materials</i> , <b>2003</b> , 15, 1797-1802	9.6	82
224	A [2,2]paracyclophane triarylamine-based hole-transporting material for high performance perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 24215-24220	13	76
223	Performance of light-emitting-diode based on quantum dots. <i>Nanoscale</i> , <b>2013</b> , 5, 5205-14	7.7	76
222	Fabrication of CuInTe <sub>2</sub> and CuInTe(2-x)Se(x) ternary gradient quantum dots and their application to solar cells. <i>ACS Nano</i> , <b>2013</b> , 7, 4756-63	16.7	75
221	A facile one-step approach to hierarchically assembled core-shell-like MnO <sub>2</sub> @MnO <sub>2</sub> nanoarchitectures on carbon fibers: An efficient and flexible electrode material to enhance energy storage. <i>Nano Research</i> , <b>2016</b> , 9, 1507-1522	10	74
220	Microscale fish bowls: a new class of latex particles with hollow interiors and engineered porous structures in their surfaces. <i>Langmuir</i> , <b>2007</b> , 23, 10968-75	4	73
219	Highly flexible InSnO electrodes on thin colourless polyimide substrate for high-performance flexible CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells. <i>Journal of Power Sources</i> , <b>2017</b> , 341, 340-347	8.9	69
218	Highly flexible, high-performance perovskite solar cells with adhesion promoted AuCl <sub>3</sub> -doped graphene electrodes. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 21146-21152	13	66
217	A chemical precursor for depositing Sb <sub>2</sub> S <sub>3</sub> onto mesoporous TiO <sub>2</sub> layers in nonaqueous media and its application to solar cells. <i>Dalton Transactions</i> , <b>2012</b> , 41, 11569-72	4.3	66
216	Highly reproducible, efficient hysteresis-less CH <sub>3</sub> NH <sub>3</sub> PbI(3-x)Cl(x) planar hybrid solar cells without requiring heat-treatment. <i>Nanoscale</i> , <b>2016</b> , 8, 2554-60	7.7	65
215	Super-flexible bis(trifluoromethanesulfonyl)-amide doped graphene transparent conductive electrodes for photo-stable perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 8251-8258	13	64
214	Nonfullerene Electron Transporting Material Based on Naphthalene Diimide Small Molecule for Highly Stable Perovskite Solar Cells with Efficiency Exceeding 20%. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1800346	15.6	64
213	Effect of multi-armed triphenylamine-based hole transporting materials for high performance perovskite solar cells. <i>Chemical Science</i> , <b>2016</b> , 7, 5517-5522	9.4	63
212	Efficient and thermally stable inverted perovskite solar cells by introduction of non-fullerene electron transporting materials. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 20615-20622	13	62

211	CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> planar perovskite solar cells with antireflection and self-cleaning function layers. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 7573-7579	13	62
210	High-Performance Small Molecule via Tailoring Intermolecular Interactions and its Application in Large-Area Organic Photovoltaic Modules. <i>Advanced Energy Materials</i> , <b>2016</b> , 6, 1600228	21.8	61
209	CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /poly-3-hexylthiophen perovskite mesoscopic solar cells: Performance enhancement by Li-assisted hole conduction. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2014</b> , 8, 816-821	2.5	60
208	Enhanced High-Temperature Long-Term Stability of Polymer Solar Cells with a Thermally Stable TiO <sub>x</sub> Interlayer. <i>Journal of Physical Chemistry C</i> , <b>2009</b> , 113, 17268-17273	3.8	58
207	Synthesis of Tetrahedral Gold Nanocrystals with High-Index Facets. <i>Crystal Growth and Design</i> , <b>2010</b> , 10, 3321-3323	3.5	55
206	Performance improvement of Sb <sub>2</sub> S <sub>3</sub> -sensitized solar cell by introducing hole buffer layer in cobalt complex electrolyte. <i>Energy and Environmental Science</i> , <b>2011</b> , 4, 2799	35.4	52
205	Performance enhancement through post-treatments of CdS-sensitized solar cells fabricated by spray pyrolysis deposition. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2010</b> , 2, 1648-52	9.5	51
204	High-Performance and Stable Nonfullerene Acceptor-Based Organic Solar Cells for Indoor to Outdoor Light. <i>ACS Energy Letters</i> , <b>2020</b> , 5, 170-179	20.1	51
203	Hole-conducting mediator for stable Sb <sub>2</sub> S <sub>3</sub> -sensitized photoelectrochemical solar cells. <i>Journal of Materials Chemistry</i> , <b>2012</b> , 22, 1107-1111		49
202	Size control of highly monodisperse polystyrene particles by modified dispersion polymerization. <i>Macromolecular Research</i> , <b>2010</b> , 18, 935-943	1.9	49
201	Enhancement of charge transport properties of small molecule semiconductors by controlling fluorine substitution and effects on photovoltaic properties of organic solar cells and perovskite solar cells. <i>Chemical Science</i> , <b>2016</b> , 7, 6649-6661	9.4	47
200	Quantum-dot-sensitized solar cells fabricated by the combined process of the direct attachment of colloidal CdSe quantum dots having a ZnS glue layer and spray pyrolysis deposition. <i>Langmuir</i> , <b>2010</b> , 26, 18576-80	4	47
199	Fabrication of Ordered Nanostructured Arrays Using Poly(dimethylsiloxane) Replica Molds Based on Three-Dimensional Colloidal Crystals. <i>Advanced Functional Materials</i> , <b>2009</b> , 19, 1594-1600	15.6	47
198	Recent advancements in and perspectives on flexible hybrid perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 888-900	13	46
197	Synthesis of polystyrene beads loaded with dual luminophors for self-referenced oxygen sensing. <i>Talanta</i> , <b>2005</b> , 67, 492-7	6.2	45
196	Evolution of gold nanoparticles through Catalan, Archimedean, and Platonic solids. <i>CrystEngComm</i> , <b>2010</b> , 12, 116-121	3.3	44
195	The size control of silver nanocrystals with different polyols and its application to low-reflection coating materials. <i>Nanotechnology</i> , <b>2011</b> , 22, 045602	3.4	44
194	Efficient HgTe colloidal quantum dot-sensitized near-infrared photovoltaic cells. <i>Nanoscale</i> , <b>2012</b> , 4, 1581-4	7.7	43

193	Effect of Evaporation Temperature on the Quality of Colloidal Crystals at the Water/Air Interface. <i>Langmuir</i> , <b>2002</b> , 18, 9642-9646	4	43
192	Highly efficient CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells prepared by AuCl <sub>3</sub> -doped graphene transparent conducting electrodes. <i>Chemical Engineering Journal</i> , <b>2017</b> , 323, 153-159	14.7	42
191	Sb <sub>2</sub> S <sub>3</sub> -Sensitized Photoelectrochemical Cells: Open Circuit Voltage Enhancement through the Introduction of Poly-3-hexylthiophene Interlayer. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 20717-20724	3.8	42
190	Two-dimensional TiO <sub>2</sub> inverse opal with a closed top surface structure for enhanced light extraction from polymer light-emitting diodes. <i>Advanced Materials</i> , <b>2011</b> , 23, 1846-50	24	42
189	Photoelectrochemical solar cells fabricated from porous CdSe and CdS layers. <i>Electrochimica Acta</i> , <b>2010</b> , 55, 5665-5669	6.7	42
188	Memory effect behavior with respect to the crystal grain size in the organic-inorganic hybrid perovskite nonvolatile resistive random access memory. <i>Scientific Reports</i> , <b>2017</b> , 7, 16586	4.9	41
187	Sb <sub>2</sub> Se <sub>3</sub> -Sensitized Inorganic/Organic Heterojunction Solar Cells Fabricated Using a Single-Source Precursor. <i>Angewandte Chemie</i> , <b>2014</b> , 126, 1353-1357	3.6	40
186	Maneuvering the growth of silver nanoplates: use of halide ions to promote vertical growth. <i>Journal of Materials Chemistry C</i> , <b>2014</b> , 2, 6165-6170	7.1	39
185	New TIPS-substituted benzo[1,2-b:4,5-b']dithiophene-based copolymers for application in polymer solar cells. <i>Journal of Materials Chemistry</i> , <b>2012</b> , 22, 22224		39
184	Efficiency enhancement of semi-transparent sandwich type CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells with island morphology perovskite film by introduction of polystyrene passivation layer. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 16324-16329	13	39
183	Development of Dopant-Free Donor-Acceptor-type Hole Transporting Material for Highly Efficient and Stable Perovskite Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 39511-39518	9.5	38
182	Unexpected solid/solid intermixing in a bilayer of poly(3-hexylthiophene) and [6,6]-phenyl C <sub>61</sub> -butyric acid methyl ester via stamping transfer. <i>Organic Electronics</i> , <b>2010</b> , 11, 1376-1380	3.5	37
181	Growth pathways of silver nanoplates in kinetically controlled synthesis: bimodal versus unimodal growth. <i>RSC Advances</i> , <b>2015</b> , 5, 14266-14272	3.7	36
180	Highly efficient solid-state mesoscopic PbS with embedded CuS quantum dot-sensitized solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 785-790	13	35
179	Synthesis of Single-Crystalline Hexagonal Graphene Quantum Dots from Solution Chemistry. <i>Nano Letters</i> , <b>2019</b> , 19, 5437-5442	11.5	35
178	Air-stable and efficient inorganic-organic heterojunction solar cells using PbS colloidal quantum dots co-capped by 1-dodecanethiol and oleic acid. <i>Physical Chemistry Chemical Physics</i> , <b>2012</b> , 14, 14999-5002	3.6	34
177	Present Status and Research Prospects of Tin-based Perovskite Solar Cells. <i>Solar Rrl</i> , <b>2020</b> , 4, 1900310	7.1	34
176	Efficient and Stable Graded CsPbI <sub>3-x</sub> Br <sub>x</sub> Perovskite Solar Cells and Submodules by Orthogonal Processable Spray Coating. <i>Joule</i> , <b>2021</b> , 5, 481-494	27.8	34

175	Flexible ITO films with atomically flat surfaces for high performance flexible perovskite solar cells. <i>Nanoscale</i> , <b>2018</b> , 10, 20587-20598	7.7	34
174	High-Performance CHNHPbI-Inverted Planar Perovskite Solar Cells with Fill Factor Over 83% via Excess Organic/Inorganic Halide. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 35871-35879	9.5	32
173	Peptide-templating dye-sensitized solar cells. <i>Nanotechnology</i> , <b>2010</b> , 21, 185601	3.4	32
172	Band Gap Engineering of Cs <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> Perovskites with Trivalent Atoms Using a Dual Metal Cation. <i>Journal of Physical Chemistry C</i> , <b>2017</b> , 121, 969-974	3.8	31
171	Hysteresis-Less CsPbI <sub>3</sub> Mesoscopic Perovskite Solar Cells with a High Open-Circuit Voltage Exceeding 1.3 V and 14.86% of Power Conversion Efficiency. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 19123-19131	9.5	31
170	Efficient Organic-Inorganic Hybrid Flexible Perovskite Solar Cells Prepared by Lamination of Polytriarylamine/CHNHPbI/Anodized Ti Metal Substrate and Graphene/PDMS Transparent Electrode Substrate. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 31413-31421	9.5	31
169	Enhanced Efficiency and Long-Term Stability of Perovskite Solar Cells by Synergistic Effect of Nonhygroscopic Doping in Conjugated Polymer-Based Hole-Transporting Layer. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 43846-43854	9.5	31
168	Mesoscopic CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells using TiO <sub>2</sub> inverse opal electron-conducting scaffolds. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 1972-1977	13	31
167	Effects of substituted side-chain position on donor-acceptor conjugated copolymers. <i>Journal of Polymer Science Part A</i> , <b>2011</b> , 49, 1821-1829	2.5	31
166	Synthesis and characterization of low-bandgap cyclopentadithiophene-biselenophene copolymer and its use in field-effect transistor and polymer solar cells. <i>Journal of Polymer Science Part A</i> , <b>2009</b> , 47, 6873-6882	2.5	31
165	Recent Progress of Innovative Perovskite Hybrid Solar Cells. <i>Israel Journal of Chemistry</i> , <b>2015</b> , 55, 966-977	3.4	30
164	CdSe-sensitized inorganic-organic heterojunction solar cells: The effect of molecular dipole interface modification and surface passivation. <i>Organic Electronics</i> , <b>2012</b> , 13, 975-979	3.5	30
163	Development of Mixed-Cation Cs <sub>x</sub> Rb <sub>1-x</sub> PbX <sub>3</sub> Perovskite Quantum Dots and Their Full-Color Film with High Stability and Wide Color Gamut. <i>Advanced Optical Materials</i> , <b>2018</b> , 6, 1800295	8.1	30
162	Enhanced photoresponse in dye-sensitized solar cells via localized surface plasmon resonance through highly stable nickel nanoparticles. <i>Nanoscale</i> , <b>2016</b> , 8, 5884-91	7.7	29
161	Au@Pd nanostructures with tunable morphologies and sizes and their enhanced electrocatalytic activity. <i>CrystEngComm</i> , <b>2013</b> , 15, 7113	3.3	29
160	Quick formation of single-crystal nanocubes of silver through dual functions of hydrogen gas in polyol synthesis. <i>Chemical Physics Letters</i> , <b>2005</b> , 411, 479-483	2.5	29
159	A discussion on the origin and solutions of hysteresis in perovskite hybrid solar cells. <i>Journal Physics D: Applied Physics</i> , <b>2016</b> , 49, 473001	3	28
158	Au@Pd core-shell nanocubes with finely-controlled sizes. <i>CrystEngComm</i> , <b>2013</b> , 15, 3385	3.3	28

157	An electrochemically grown three-dimensional porous Si@Ni inverse opal structure for high-performance Li ion battery anodes. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 6396-6401	13	26
156	Quaternary semiconductor Cu <sub>2</sub> FeSnS <sub>4</sub> nanoparticles as an alternative to Pt catalysts. <i>RSC Advances</i> , <b>2013</b> , 3, 24918	3.7	26
155	Facile scalable synthesis of MoO <sub>2</sub> nanoparticles by new solvothermal cracking process and their application to hole transporting layer for CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> planar perovskite solar cells. <i>Chemical Engineering Journal</i> , <b>2017</b> , 310, 179-186	14.7	26
154	Improved air stability of PbS-sensitized solar cell by incorporating ethanedithiol during spin-assisted successive ionic layer adsorption and reaction. <i>Organic Electronics</i> , <b>2012</b> , 13, 2352-2357	3.5	26
153	Near-infrared photodetection based on PbS colloidal quantum dots/organic hole conductor. <i>Organic Electronics</i> , <b>2010</b> , 11, 696-699	3.5	26
152	Fabrication of robust, high-quality two-dimensional colloidal crystals from aqueous suspensions containing water-soluble polymer. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 143127	3.4	26
151	Semi-transparent plastic solar cell based on oxide-metal-oxide multilayer electrodes. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2018</b> , 26, 188-195	6.8	26
150	Oxide-free Sb <sub>2</sub> S <sub>3</sub> sensitized solar cells fabricated by spin and heat-treatment of Sb(III)(thioacetamide) <sub>2</sub> Cl <sub>3</sub> . <i>Organic Electronics</i> , <b>2015</b> , 21, 155-159	3.5	25
149	Reproducible Dry Stamping Transfer of PEDOT:PSS Transparent Top Electrode for Flexible Semitransparent Metal Halide Perovskite Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 10527-10534	9.5	25
148	Bandgap engineered monodisperse and stable mercury telluride quantum dots and their application for near-infrared photodetection. <i>Journal of Materials Chemistry</i> , <b>2011</b> , 21, 15232		25
147	Growth of Silver Nanowires from Controlled Silver Chloride Seeds and Their Application for Fluorescence Enhancement Based on Localized Surface Plasmon Resonance. <i>Small</i> , <b>2017</b> , 13, 1603392	11	24
146	Scalable synthesis of Ti-doped MoO <sub>2</sub> nanoparticle-hole-transporting-material with high moisture stability for CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells. <i>Chemical Engineering Journal</i> , <b>2017</b> , 330, 698-705	14.7	24
145	Homochiral Asymmetric-Shaped Electron-Transporting Materials for Efficient Non-Fullerene Perovskite Solar Cells. <i>ChemSusChem</i> , <b>2019</b> , 12, 224-230	8.3	24
144	Low temperature solution processable TiO <sub>2</sub> nano-sol for electron transporting layer of flexible perovskite solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2019</b> , 194, 1-6	6.4	23
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142	Fabrication of unconventional colloidal self-assembled structures. <i>Langmuir</i> , <b>2010</b> , 26, 12500-4	4	23
141	Enhancing performance and stability of perovskite solar cells using hole transport layer of small molecule and conjugated polymer blend. <i>Journal of Power Sources</i> , <b>2019</b> , 418, 167-175	8.9	22
140	Scalable continuous solvo-jet process for ZIF-8 nanoparticles. <i>Chemical Engineering Journal</i> , <b>2015</b> , 266, 56-63	14.7	22

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134	Bulk heterojunction polymer solar cells based on binary and ternary blend systems. <i>Journal of Polymer Science Part A</i> , <b>2011</b> , 49, 4416-4424	2.5	21
133	Shape and feature size control of colloidal crystal-based patterns using stretched polydimethylsiloxane replica molds. <i>Langmuir</i> , <b>2009</b> , 25, 12011-4	4	21
132	Effects of thermal treatment on organic-inorganic hybrid perovskite films and luminous efficiency of light-emitting diodes. <i>Current Applied Physics</i> , <b>2016</b> , 16, 1069-1074	2.6	20
131	Corrugated structure through a spin-coating process for enhanced light extraction from organic light-emitting diodes. <i>Organic Electronics</i> , <b>2012</b> , 13, 579-585	3.5	20
130	High-Performance Solid-State PbS Quantum Dot-Sensitized Solar Cells Prepared by Introduction of Hybrid Perovskite Interlayer. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 41104-41110	9.5	20
129	Synthesis and characterization of regioregular poly(3-dodecyltellurophene). <i>Journal of Polymer Science Part A</i> , <b>2013</b> , 51, 2753-2758	2.5	20
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| 114 | Chiral Stereoisomer Engineering of Electron Transporting Materials for Efficient and Stable Perovskite Solar Cells. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1905951   | 15.6 | 15 |
| 113 | Robust synthesis of gold rhombic dodecahedra with well-controlled sizes and their optical properties. <i>CrystEngComm</i> , <b>2013</b> , 15, 252-258  | 3.3  | 15 |
| 112 | Heterogeneous Capillary Interactions of Interface-Trapped Ellipsoid Particles Using the Trap-Release Method. <i>Langmuir</i> , <b>2018</b> , 34, 384-394   | 4    | 14 |
| 111 | Highly reproducible polyol synthesis for silver nanocubes. <i>Journal of Crystal Growth</i> , <b>2017</b> , 469, 48-53   | 1.6  | 14 |
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17	Chiral Stereoisomer Engineering: Chiral Stereoisomer Engineering of Electron Transporting Materials for Efficient and Stable Perovskite Solar Cells (Adv. Funct. Mater. 13/2020). <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2070087	15.6	1
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15	Neutral-Colored Semitransparent Perovskite Solar Cells with Aperture Ratios Controlled via Laser Patterning. <i>ACS Applied Energy Materials</i> , <b>2022</b> , 5, 3660-3667	6.1	1
14	Spray-coated nanocrystalline CsPbBr <sub>3</sub> perovskite thin-films for large area and efficient rigid and flexible light emitting diodes. <i>Journal of Alloys and Compounds</i> , <b>2022</b> , 918, 165560	5.7	1

13	Cross-linkable polymers containing a triple bond backbone and their application in photovoltaic devices. <i>RSC Advances</i> , <b>2016</b> , 6, 61284-61291	3.7	o
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10	Formation of compositional gradient profiles by using shear-induced polymer migration phenomenon under Couette flow field. <i>Korean Journal of Chemical Engineering</i> , <b>2015</b> , 32, 1422-1426	2.8	
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