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Additive enhanced crystallization of solution-processed perovskite for highly efficient planar-heterojunction solar cells

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| 1165 | Crown-ether functionalized fullerene as a solution-processable cathode buffer layer for high performance perovskite and polymer solar cells. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 9278-9284  | 13   | 59  |
| 1164 | Outdoor Performance and Stability under Elevated Temperatures and Long-Term Light Soaking of Triple-Layer Mesoporous Perovskite Photovoltaics. <b>2015</b> , 3, 551-555  |      | 300 |
| 1163 | Enhancement of solar cell efficiency using perovskite dyes deposited via a two-step process. <i>RSC Advances</i> , <b>2015</b> , 5, 33515-33523  | 3.7  | 6   |
| 1162 | Modified deposition process of electron transport layer for efficient inverted planar perovskite solar cells. <b>2015</b> , 51, 8986-9   |      | 24  |
| 1161 | Modulation of hybrid organic perovskite photovoltaic performance by controlling the excited dynamics of fullerenes. <b>2015</b> , 2, 414-419   |      | 22  |
| 1160 | Metal electrode-free perovskite solar cells with transfer-laminated conducting polymer electrode. <b>2015</b> , 23, A83-91   |      | 47  |
| 1159 | Enhanced Performance and Stability of Semitransparent Perovskite Solar Cells Using Solution-Processed Thiol-Functionalized Cationic Surfactant as Cathode Buffer Layer. <b>2015</b> , 27, 7119-7127  |      | 67  |
| 1158 | Morphology-controlled CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> films by hexane-assisted one-step solution deposition for hybrid perovskite mesoscopic solar cells with high reproductivity. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 22839-22845 | 13   | 45  |
| 1157 | High efficiency flexible perovskite solar cells using superior low temperature TiO <sub>2</sub> . <b>2015</b> , 8, 3208-3214   |      | 457 |
| 1156 | Room-temperature, solution-processable organic electron extraction layer for high-performance planar heterojunction perovskite solar cells. <b>2015</b> , 7, 17343-9   |      | 62  |
| 1155 | Managing Carrier Lifetime and Doping Property of Lead Halide Perovskite by Postannealing Processes for Highly Efficient Perovskite Solar Cells. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 22812-22819  | 3.8  | 100 |
| 1154 | Low temperature processed ITO-free perovskite solar cells without a hole transport layer. <i>RSC Advances</i> , <b>2015</b> , 5, 94752-94758   | 3.7  | 12  |
| 1153 | A general fabrication procedure for efficient and stable planar perovskite solar cells: Morphological and interfacial control by in-situ-generated layered perovskite. <b>2015</b> , 18, 165-175   |      | 73  |

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| 1152 | Functional p-Type, Polymerized Organic Electrode Interlayer in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite/Fullerene Planar Heterojunction Hybrid Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2015</b> , 7, 24973-81                | 9.5 | 30  |
| 1151 | Two different mechanisms of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> film formation in one-step deposition and its effect on photovoltaic properties of OPV-type perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 23964-23972 | 13  | 68  |
| 1150 | Texture of MAPbI <sub>3</sub> Layers Assisted by Chloride on Flat TiO <sub>2</sub> Substrates. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 19808-19816  | 3.8 | 32  |
| 1149 | Hole-conductor-free planar perovskite solar cells with 16.0% efficiency. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 18389-18394   | 13  | 73  |
| 1148 | Interfacial engineering of self-assembled monolayer modified semi-roll-to-roll planar heterojunction perovskite solar cells on flexible substrates. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 24254-24260  | 13  | 115 |
| 1147 | PbI <sub>2</sub> : A new precursor solution for efficient planar perovskite solar cell by vapor-assisted solution process. <i>Applied Surface Science</i> , <b>2015</b> , 357, 2372-2377  | 6.7 | 31  |
| 1146 | Antisolvent diffusion-induced growth, equilibrium behaviours in aqueous solution and optical properties of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> single crystals for photovoltaic applications. <i>RSC Advances</i> , <b>2015</b> , 5, 85344-85349           | 3.7 | 27  |
| 1145 | High efficiency methylammonium lead triiodide perovskite solar cells: the relevance of non-stoichiometric precursors. <b>2015</b> , 8, 3550-3556  |     | 335 |
| 1144 | Chlorine Incorporation for Enhanced Performance of Planar Perovskite Solar Cell Based on Lead Acetate Precursor. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2015</b> , 7, 23110-6   | 9.5 | 102 |
| 1143 | Efficient charge-transport in hybrid lead iodide perovskite solar cells. <b>2015</b> , 44, 16914-22   |     | 17  |
| 1142 | Improved charge transport and injection in a meso-superstructured solar cell by a tractable pre-spin-coating process. <b>2015</b> , 17, 24092-7   |     | 12  |
| 1141 | Effect of solvents on the growth of TiO <sub>2</sub> nanorods and their perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 19476-19482  | 13  | 59  |
| 1140 | Efficient Perovskite Hybrid Solar Cells via Controllable Crystallization Film Morphology. <b>2015</b> , 5, 1402-1407  |     | 4   |
| 1139 | The chemical origin of the p-type and n-type doping effects in the hybrid methylammonium-lead iodide (MAPbI <sub>3</sub> ) perovskite solar cells. <b>2015</b> , 51, 14917-20   |     | 100 |
| 1138 | High-performance inverted planar perovskite solar cells without a hole transport layer via a solution process under ambient conditions. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 19294-19298  | 13  | 30  |
| 1137 | Elastic perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 21070-21076  | 13  | 56  |
| 1136 | Ionic liquid-assisted growth of methylammonium lead iodide spherical nanoparticles by a simple spin-coating method and photovoltaic properties of perovskite solar cells. <i>RSC Advances</i> , <b>2015</b> , 5, 77495-77500  | 3.7 | 44  |
| 1135 | Hydrochloric acid accelerated formation of planar CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite with high humidity tolerance. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 19674-19678  | 13  | 108 |

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| 1134 | High performance planar p-i-n perovskite solar cells with crown-ether functionalized fullerene and LiF as double cathode buffer layers. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 063901                              | 3-4  | 41  |
| 1133 | Mechanistic insights into perovskite photoluminescence enhancement: light curing with oxygen can boost yield thousandfold. <b>2015</b> , 17, 24978-87   |      | 272 |
| 1132 | Controlled reaction for improved CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> transition in perovskite solar cells. <b>2015</b> , 44, 17841-9   |      | 12  |
| 1131 | A solution-processed bathocuproine cathode interfacial layer for high-performance bromine-iodine perovskite solar cells. <b>2015</b> , 17, 26653-8  |      | 89  |
| 1130 | Effects of 4-tert-butylpyridine on perovskite formation and performance of solution-processed perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 22191-22198                                    | 13   | 75  |
| 1129 | Enhanced optoelectronic quality of perovskite thin films with hypophosphorous acid for planar heterojunction solar cells. <i>Nature Communications</i> , <b>2015</b> , 6, 10030   | 17.4 | 492 |
| 1128 | Improving the efficiency of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> based photovoltaics by tuning the work function of the PEDOT:PSS hole transport layer. <b>2015</b> , 122, 892-899                                  |      | 36  |
| 1127 | Multifunctional Fullerene Derivative for Interface Engineering in Perovskite Solar Cells. <b>2015</b> , 137, 15540-7  |      | 433 |
| 1126 | High efficiency hysteresis-less inverted planar heterojunction perovskite solar cells with a solution-derived NiOx hole contact layer. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 24495-24503                   | 13   | 107 |
| 1125 | Highly efficient and stable planar perovskite solar cells with reduced graphene oxide nanosheets as electrode interlayer. <b>2015</b> , 12, 96-104  |      | 287 |
| 1124 | Interface Engineering of Perovskite Hybrid Solar Cells with Solution-Processed PeryleneDiimide Heterojunctions toward High Performance. <b>2015</b> , 27, 227-234   |      | 208 |
| 1123 | Inkjet printing of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> on a mesoscopic TiO <sub>2</sub> film for highly efficient perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 9092-9097     | 13   | 175 |
| 1122 | High-performance semitransparent perovskite solar cells with solution-processed silver nanowires as top electrodes. <b>2015</b> , 7, 1642-9   |      | 257 |
| 1121 | Perovskite-based solar cells: impact of morphology and device architecture on device performance. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 8943-8969  | 13   | 465 |
| 1120 | Layer-by-layer growth of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> (1-x)Cl <sub>x</sub> for highly efficient planar heterojunction perovskite solar cells. <i>Advanced Materials</i> , <b>2015</b> , 27, 1053-9          | 24   | 192 |
| 1119 | High-performance and environmentally stable planar heterojunction perovskite solar cells based on a solution-processed copper-doped nickel oxide hole-transporting layer. <i>Advanced Materials</i> , <b>2015</b> , 27, 695-701 | 24   | 655 |
| 1118 | Hybrid interfacial layer leads to solid performance improvement of inverted perovskite solar cells. <b>2015</b> , 8, 629-640  |      | 249 |
| 1117 | Multicolored organic/inorganic hybrid perovskite light-emitting diodes. <i>Advanced Materials</i> , <b>2015</b> , 27, 1248-54   | 24   | 938 |

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| 1116 | Metallohalide perovskite-polymer composite film for hybrid planar heterojunction solar cells. <i>RSC Advances</i> , <b>2015</b> , 5, 775-783   | 3-7 | 64  |
| 1115 | Three-step sequential solution deposition of PbI <sub>2</sub> -free CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 9086-9091  | 13  | 89  |
| 1114 | Enhanced Environmental Stability of Planar Heterojunction Perovskite Solar Cells Based on Blade-Coating. <b>2015</b> , 5, 1401229  |     | 278 |
| 1113 | Thermal assisted oxygen annealing for high efficiency planar CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells. <b>2014</b> , 4, 6752  |     | 88  |
| 1112 | Recent progress in organic-inorganic halide perovskite solar cells: mechanisms and material design. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 8992-9010   | 13  | 133 |
| 1111 | Planar heterojunction perovskite solar cells with superior reproducibility. <b>2014</b> , 4, 6953  |     | 190 |
| 1110 | Optical properties of organometal halide perovskite thin films and general device structure design rules for perovskite single and tandem solar cells. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 9152-9159  | 13  | 169 |
| 1109 | The roles of alkyl halide additives in enhancing perovskite solar cell performance. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 9058-9062   | 13  | 135 |
| 1108 | High-Performance Planar-Heterojunction Solar Cells Based on Ternary Halide Large-Band-Gap Perovskites. <b>2015</b> , 5, 1400960  |     | 108 |
| 1107 | Crystal Structure Formation of CH <sub>3</sub> NH <sub>3</sub> PbCl Perovskite. <i>Materials</i> , <b>2016</b> , 9,  | 3-5 | 72  |
| 1106 | Highly Efficient Reproducible Perovskite Solar Cells Prepared by Low-Temperature Processing. <b>2016</b> , 21, 542   |     | 15  |
| 1105 | Recent Advances in Interface Engineering for Planar Heterojunction Perovskite Solar Cells. <b>2016</b> , 21,   |     | 26  |
| 1104 | Influence of hydration water on CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite films prepared through one-step procedure. <b>2016</b> , 24, A1431-A1443   |     | 19  |
| 1103 | Planar Perovskite Solar Cells using CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Films: A Simple Process Suitable for Large-Scale Production. <b>2016</b> , 4, 473-478   |     | 29  |
| 1102 | Efficient Visible Quasi-2D Perovskite Light-Emitting Diodes. <i>Advanced Materials</i> , <b>2016</b> , 28, 7515-20   | 24  | 451 |
| 1101 | Mesoporous PbI <sub>2</sub> Scaffold for High-Performance Planar Heterojunction Perovskite Solar Cells. <b>2016</b> , 6, 1501890   |     | 102 |
| 1100 | Inverted Perovskite Solar Cells: Progresses and Perspectives. <b>2016</b> , 6, 1600457   |     | 294 |
| 1099 | Improved performance of perovskite solar cell by controlling CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3-x</sub> Cl <sub>x</sub> film morphology with CH <sub>3</sub> NH <sub>3</sub> Cl-assisted method. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2016</b> , 27, 10869-10876 | 21  | 14  |

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| 1098 | Understanding Interface Engineering for High-Performance Fullerene/Perovskite Planar Heterojunction Solar Cells. <b>2016</b> , 6, 1501606  |      | 156  |
| 1097 | Humidity controlled crystallization of thin CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> films for high performance perovskite solar cell. <b>2016</b> , 10, 381-387   |      | 34   |
| 1096 | High-Efficiency Perovskite Solar Cells Employing a S,N-Heteropentacene-based D-A Hole-Transport Material. <b>2016</b> , 9, 433-8   |      | 53   |
| 1095 | Improving Performance and Stability of Flexible Planar-Heterojunction Perovskite Solar Cells Using Polymeric Hole-Transport Material. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 4464-4471                                   | 15.6 | 120  |
| 1094 | Precisely Controlled Hydration Water for Performance Improvement of Organic-Inorganic Perovskite Solar Cells. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 5028-5034   | 15.6 | 59   |
| 1093 | Enhanced Efficiency and Stability of Inverted Perovskite Solar Cells Using Highly Crystalline SnO <sub>2</sub> Nanocrystals as the Robust Electron-Transporting Layer. <i>Advanced Materials</i> , <b>2016</b> , 28, 6478-84               | 24   | 382  |
| 1092 | Recent advances in low-toxic lead-free metal halide perovskite materials for solar cell application. <b>2016</b> , 11, 392-398   |      | 22   |
| 1091 | Chitosan-Assisted Crystallization and Film Forming of Perovskite Crystals through Biomineralization. <b>2016</b> , 11, 893-9   |      | 7    |
| 1090 | Enhanced performance of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3-x</sub> Cl <sub>x</sub> perovskite solar cells by CH <sub>3</sub> NH <sub>3</sub> I modification of TiO <sub>2</sub> -perovskite layer interface. <b>2016</b> , 11, 316 |      | 42   |
| 1089 | Low Cost and Solution Processed Interfacial Layer Based on Poly(2-ethyl-2-oxazoline) Nanodots for Inverted Perovskite Solar Cells. <b>2016</b> , 28, 4879-4883   |      | 40   |
| 1088 | An easy method to modify PEDOT:PSS/perovskite interfaces for solar cells with efficiency exceeding 15%. <i>RSC Advances</i> , <b>2016</b> , 6, 65594-65599   | 3.7  | 23   |
| 1087 | Amino-Functionalized Conjugated Polymer as an Efficient Electron Transport Layer for High-Performance Planar-Heterojunction Perovskite Solar Cells. <b>2016</b> , 6, 1501534   |      | 247  |
| 1086 | Effective Improvement of the Photovoltaic Performance of Carbon-Based Perovskite Solar Cells by Additional Solvents. <b>2016</b> , 8, 347-357  |      | 63   |
| 1085 | Versatile Molybdenum Isopropoxide for Efficient Mesoporous Perovskite Solar Cells: Simultaneously Optimized Morphology and Interfacial Engineering. <i>Journal of Physical Chemistry C</i> , <b>2016</b> , 120, 15089-15095                | 3.8  | 8    |
| 1084 | High-efficiency two-dimensional Ruddlesden-Popper perovskite solar cells. <b>2016</b> , 536, 312-6   |      | 2161 |
| 1083 | Effective control of crystal grain size in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells with a pseudohalide Pb(SCN) <sub>2</sub> additive. <b>2016</b> , 18, 6090-6095  |      | 71   |
| 1082 | Enhancing the Optoelectronic Performance of Perovskite Solar Cells via a Textured CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Morphology. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 1278-1285                          | 15.6 | 76   |
| 1081 | Improving Film Formation and Photovoltage of Highly Efficient Inverted-Type Perovskite Solar Cells through the Incorporation of New Polymeric Hole Selective Layers. <b>2016</b> , 6, 1502021  |      | 141  |

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| 1080 | Fulleropyrrolidinium Iodide As an Efficient Electron Transport Layer for Air-Stable Planar Perovskite Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 34612-34619  | 9.5  | 21  |
| 1079 | Research Update: Behind the high efficiency of hybrid perovskite solar cells. <b>2016</b> , 4, 091505  |      | 36  |
| 1078 | New low-temperature solution processes to control the formation of perovskite films for achieving high performance solar cells. <b>2016</b> ,  |      |     |
| 1077 | Iodine and Chlorine Element Evolution in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3-x</sub> Cl <sub>x</sub> Thin Films for Highly Efficient Planar Heterojunction Perovskite Solar Cells. <b>2016</b> , 28, 2742-2749                        |      | 48  |
| 1076 | Effects of UV-ozone irradiation on copper doped nickel acetate and its applicability to perovskite solar cells. <b>2016</b> , 8, 9284-92   |      | 34  |
| 1075 | Efficient Perovskite Hybrid Photovoltaics via Alcohol-Vapor Annealing Treatment. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 101-110  | 15.6 | 101 |
| 1074 | High-Performance Perovskite Solar Cells Engineered by an Ammonia Modified Graphene Oxide Interfacial Layer. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 14503-12  | 9.5  | 100 |
| 1073 | RETRACTED: Enhance the stability and efficiency of perovskite solar cell via gel-type polyurethane. <b>2016</b> , 97, 196-204  |      | 7   |
| 1072 | Efficiency Enhancement of Perovskite Solar Cells by Pumping Away the Solvent of Precursor Film Before Annealing. <b>2016</b> , 11, 248   |      | 9   |
| 1071 | A controllable fabrication of grain boundary PbI <sub>2</sub> nanoplates passivated lead halide perovskites for high performance solar cells. <b>2016</b> , 26, 50-56  |      | 138 |
| 1070 | Enhancement of photovoltaic performance of perovskite solar cells by modification of the interface between the perovskite and mesoporous TiO <sub>2</sub> film. <b>2016</b> , 155, 101-107   |      | 46  |
| 1069 | Chlorobenzene vapor assistant annealing method for fabricating high quality perovskite films. <b>2016</b> , 34, 97-103   |      | 37  |
| 1068 | Progress in emerging solution-processed thin film solar cells [Part II: Perovskite solar cells. <b>2016</b> , 62, 1012-1031  |      | 93  |
| 1067 | Molecular Origins of Defects in Organohalide Perovskites and Their Influence on Charge Carrier Dynamics. <i>Journal of Physical Chemistry C</i> , <b>2016</b> , 120, 12392-12402   | 3.8  | 76  |
| 1066 | Highly reproducible perovskite solar cells with excellent CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3-x</sub> Cl <sub>x</sub> film morphology fabricated via high precursor concentration. <i>RSC Advances</i> , <b>2016</b> , 6, 51279-51285 | 3.7  | 9   |
| 1065 | Crystal growth engineering for high efficiency perovskite solar cells. <b>2016</b> , 18, 5977-5985   |      | 71  |
| 1064 | Formation of ultrasmooth perovskite films toward highly efficient inverted planar heterojunction solar cells by micro-flowing anti-solvent deposition in air. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 6295-6303           | 13   | 58  |
| 1063 | Sulfamic Acid-Catalyzed Lead Perovskite Formation for Solar Cell Fabrication on Glass or Plastic Substrates. <b>2016</b> , 138, 5410-6   |      | 78  |



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| 1062 | Advancements in the stability of perovskite solar cells: degradation mechanisms and improvement approaches. <i>RSC Advances</i> , <b>2016</b> , 6, 38079-38091  | 3.7  | 131 |
| 1061 | Well-Organized Mesoporous TiO <sub>2</sub> Photoanode by Using Amphiphilic Graft Copolymer for Efficient Perovskite Solar Cells. <i>Journal of Physical Chemistry C</i> , <b>2016</b> , 120, 9619-9627  | 3.8  | 41  |
| 1060 | State and prospects of solar cells based on perovskites. <b>2016</b> , 52, 5-15   |      | 6   |
| 1059 | Formamidinium Lead Halide Perovskite Crystals with Unprecedented Long Carrier Dynamics and Diffusion Length. <b>2016</b> , 1, 32-37   |      | 551 |
| 1058 | Coordination engineering toward high performance organic/inorganic hybrid perovskites. <b>2016</b> , 320-321, 53-65   |      | 30  |
| 1057 | High-performance inverted planar heterojunction perovskite solar cells based on a solution-processed CuOx hole transport layer. <b>2016</b> , 8, 10806-13   |      | 161 |
| 1056 | New fullerene design enables efficient passivation of surface traps in high performance p-i-n heterojunction perovskite solar cells. <b>2016</b> , 26, 7-15   |      | 80  |
| 1055 | Ultrasoother metal halide perovskite thin films via sol/gel processing. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 8308-8315  | 13   | 48  |
| 1054 | Efficient planar heterojunction perovskite solar cells fabricated via roller-coating. <b>2016</b> , 155, 14-19  |      | 14  |
| 1053 | Bromide regulated film formation of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> in low-pressure vapor-assisted deposition for efficient planar-heterojunction perovskite solar cells. <b>2016</b> , 157, 1026-1037   |      | 21  |
| 1052 | Influence of the mixed organic cation ratio in lead iodide based perovskite on the performance of solar cells. <b>2016</b> , 18, 27148-27157  |      | 61  |
| 1051 | A tailored TiO <sub>2</sub> electron selective layer for high-performance flexible perovskite solar cells via low temperature UV process. <b>2016</b> , 28, 380-389   |      | 100 |
| 1050 | Synergistic Effect of PbI <sub>2</sub> Passivation and Chlorine Inclusion Yielding High Open-Circuit Voltage Exceeding 1.15 V in Both Mesoscopic and Inverted Planar CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> (Cl)-Based Perovskite Solar Cells. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 8119-8127 | 15.6 | 77  |
| 1049 | Efficient perovskite solar cells using trichlorosilanes as perovskite/PCBM interface modifiers. <b>2016</b> , 39, 1-9   |      | 21  |
| 1048 | Enhanced electronic properties in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> via LiCl mixing for hole-conductor-free printable perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 16731-16736   | 13   | 72  |
| 1047 | Surface Passivation of Perovskite Film by Small Molecule Infiltration for Improved Efficiency of Perovskite Solar Cells. <b>2016</b> , 8, 1-7   |      | 6   |
| 1046 | Evolution in surface coverage of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> ·xCl <sub>x</sub> via heat assisted solvent vapour treatment and their effects on photovoltaic performance of devices. <i>RSC Advances</i> , <b>2016</b> , 6, 94731-94738   | 3.7  | 7   |
| 1045 | Preferential (100)-oriented CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite film formation by flash drying and elucidation of formation mechanism. <i>RSC Advances</i> , <b>2016</b> , 6, 94502-94509   | 3.7  | 4   |



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| 1044 | Solution-Processable Cathode Buffer Layer for High-Performance ITO/CuSCN-based Planar Heterojunction Perovskite Solar Cell. <b>2016</b> , 218, 263-270  |      | 19  |
| 1043 | The Effect of the Microstructure on Trap-Assisted Recombination and Light Soaking Phenomenon in Hybrid Perovskite Solar Cells. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 8094-8102   | 15.6 | 88  |
| 1042 | Mapping Morphological and Structural Properties of Lead Halide Perovskites by Scanning Nanofocus XRD. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 8221-8230  | 15.6 | 22  |
| 1041 | Ionic liquid-assisted perovskite crystal film growth for high performance planar heterojunction perovskite solar cells. <i>RSC Advances</i> , <b>2016</b> , 6, 97848-97852  | 3.7  | 28  |
| 1040 | Constructing water-resistant CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite films via coordination interaction. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 17018-17024   | 13   | 69  |
| 1039 | p-type Li, Cu-codoped NiO <sub>x</sub> hole-transporting layer for efficient planar perovskite solar cells. <b>2016</b> , 24, A1349-A1359   |      | 58  |
| 1038 | Promoting crystalline grain growth and healing pinholes by water vapor modulated post-annealing for enhancing the efficiency of planar perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 13458-13467             | 13   | 52  |
| 1037 | Efficient inverted planar formamidinium lead iodide perovskite solar cells via a post improved perovskite layer. <i>RSC Advances</i> , <b>2016</b> , 6, 79952-79957   | 3.7  | 23  |
| 1036 | Fatigue behavior of planar CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells revealed by light on/off diurnal cycling. <b>2016</b> , 27, 509-514  |      | 57  |
| 1035 | Post-annealing of MAPbI <sub>3</sub> perovskite films with methylamine for efficient perovskite solar cells. <b>2016</b> , 3, 548-555   |      | 109 |
| 1034 | Copper Salts Doped Spiro-OMeTAD for High-Performance Perovskite Solar Cells. <b>2016</b> , 6, 1601156   |      | 172 |
| 1033 | Novel insight into the function of PC61BM in efficient planar perovskite solar cells. <b>2016</b> , 27, 561-568   |      | 12  |
| 1032 | Interface studies of the planar heterojunction perovskite solar cells. <b>2016</b> , 157, 783-790   |      | 38  |
| 1031 | NiO Electrode Interlayer and CH <sub>3</sub> NH <sub>3</sub> /CH <sub>3</sub> NH <sub>3</sub> PbBr Interface Treatment to Markedly Advance Hybrid Perovskite-Based Light-Emitting Diodes. <i>Advanced Materials</i> , <b>2016</b> , 28, 8687-8694 | 24   | 134 |
| 1030 | 130 °C CH <sub>3</sub> NH <sub>3</sub> I treatment temperature in vapor-assisted solution process for large grain and full-coverage perovskite thin films. <b>2016</b> , 60, 230-234  |      | 11  |
| 1029 | Fast self-diffusion of ions in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> : the interstitially mechanism versus vacancy-assisted mechanism. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 13105-13112                          | 13   | 53  |
| 1028 | Ionic Liquid Control Crystal Growth to Enhance Planar Perovskite Solar Cells Efficiency. <b>2016</b> , 6, 1600767   |      | 165 |
| 1027 | Kinetic block model of crystal/another-phase interface with preferential clustering - single layer case. <b>2016</b> , 51, 16-22  |      |     |

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| 1026 | First-Principles Modeling of Organohalide Thin Films and Interfaces. <b>2016</b> , 19-52   |     | 4   |
| 1025 | Hexadecafluorophthalocyaninatocopper as an electron conductor for high-efficiency fullerene-free planar perovskite solar cells. <b>2016</b> , 157, 510-516   |     | 7   |
| 1024 | Interfacial engineering with amino-functionalized graphene for efficient perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 13482-13487  | 13  | 61  |
| 1023 | Solution-Processed BiI <sub>3</sub> Thin Films for Photovoltaic Applications: Improved Carrier Collection via Solvent Annealing. <b>2016</b> , 28, 6567-6574   |     | 107 |
| 1022 | Ternary Halide Perovskites for Highly Efficient Solution-Processed Hybrid Solar Cells. <b>2016</b> , 1, 712-718  |     | 16  |
| 1021 | Low temperature fabrication of formamidinium based perovskite solar cells with enhanced performance by chlorine incorporation. <b>2016</b> , 38, 144-149   |     | 8   |
| 1020 | Efficient perovskite solar cells via simple interfacial modification toward a mesoporous TiO <sub>2</sub> electron transportation layer. <i>RSC Advances</i> , <b>2016</b> , 6, 82282-82288  | 3-7 | 27  |
| 1019 | Effects of Organic Cation Additives on the Fast Growth of Perovskite Thin Films for Efficient Planar Heterojunction Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 24703-11                           | 9-5 | 34  |
| 1018 | Enhanced crystallization and stability of perovskites by a cross-linkable fullerene for high-performance solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 15088-15094   | 13  | 62  |
| 1017 | Surface coverage enhancement of a mixed halide perovskite film by using an UV-ozone treatment. <b>2016</b> , 69, 406-411   |     | 14  |
| 1016 | Efficiency-Enhanced Planar Perovskite Solar Cells via an Isopropanol/Ethanol Mixed Solvent Process. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 23837-43  | 9-5 | 48  |
| 1015 | HONHCl optimized CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> films for improving performance of planar heterojunction perovskite solar cells via a one-step route. <b>2016</b> , 18, 26254-26261                                |     | 7   |
| 1014 | Surface optimization to eliminate hysteresis for record efficiency planar perovskite solar cells. <b>2016</b> , 9, 3071-3078   |     | 691 |
| 1013 | Iodomethane-Mediated Organometal Halide Perovskite with Record Photoluminescence Lifetime. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 23181-9  | 9-5 | 30  |
| 1012 | Highly-Efficient and Long-Term Stable Perovskite Solar Cells Enabled by a Cross-Linkable n-Doped Hybrid Cathode Interfacial Layer. <b>2016</b> , 28, 6305-6312   |     | 32  |
| 1011 | High-Quality Perovskite Films Grown with a Fast Solvent-Assisted Molecule Inserting Strategy for Highly Efficient and Stable Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 22238-45                  | 9-5 | 16  |
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| 1009 | Room Temperature Phase Transition in Methylammonium Lead Iodide Perovskite Thin Films Induced by Hydrohalic Acid Additives. <b>2016</b> , 9, 2656-2665   |     | 43  |

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| 1008 | Preparation and Characterization of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Deposited onto Polyacrylonitrile (PAN) Nanofiber Substrates. <b>2016</b> , 45, 312-314   |     | 8    |
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| 1006 | Optimizing semiconductor thin films with smooth surfaces and well-interconnected networks for high-performance perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 12463-12470                        | 13  | 23   |
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| 1004 | Interface engineering in efficient vacuum deposited perovskite solar cells. <b>2016</b> , 37, 396-401  |     | 18   |
| 1003 | Carrier Transport in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Films with Different Thickness for Perovskite Solar Cells. <b>2016</b> , 3, 1600327  |     | 39   |
| 1002 | Highly Efficient, Reproducible, Uniform (CH <sub>3</sub> NH <sub>3</sub> )PbI <sub>3</sub> Layer by Processing Additive Dripping for Solution-Processed Planar Heterojunction Perovskite Solar Cells. <b>2016</b> , 11, 2399-405     |     | 5    |
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| 1000 | High Performance of Perovskite Solar Cells via Catalytic Treatment in Two-Step Process: The Case of Solvent Engineering. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 30107-30115                                | 9.5 | 20   |
| 999  | Room-temperature water-vapor annealing for high-performance planar perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 17267-17273  | 13  | 51   |
| 998  | Charge-Carrier Balance for Highly Efficient Inverted Planar Heterojunction Perovskite Solar Cells. <i>Advanced Materials</i> , <b>2016</b> , 28, 10718-10724   | 24  | 170  |
| 997  | Polymer-templated nucleation and crystal growth of perovskite films for solar cells with efficiency greater than 21%. <b>2016</b> , 1,   |     | 1422 |
| 996  | Frustrated Lewis pair-mediated recrystallization of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> for improved optoelectronic quality and high voltage planar perovskite solar cells. <b>2016</b> , 9, 3770-3782                  |     | 101  |
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| 993  | Nonreduction-Active Hole-Transporting Layers Enhancing Open-Circuit Voltage and Efficiency of Planar Perovskite Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 33899-33906                            | 9.5 | 34   |
| 992  | High coverage solution-processed planar perovskite solar cell grown based on the Stranski-Krastanov mechanism at low temperature and short time. <i>RSC Advances</i> , <b>2016</b> , 6, 112677-112685                                | 3.7 | 13   |
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| 989 | Crystallization of HC(NH <sub>2</sub> ) <sub>2</sub> PbI <sub>3</sub> Black Polymorph by Solvent Intercalation for Low Temperature Solution Processing of Perovskite Solar Cells. <i>Journal of Physical Chemistry C</i> , <b>2016</b> , 120, 26710-26719 | 3.8 | 22  |
| 988 | Modulation of PEDOT:PSS pH for Efficient Inverted Perovskite Solar Cells with Reduced Potential Loss and Enhanced Stability. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 32068-32076   | 9.5 | 132 |
| 987 | The Role of Trap-assisted Recombination in Luminescent Properties of Organometal Halide CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> Perovskite Films and Quantum Dots. <b>2016</b> , 6, 27286   |     | 74  |
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| 985 | Enhanced performance of perovskite solar cells by modulating the Lewis acid-base reaction. <b>2016</b> , 8, 19804-19810   |     | 56  |
| 984 | A Universal Deposition Protocol for Planar Heterojunction Solar Cells with High Efficiency Based on Hybrid Lead Halide Perovskite Families. <i>Advanced Materials</i> , <b>2016</b> , 28, 10701-10709   | 24  | 89  |
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| 982 | Investigation into the Advantages of Pure Perovskite Film without Pbl for High Performance Solar Cell. <b>2016</b> , 6, 35994   |     | 38  |
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| 980 | Improved efficiency of solution-processed bulk-heterojunction organic solar cells and planar-heterojunction perovskite solar cells with efficient hole-extracting Si nanocrystals. <i>RSC Advances</i> , <b>2016</b> , 6, 104962-104968                   | 3.7 |     |
| 979 | Perylene Bisimides as efficient electron transport layers in planar heterojunction perovskite solar cells. <b>2016</b> , 59, 1658-1662  |     | 9   |
| 978 | Reduced graphene oxide-assisted crystallization of perovskite via solution-process for efficient and stable planar solar cells with module-scales. <b>2016</b> , 30, 667-676  |     | 52  |
| 977 | Hysteresis-Suppressed High-Efficiency Flexible Perovskite Solar Cells Using Solid-State Ionic-Liquids for Effective Electron Transport. <i>Advanced Materials</i> , <b>2016</b> , 28, 5206-13   | 24  | 326 |
| 976 | Hole-Transporting Materials in Inverted Planar Perovskite Solar Cells. <b>2016</b> , 6, 1600474   |     | 197 |
| 975 | Perovskite materials in energy storage and conversion. <b>2016</b> , 11, 338-369  |     | 59  |
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| 970 | Facilitating Electron Transportation in Perovskite Solar Cells via Water-Soluble Fullerenol Interlayers. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 18284-91  | 9.5 | 67  |
| 969 | Effective solvent-additive enhanced crystallization and coverage of absorber layers for high efficiency formamidinium perovskite solar cells. <i>RSC Advances</i> , <b>2016</b> , 6, 56807-56811  | 3.7 | 21  |
| 968 | Intriguing Optoelectronic Properties of Metal Halide Perovskites. <b>2016</b> , 116, 12956-13008  |     | 987 |
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| 964 | Ultralong Perovskite Microrods: One- versus Two-Step Synthesis and Enhancement of Hole-Transfer During Light Soaking. <i>Journal of Physical Chemistry C</i> , <b>2016</b> , 120, 12273-12283   | 3.8 | 15  |
| 963 | Low temperature synthesis of hierarchical TiO nanostructures for high performance perovskite solar cells by pulsed laser deposition. <b>2016</b> , 18, 27067-27072  |     | 24  |
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| 959 | Power Conversion Efficiency and Device Stability Improvement of Inverted Perovskite Solar Cells by Using a ZnO:PFN Composite Cathode Buffer Layer. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 18410-7                 | 9.5 | 47  |
| 958 | High-Efficiency Flexible Solar Cells Based on Organometal Halide Perovskites. <i>Advanced Materials</i> , <b>2016</b> , 28, 4532-40   | 24  | 86  |
| 957 | Oxidized Ni/Au Transparent Electrode in Efficient CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite/Fullerene Planar Heterojunction Hybrid Solar Cells. <i>Advanced Materials</i> , <b>2016</b> , 28, 3290-7                      | 24  | 50  |
| 956 | High-Performance Perovskite Solar Cells with Enhanced Environmental Stability Based on Amphiphile-Modified CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <i>Advanced Materials</i> , <b>2016</b> , 28, 2910-5                          | 24  | 207 |
| 955 | Fullerene imposed high open-circuit voltage in efficient perovskite based solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 3667-3672   | 13  | 38  |

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| 954 | Solution-induced morphology change of organic-inorganic hybrid perovskite films for high efficiency inverted planar heterojunction solar cells. <b>2016</b> , 191, 750-757                               |     | 26   |
| 953 | A Long-Term View on Perovskite Optoelectronics. <b>2016</b> , 49, 339-46   |     | 164  |
| 952 | Recent progress in electron transport layers for efficient perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 3970-3990  | 13  | 393  |
| 951 | Shape-controlled CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> nanoparticles for planar heterojunction perovskite solar cells. <b>2016</b> , 55, 02BF05   |     | 9    |
| 950 | Novel Surface Passivation Technique for Low-Temperature Solution-Processed Perovskite PV Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 4644-50                                 | 9.5 | 72   |
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| 942 | Organic-inorganic hybrid lead halide perovskites for optoelectronic and electronic applications. <b>2016</b> , 45, 655-89  |     | 1049 |
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| 938 | Efficient lead acetate sourced planar heterojunction perovskite solar cells with enhanced substrate coverage via one-step spin-coating. <b>2016</b> , 33, 194-200  |     | 45   |
| 937 | High Efficiency Tandem Thin-Perovskite/Polymer Solar Cells with a Graded Recombination Layer. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 7070-6                                    | 9.5 | 94   |



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| 934 | A Photonic Crystal Laser from Solution Based Organo-Lead Iodide Perovskite Thin Films. <b>2016</b> , 10, 3959-67  |     | 188 |
| 933 | Time-resolved fluorescence anisotropy study of organic lead halide perovskite. <b>2016</b> , 151, 102-112   |     | 12  |
| 932 | Large Perovskite Grain Growth in Low-Temperature Solution-Processed Planar p-i-n Solar Cells by Sodium Addition. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 5053-7  | 9.5 | 102 |
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| 928 | Perovskite solar cells fabricated using dicarboxylic fullerene derivatives. <b>2016</b> , 40, 2829-2834   |     | 18  |
| 927 | Universal energy level tailoring of self-organized hole extraction layers in organic solar cells and organic/inorganic hybrid perovskite solar cells. <b>2016</b> , 9, 932-939  |     | 192 |
| 926 | A general non-CH <sub>3</sub> NH <sub>3</sub> X (X = I, Br) one-step deposition of CH <sub>3</sub> NH <sub>3</sub> PbX <sub>3</sub> perovskite for high performance solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 3245-3248 | 13  | 43  |
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| 923 | Efficiency enhancement of perovskite solar cells by fabricating as-prepared film before sequential spin-coating procedure. <i>Applied Surface Science</i> , <b>2016</b> , 371, 289-295  | 6.7 | 17  |
| 922 | The solvent treatment effect of the PEDOT:PSS anode interlayer in inverted planar perovskite solar cells. <i>RSC Advances</i> , <b>2016</b> , 6, 24501-24507  | 3.7 | 34  |
| 921 | Solvent washing with toluene enhances efficiency and increases reproducibility in perovskite solar cells. <i>RSC Advances</i> , <b>2016</b> , 6, 26606-26611  | 3.7 | 29  |
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| 919 | Intense Pulsed Light Sintering of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 8419-26  | 9.5 | 46  |



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| 918 | Graphene in perovskite solar cells: device design, characterization and implementation. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 6185-6235  | 13   | 149 |
| 917 | Fabrication of perovskite films using an electrostatic assisted spray technique: the effect of the electric field on morphology, crystallinity and solar cell performance. <b>2016</b> , 8, 6792-800    |      | 35  |
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| 915 | Design rules for the broad application of fast (. <i>RSC Advances</i> , <b>2016</b> , 6, 27475-27484  | 3.7  | 35  |
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| 913 | High-efficiency robust perovskite solar cells on ultrathin flexible substrates. <i>Nature Communications</i> , <b>2016</b> , 7, 10214   | 17.4 | 444 |
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| 911 | Recent advancements in perovskite solar cells: flexibility, stability and large scale. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 6755-6771   | 13   | 118 |
| 910 | Synergistic improvements in stability and performance of lead iodide perovskite solar cells incorporating salt additives. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 1591-1597          | 13   | 158 |
| 909 | Determination of the exciton binding energy and effective masses for methylammonium and formamidinium lead tri-halide perovskite semiconductors. <b>2016</b> , 9, 962-970                               |      | 457 |
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| 904 | Organometal halide perovskite thin films and solar cells by vapor deposition. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 6693-6713  | 13   | 177 |
| 903 | A solution-processed n-doped fullerene cathode interfacial layer for efficient and stable large-area perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 640-648         | 13   | 95  |
| 902 | Relationships between Lead Halide Perovskite Thin-Film Fabrication, Morphology, and Performance in Solar Cells. <b>2016</b> , 138, 463-70   |      | 192 |
| 901 | Room-temperature mixed-solvent-vapor annealing for high performance perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 321-326  | 13   | 87  |

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| 898 | Improved air stability of perovskite solar cells via solution-processed metal oxide transport layers. <b>2016</b> , 11, 75-81   |     | 1614 |
| 897 | Planar heterojunction organometal halide perovskite solar cells: roles of interfacial layers. <b>2016</b> , 9, 12-30  |     | 396  |
| 896 | An efficient planar-heterojunction solar cell based on wide-bandgap CH <sub>3</sub> NH <sub>3</sub> PbI <sub>2</sub> .1Br <sub>0.9</sub> perovskite film for tandem cell application. <b>2016</b> , 52, 304-7   |     | 32   |
| 895 | Interfacial modification of hole transport layers for efficient large-area perovskite solar cells achieved via blade-coating. <b>2016</b> , 144, 309-315  |     | 75   |
| 894 | Solution-processed CuO as an efficient hole-extraction layer for inverted planar heterojunction perovskite solar cells. <b>2017</b> , 28, 13-18   |     | 56   |
| 893 | Enhancement of the efficiency and stability of planar p-i-n perovskite solar cells via incorporation of an amine-modified fullerene derivative as a cathode buffer layer. <b>2017</b> , 60, 136-143   |     | 25   |
| 892 | Tailoring interface of lead-halide perovskite solar cells. <b>2017</b> , 10, 1471-1497  |     | 35   |
| 891 | Ultrasoother Perovskite Film via Mixed Anti-Solvent Strategy with Improved Efficiency. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 3667-3676   | 9.5 | 86   |
| 890 | Accelerated formation and improved performance of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> -based perovskite solar cells via solvent coordination and anti-solvent extraction. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 4190-4198 | 13  | 45   |
| 889 | Crystallization process of perovskite modified by adding lead acetate in precursor solution for better morphology and higher device efficiency. <b>2017</b> , 43, 189-195   |     | 12   |
| 888 | Management of perovskite intermediates for highly efficient inverted planar heterojunction perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 3193-3202   | 13  | 82   |
| 887 | Large grain growth for hole-conductor-free fully printable perovskite solar cells via polyoxometalate molecular doping. <b>2017</b> , 53, 2290-2293   |     | 31   |
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| 885 | Cd <sub>2</sub> SnO <sub>4</sub> transparent conductive oxide: a promising alternative candidate for highly efficient hybrid halide perovskite solar cells. <i>RSC Advances</i> , <b>2017</b> , 7, 8295-8302  | 3.7 | 25   |
| 884 | Ag Doping of Organometal Lead Halide Perovskites: Morphology Modification and p-Type Character. <i>Journal of Physical Chemistry C</i> , <b>2017</b> , 121, 3673-3679   | 3.8 | 34   |
| 883 | Nucleation mediated interfacial precipitation for architectural perovskite films with enhanced photovoltaic performance. <b>2017</b> , 9, 2569-2578   |     | 22   |

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| 882 | Formation criteria of high efficiency perovskite solar cells under ambient conditions. <i>Sustainable Energy and Fuels</i> , <b>2017</b> , 1, 540-547   | 5.8 | 48  |
| 881 | Preparation and characterization of PEDOT:PSS/reduced graphene oxide/carbon nanotubes hybrid composites for transparent electrode applications. <b>2017</b> , 52, 5696-5707   |     | 33  |
| 880 | Band Diagram of Heterojunction Solar Cells through Scanning Tunneling Spectroscopy. <b>2017</b> , 2, 582-591  |     | 29  |
| 879 | Impact of Excess CH <sub>3</sub> NH <sub>3</sub> I on Free Carrier Dynamics in High-Performance Nonstoichiometric Perovskites. <i>Journal of Physical Chemistry C</i> , <b>2017</b> , 121, 3143-3148  | 3.8 | 41  |
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| 876 | Predicting the Morphology of Perovskite Thin Films Produced by Sequential Deposition Method: A Crystal Growth Dynamics Study. <b>2017</b> , 29, 1165-1174   |     | 24  |
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| 874 | Interface Engineering of a Compatible PEDOT Derivative Bilayer for High-Performance Inverted Perovskite Solar Cells. <b>2017</b> , 4, 1600948   |     | 31  |
| 873 | Controlled growth of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> films towards efficient perovskite solar cells by varied-stoichiometric intermediate adduct. <i>Applied Surface Science</i> , <b>2017</b> , 403, 572-577              | 6.7 | 21  |
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| 871 | Advances in hole transport materials engineering for stable and efficient perovskite solar cells. <b>2017</b> , 34, 271-305   |     | 278 |
| 870 | Kinetics of Polymer-Fullerene Phase Separation during Solvent Annealing Studied by Table-Top X-ray Scattering. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 8241-8247   | 9.5 | 6   |
| 869 | Recent advances in perovskite solar cells: efficiency, stability and lead-free perovskite. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 11462-11482   | 13  | 307 |
| 868 | Effect of the Microstructure of the Functional Layers on the Efficiency of Perovskite Solar Cells. <i>Advanced Materials</i> , <b>2017</b> , 29, 1601715  | 24  | 80  |
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| 866 | A dimeric fullerene derivative for efficient inverted planar perovskite solar cells with improved stability. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 7326-7332   | 13  | 45  |
| 865 | Rapid and Complete Conversion of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> for Perovskite/C60 Planar-Heterojunction Solar Cells by Two-Step Deposition. <b>2017</b> , 35, 687-692  |     | 5   |

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| 864 | A pure and stable intermediate phase is key to growing aligned and vertically monolithic perovskite crystals for efficient PIN planar perovskite solar cells with high processibility and stability. <b>2017</b> , 34, 58-68       |     | 123 |
| 863 | Large Grain-Based Hole-Blocking Layer-Free Planar-Type Perovskite Solar Cell with Best Efficiency of 18.20. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 8113-8120   | 9.5 | 59  |
| 862 | The synergistic effect of H <sub>2</sub> O and DMF towards stable and 20% efficiency inverted perovskite solar cells. <b>2017</b> , 10, 808-817  |     | 315 |
| 861 | Isomer-Pure Bis-PCBM-Assisted Crystal Engineering of Perovskite Solar Cells Showing Excellent Efficiency and Stability. <i>Advanced Materials</i> , <b>2017</b> , 29, 1606806  | 24  | 276 |
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| 854 | Optimized organometal halide perovskite solar cell fabrication through control of nanoparticle crystal patterning. <b>2017</b> , 5, 2352-2359  |     | 11  |
| 853 | Electrospray technique in fabricating perovskite-based hybrid solar cells under ambient conditions. <i>RSC Advances</i> , <b>2017</b> , 7, 10985-10991   | 3.7 | 12  |
| 852 | Organic Gelators as Growth Control Agents for Stable and Reproducible Hybrid Perovskite-Based Solar Cells. <b>2017</b> , 7, 1602600  |     | 65  |
| 851 | CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> grain growth and interfacial properties in meso-structured perovskite solar cells fabricated by two-step deposition. <b>2017</b> , 18, 253-262                                    |     | 36  |
| 850 | The investigation of an amidine-based additive in the perovskite films and solar cells. <b>2017</b> , 38, 014001   |     | 6   |
| 849 | Achieving Large-Area Planar Perovskite Solar Cells by Introducing an Interfacial Compatibilizer. <i>Advanced Materials</i> , <b>2017</b> , 29, 1606363   | 24  | 123 |
| 848 | Multichannel Interdiffusion Driven FASnI Film Formation Using Aqueous Hybrid Salt/Polymer Solutions toward Flexible Lead-Free Perovskite Solar Cells. <i>Advanced Materials</i> , <b>2017</b> , 29, 1606964                        | 24  | 117 |
| 847 | Tuning Magneto-photocurrent between Positive and Negative Polarities in Perovskite Solar Cells. <i>Journal of Physical Chemistry C</i> , <b>2017</b> , 121, 9537-9542  | 3.8 | 7   |

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| 846 | Recent progress in stabilizing hybrid perovskites for solar cell applications. <b>2017</b> , 355, 98-133  |      | 76  |
| 845 | Annealing Induced Re-crystallization in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> for High Performance Perovskite Solar Cells. <b>2017</b> , 7, 46724  |      | 44  |
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| 838 | Tuning the crystal growth of perovskite thin-films by adding the 2-pyridylthiourea additive for highly efficient and stable solar cells prepared in ambient air. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 13448-13456 | 13   | 74  |
| 837 | Carbon-Based Materials Used for Perovskite Solar Cells. <i>ChemNanoMat</i> , <b>2017</b> , 3, 75-88   | 3,5  | 21  |
| 836 | Hematite electron-transporting layers for environmentally stable planar perovskite solar cells with enhanced energy conversion and lower hysteresis. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 1434-1441               | 13   | 77  |
| 835 | Inverted planar solar cells based on perovskite/graphene oxide hybrid composites. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 13957-13965  | 13   | 61  |
| 834 | In Situ Observation of Crystallization of Methylammonium Lead Iodide Perovskite from Microdroplets. <i>Small</i> , <b>2017</b> , 13, 1604125  | 11   | 33  |
| 833 | Thermally Stable MAPbI <sub>3</sub> Perovskite Solar Cells with Efficiency of 19.19% and Area over 1 cm <sup>2</sup> achieved by Additive Engineering. <i>Advanced Materials</i> , <b>2017</b> , 29, 1701073                            | 24   | 447 |
| 832 | In situ dynamic observations of perovskite crystallisation and microstructure evolution intermediated from [PbI <sub>2</sub> ] cage nanoparticles. <i>Nature Communications</i> , <b>2017</b> , 8, 15688                                | 17.4 | 147 |
| 831 | Deciphering the NH <sub>4</sub> PbI <sub>3</sub> Intermediate Phase for Simultaneous Improvement on Nucleation and Crystal Growth of Perovskite. <i>Advanced Functional Materials</i> , <b>2017</b> , 27, 1701804                       | 15.6 | 89  |
| 830 | Enhanced Photovoltaic Performance of Perovskite Solar Cells Based on Er-Yb Co-doped TiO <sub>2</sub> Nanorod Arrays. <b>2017</b> , 245, 839-845   |      | 47  |
| 829 | Viscosity effect of ionic liquid-assisted controlled growth of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> nanoparticle-based planar perovskite solar cells. <b>2017</b> , 48, 147-153   |      | 23  |

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| 828 | Hybrid Perovskites: Effective Crystal Growth for Optoelectronic Applications. <b>2017</b> , 7, 1602596   |      | 54  |
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| 825 | Ultraviolet-ozone surface modification for non-wetting hole transport materials based inverted planar perovskite solar cells with efficiency exceeding 18%. <b>2017</b> , 360, 157-165                                   |      | 86  |
| 824 | Enhanced Crystalline Phase Purity of $\text{CH}_3\text{NH}_3\text{PbI}_2$ Film for High-Efficiency Hysteresis-Free Perovskite Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 23141-23151  | 9.5  | 33  |
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| 822 | Annealing effects on $\text{CsPbI}_3$ -based planar heterojunction perovskite solar cells formed by vacuum deposition method. <b>2017</b> , 56, 04CS11   |      | 27  |
| 821 | Structure formation and evolution in semiconductor films for perovskite and organic photovoltaics. <b>2017</b> , 32, 1798-1824   |      | 14  |
| 820 | Effective hot-air annealing for improving the performance of perovskite solar cells. <b>2017</b> , 146, 359-367  |      | 16  |
| 819 | Solution-Processed Extremely Efficient Multicolor Perovskite Light-Emitting Diodes Utilizing Doped Electron Transport Layer. <i>Advanced Functional Materials</i> , <b>2017</b> , 27, 1606874                            | 15.6 | 73  |
| 818 | Single-Crystal-like Perovskite for High-Performance Solar Cells Using the Effective Merged Annealing Method. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 12382-12390                                | 9.5  | 29  |
| 817 | Enhanced optoelectronic quality of perovskite films with excess $\text{CH}_3\text{NH}_3\text{I}$ for high-efficiency solar cells in ambient air. <b>2017</b> , 28, 205401  |      | 15  |
| 816 | Poly(4-Vinylpyridine)-Based Interfacial Passivation to Enhance Voltage and Moisture Stability of Lead Halide Perovskite Solar Cells. <b>2017</b> , 10, 2473-2479   |      | 132 |
| 815 | Solvent vapor annealing of oriented $\text{PbI}_2$ films for improved crystallization of perovskite films in the air. <b>2017</b> , 166, 167-175   |      | 16  |
| 814 | Perovskite hybrid solar cells with a fullerene derivative electron extraction layer. <b>2017</b> , 5, 4190-4197  |      | 20  |
| 813 | Study on the role of additional ions in $\text{CH}_3\text{NH}_3\text{PbI}_3-x\text{Cl}_x$ planar solar cells. <b>2017</b> , 148, 70-77   |      | 2   |
| 812 | Moisture-driven phase transition for improved perovskite solar cells with reduced trap-state density. <b>2017</b> , 10, 1413-1422  |      | 12  |
| 811 | Modulated $\text{CH}_3\text{NH}_3\text{PbI}_2\text{Br}$ film for efficient perovskite solar cells exceeding 18. <b>2017</b> , 7, 44603   |      | 52  |



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| 810 | Enhancement in efficiency and optoelectronic quality of perovskite thin films annealed in MA <sub>2</sub> Cl vapor. <i>Sustainable Energy and Fuels</i> , <b>2017</b> , 1, 755-766  | 5.8 | 53  |
| 809 | Ternary solvent for CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite films with uniform domain size. <b>2017</b> , 19, 1143-1150   |     | 26  |
| 808 | Dual Interfacial Modifications Enable High Performance Semitransparent Perovskite Solar Cells with Large Open Circuit Voltage and Fill Factor. <b>2017</b> , 7, 1602333   |     | 161 |
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| 806 | Sequential Introduction of Cations Deriving Large-Grain Cs FA PbI <sub>3</sub> Thin Film for Planar Hybrid Solar Cells: Insight into Phase-Segregation and Thermal-Healing Behavior. <i>Small</i> , <b>2017</b> , 13, 1603225 | 11  | 56  |
| 805 | Hybrid Perovskite Photovoltaic Devices: Properties, Architecture, and Fabrication Methods. <b>2017</b> , 5, 373-401   |     | 21  |
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| 803 | Optimization of perovskite by 3D twisted diketopyrrolopyrrole for efficient perovskite solar cells. <b>2017</b> , 1, 1179-1184  |     | 7   |
| 802 | Room temperature formation of organic/inorganic lead halide perovskites: design of nanostructured and highly reactive intermediates. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 3599-3608                     | 13  | 36  |
| 801 | Rapid crystallization in ambient air for planar heterojunction perovskite solar cells. <b>2017</b> , 13, 72-76  |     | 16  |
| 800 | Versatile plasmonic-effects at the interface of inverted perovskite solar cells. <b>2017</b> , 9, 1229-1236   |     | 42  |
| 799 | A TiO <sub>2</sub> embedded structure for perovskite solar cells with anomalous grain growth and effective electron extraction. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 1406-1414                          | 13  | 48  |
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| 796 | Highly enhanced long time stability of perovskite solar cells by involving a hydrophobic hole modification layer. <b>2017</b> , 32, 165-173   |     | 50  |
| 795 | Systematically Optimized Bilayered Electron Transport Layer for Highly Efficient Planar Perovskite Solar Cells (PCE 21.1%). <b>2017</b> , 2, 2667-2673  |     | 139 |
| 794 | Di-isopropyl ether assisted crystallization of organic-inorganic perovskites for efficient and reproducible perovskite solar cells. <b>2017</b> , 9, 17893-17901  |     | 13  |
| 793 | Printing-friendly sequential deposition via intra-additive approach for roll-to-roll process of perovskite solar cells. <b>2017</b> , 41, 443-451   |     | 79  |



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| 792 | High-Performance Flexible Photodetectors based on High-Quality Perovskite Thin Films by a Vapor-Solution Method. <i>Advanced Materials</i> , <b>2017</b> , 29, 1703256   | 24   | 96  |
| 791 | Solution-Processed Ultrathin TiO Compact Layer Hybridized with Mesoporous TiO for High-Performance Perovskite Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 36865-36874  | 9.5  | 34  |
| 790 | Highly efficient Cs-based perovskite light-emitting diodes enabled by energy funnelling. <b>2017</b> , 53, 12004-12007   | 7.1  |     |
| 789 | Cove-Edge Nanoribbon Materials for Efficient Inverted Halide Perovskite Solar Cells. <b>2017</b> , 129, 14840-14844  | 13   |     |
| 788 | Cove-Edge Nanoribbon Materials for Efficient Inverted Halide Perovskite Solar Cells. <b>2017</b> , 56, 14648-14652   | 40   |     |
| 787 | High Performance Metal Halide Perovskite Light-Emitting Diode: From Material Design to Device Optimization. <i>Small</i> , <b>2017</b> , 13, 1701770   | 11   | 167 |
| 786 | Enhancing Efficiency of Perovskite Solar Cells via Surface Passivation with Graphene Oxide Interlayer. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 38967-38976  | 9.5  | 97  |
| 785 | Efficient and stable perovskite solar cells based on high-quality CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3-x</sub> Cl <sub>x</sub> films modified by V <sub>2</sub> O <sub>5</sub> additives. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 24282-24291 | 13   | 21  |
| 784 | Enhanced performance by organic electron transporting layers compared with inorganic layers for perovskite solar cells. <b>2017</b> , 651, 259-264   |      |     |
| 783 | Outstanding Performance of Hole-Blocking Layer-Free Perovskite Solar Cell Using Hierarchically Porous Fluorine-Doped Tin Oxide Substrate. <b>2017</b> , 7, 1700749   |      | 37  |
| 782 | Impact of fullerene derivative isomeric purity on the performance of inverted planar perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 19485-19490  | 13   | 25  |
| 781 | Improved perovskite film quality and solar cell performances using dual single solution coating. <b>2017</b> , 122, 085502   |      | 11  |
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| 779 | Identification of the physical origin behind disorder, heterogeneity, and reconstruction and their correlation with the photoluminescence lifetime in hybrid perovskite thin films. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 21002-21015             | 13   | 9   |
| 778 | Improvement and Regeneration of Perovskite Solar Cells via Methylamine Gas Post-Treatment. <i>Advanced Functional Materials</i> , <b>2017</b> , 27, 1703060  | 15.6 | 68  |
| 777 | Constructing Efficient and Stable Perovskite Solar Cells via Interconnecting Perovskite Grains. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 35200-35208   | 9.5  | 89  |
| 776 | Improved performance of hole-transporting layer-free perovskite solar cells by using graphene oxide sheets as the nucleation centers. <i>RSC Advances</i> , <b>2017</b> , 7, 45320-45326   | 3.7  | 7   |
| 775 | The interface degradation of planar organic/inorganic perovskite solar cell traced by light beam induced current (LBIC). <i>RSC Advances</i> , <b>2017</b> , 7, 42973-42978  | 3.7  | 11  |

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| 774 | Solvent-Mediated Intragranular-Coarsening of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Thin Films toward High-Performance Perovskite Photovoltaics. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 31959-31967 | 9.5  | 20  |
| 773 | Effects of Self-Assembled Monolayer Modification of Nickel Oxide Nanoparticles Layer on the Performance and Application of Inverted Perovskite Solar Cells. <b>2017</b> , 10, 3794-3803   |      | 116 |
| 772 | Carbon Nanotube Based Inverted Flexible Perovskite Solar Cells with All-Inorganic Charge Contacts. <i>Advanced Functional Materials</i> , <b>2017</b> , 27, 1703068   | 15.6 | 108 |
| 771 | Recent advances in interfacial engineering of perovskite solar cells. <i>Journal Physics D: Applied Physics</i> , <b>2017</b> , 50, 373002  | 3    | 117 |
| 770 | Impact of Interfacial Layers in Perovskite Solar Cells. <b>2017</b> , 10, 3687-3704   |      | 129 |
| 769 | Updating the road map to metal-halide perovskites for photovoltaics. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 17135-17150   | 13   | 23  |
| 768 | Vertically Oriented 2D Layered Perovskite Solar Cells with Enhanced Efficiency and Good Stability. <i>Small</i> , <b>2017</b> , 13, 1700611   | 11   | 158 |
| 767 | Enhancing the Performance of Perovskite Solar Cells by Hybridizing SnS Quantum Dots with CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <i>Small</i> , <b>2017</b> , 13, 1700953  | 11   | 64  |
| 766 | Perovskite solar cells from small scale spin coating process towards roll-to-roll printing: Optical and Morphological studies. <b>2017</b> , 4, 5082-5089   |      | 17  |
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| 764 | Improved Morphology and Efficiency of n-i-p Planar Perovskite Solar Cells by Processing with Glycol Ether Additives. <b>2017</b> , 2, 1960-1968   |      | 39  |
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| 762 | Efficient and Hysteresis-Free Perovskite Solar Cells Based on a Solution Processable Polar Fullerene Electron Transport Layer. <b>2017</b> , 7, 1701144   |      | 97  |
| 761 | Role of Ionic Functional Groups on Ion Transport at Perovskite Interfaces. <b>2017</b> , 7, 1701235   |      | 27  |
| 760 | Interface Engineering of Perovskite Solar Cells with Air Plasma Treatment for Improved Performance. <b>2017</b> , 18, 2939-2946   |      | 15  |
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| 758 | Synthetic Manipulation of Hybrid Perovskite Systems in Search of New and Enhanced Functionalities. <b>2017</b> , 10, 3722-3739  |      | 10  |
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| 755 | Doping Lanthanide into Perovskite Nanocrystals: Highly Improved and Expanded Optical Properties. <b>2017</b> , 17, 8005-8011  |     | 447 |
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| 753 | Enhanced efficiency and stability of carbon based perovskite solar cells using terephthalic acid additive. <b>2017</b> , 258, 1262-1272   |     | 26  |
| 752 | High-performance planar perovskite solar cells: Influence of solvent upon performance. <b>2017</b> , 9, 598-604   |     | 49  |
| 751 | Millisecond-pulsed photonically-annealed tin oxide electron transport layers for efficient perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 24110-24115   | 13  | 32  |
| 750 | Additive-Enhanced Crystallization of Solution Process for Planar Perovskite Solar Cells with Efficiency Exceeding 19 . <b>2017</b> , 23, 18140-18145  |     | 30  |
| 749 | Efficacious engineering on charge extraction for realizing highly efficient perovskite solar cells. <b>2017</b> , 10, 2570-2578   |     | 122 |
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| 744 | A low temperature processed fused-ring electron transport material for efficient planar perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 24820-24825  | 13  | 36  |
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| 742 | Insights into optoelectronic properties of anti-solvent treated perovskite films. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2017</b> , 28, 15630-15636   | 2.1 | 6   |
| 741 | Surface-activation modified perovskite crystallization for improving photovoltaic performance. <b>2017</b> , 5, 173-180   |     | 24  |
| 740 | Solution-processed perovskite solar cells using environmentally friendly solvent system. <b>2017</b> , 636, 639-643   |     | 16  |
| 739 | Hybrid perovskite solar cells fabricated from guanidine hydroiodide and tin iodide. <b>2017</b> , 7, 4969   |     | 8   |

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| 736 | Perovskite solar cells The stars of photovoltaic industry. <b>2017</b> ,  |     |     |
| 735 | Microscopic Analysis of Inherent Void Passivation in Perovskite Solar Cells. <b>2017</b> , 2, 1705-1710   |     | 10  |
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| 732 | Organic functional materials based buffer layers for efficient perovskite solar cells. <b>2017</b> , 28, 503-511  |     | 21  |
| 731 | Efficient spin-coating-free planar heterojunction perovskite solar cells fabricated with successive brush-painting. <b>2017</b> , 339, 33-40  |     | 42  |
| 730 | Controlling nucleation, growth, and orientation of metal halide perovskite thin films with rationally selected additives. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 113-123  | 13  | 92  |
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| 728 | Aquointermediate Assisted Highly Orientated Perovskite Thin Films toward Thermally Stable and Efficient Solar Cells. <b>2017</b> , 7, 1601433   |     | 24  |
| 727 | The optimum titanium precursor of fabricating TiO compact layer for perovskite solar cells. <b>2017</b> , 12, 640   |     | 21  |
| 726 | Combined Organic-Perovskite Solar Cell Fabrication as conventional Energy substitute. <b>2017</b> , 4, 12651-12656  |     | 4   |
| 725 | Perovskite solar cells for roll-to-roll fabrication. <b>2017</b> , 2, 7   |     | 1   |
| 724 | Solvent-induced textured structure and improved crystallinity for high performance perovskite solar cells. <i>Optical Materials Express</i> , <b>2017</b> , 7, 2150   | 2.6 | 20  |
| 723 | Defect-Free Large-Area (25 cm <sup>2</sup> ) Light Absorbing Perovskite Thin Films Made by Spray Coating. <i>Coatings</i> , <b>2017</b> , 7, 42   | 2.9 | 38  |
| 722 | CH <sub>3</sub> NH <sub>3</sub> Cl Assisted Solvent Engineering for Highly Crystallized and Large Grain Size Mixed-Composition (FAPbI <sub>3</sub> ) <sub>0.85</sub> (MAPbBr <sub>3</sub> ) <sub>0.15</sub> Perovskites. <b>2017</b> , 7, 272 |     | 20  |
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| 7 <sup>20</sup> | Effects of Electron and Proton Radiation on Perovskite Solar Cells for Space Solar Power Application. <b>2017</b> ,  |      | 7   |
| 7 <sup>19</sup> | Strategic Synthesis of Ultrasmall NiCo <sub>2</sub> O <sub>4</sub> NPs as Hole Transport Layer for Highly Efficient Perovskite Solar Cells. <b>2018</b> , 8, 1702722   |      | 82  |
| 7 <sup>18</sup> | Progress in fullerene-based hybrid perovskite solar cells. <b>2018</b> , 6, 2635-2651  |      | 89  |
| 7 <sup>17</sup> | Efficient and Stable Perovskite Solar Cells via Dual Functionalization of Dopamine Semiquinone Radical with Improved Trap Passivation Capabilities. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1707444   | 15.6 | 74  |
| 7 <sup>16</sup> | Mechanochemical Synthesis of Methylammonium Lead Mixed Halide Perovskites: Unraveling the Solid-Solution Behavior Using Solid-State NMR. <b>2018</b> , 30, 2309-2321   |      | 64  |
| 7 <sup>15</sup> | Graphene and its derivatives for solar cells application. <b>2018</b> , 47, 51-65  |      | 189 |
| 7 <sup>14</sup> | Effects of organic solvents for the phenyl-C61-butyric acid methyl ester layer on the performance of inverted perovskite solar cells. <b>2018</b> , 56, 247-253  |      | 4   |
| 7 <sup>13</sup> | Slot die coated planar perovskite solar cells via blowing and heating assisted one step deposition. <b>2018</b> , 179, 80-86   |      | 79  |
| 7 <sup>12</sup> | Strategies for high performance perovskite/crystalline silicon four-terminal tandem solar cells. <b>2018</b> , 179, 36-44  |      | 23  |
| 7 <sup>11</sup> | Mixed halide hybrid perovskites: a paradigm shift in photovoltaics. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 5507-5537   | 13   | 80  |
| 7 <sup>10</sup> | Graphene/Perovskite Schottky Barrier Solar Cells. <b>2018</b> , 2, 1700106   |      | 11  |
| 7 <sup>09</sup> | Organic/inorganic self-doping controlled crystallization and electronic properties of mixed perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 6319-6326   | 13   | 22  |
| 7 <sup>08</sup> | Evolution of organometal halide solar cells. <b>2018</b> , 35, 74-107  |      | 22  |
| 7 <sup>07</sup> | A Simple Perylene Derivative as a Solution-Processable Cathode Interlayer for Perovskite Solar Cells with Enhanced Efficiency and Stability. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 15933-15942   | 9.5  | 18  |
| 7 <sup>06</sup> | Investigation on Organic Molecule Additive for Moisture Stability and Defect Passivation via Physisorption in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Based Perovskite. <i>ACS Applied Energy Materials</i> , <b>2018</b> , 1, 1870-1877                  | 6.1  | 31  |
| 7 <sup>05</sup> | Black phosphorus quantum dots as dual-functional electron-selective materials for efficient plastic perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 8886-8894   | 13   | 62  |
| 7 <sup>04</sup> | Environmental-Friendly Urea Additive Induced Large Perovskite Grains for High Performance Inverted Solar Cells. <b>2018</b> , 2, 1800054   |      | 38  |
| 7 <sup>03</sup> | Introducing optically polarizable molecules into perovskite solar cells by simultaneously enhanced spin-orbital coupling, suppressed non-radiative recombination and improved transport balance towards enhancing photovoltaic actions. <b>2018</b> , 6, 6164-6171 |      | 15  |

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| 701 | Planar structured perovskite solar cells by hybrid physical chemical vapor deposition with optimized perovskite film thickness. <b>2018</b> , 57, 052301   | 12     |
| 700 | Promoting perovskite crystal growth to achieve highly efficient and stable solar cells by introducing acetamide as an additive. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 9930-9937                   | 13 42  |
| 699 | A Biopolymer Heparin Sodium Interlayer Anchoring TiO and MAPbI Enhances Trap Passivation and Device Stability in Perovskite Solar Cells. <i>Advanced Materials</i> , <b>2018</b> , 30, e1706924                        | 24 141 |
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| 696 | Controlled defects and enhanced electronic extraction in fluorine-incorporated zinc oxide for high-performance planar perovskite solar cells. <b>2018</b> , 182, 263-271   | 32     |
| 695 | A solution-processed pillar[5]arene-based small molecule cathode buffer layer for efficient planar perovskite solar cells. <b>2018</b> , 10, 8088-8098   | 17     |
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| 693 | Suppressing generation of iodine impurity via an amidine additive in perovskite solar cells. <b>2018</b> , 54, 4704-4707   | 8      |
| 692 | The Deposition Environment Controlling Method: A Vapor-Phase Solvent-Assisted Approach to Fabricate High-Quality Crystalline Perovskite. <b>2018</b> , 1-6   | 1      |
| 691 | Stable perovskite solar cells using thiazolo [5,4-d]thiazole-core containing hole transporting material. <b>2018</b> , 49, 372-379   | 25     |
| 690 | Synergistic effect of anions and cations in additives for highly efficient and stable perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 9264-9270                                     | 13 36  |
| 689 | Chelate-Pb Intermediate Engineering for High-Efficiency Perovskite Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 14744-14750  | 9.5 12 |
| 688 | Fabricating High-Efficient Blade-Coated Perovskite Solar Cells under Ambient Condition Using Lead Acetate Trihydrate. <b>2018</b> , 2, 1700214   | 25     |
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| 686 | Electrochemical reduction of CO <sub>2</sub> on defect-rich Bi derived from Bi <sub>2</sub> S <sub>3</sub> with enhanced formate selectivity. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 4714-4720     | 13 93  |
| 685 | Stable and Efficient Organo-Metal Halide Hybrid Perovskite Solar Cells via $\pi$ -Conjugated Lewis Base Polymer Induced Trap Passivation and Charge Extraction. <i>Advanced Materials</i> , <b>2018</b> , 30, e1706126 | 24 192 |



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| 682 | Impact of PCBM/C60 electron transfer layer on charge transports on ordered and disordered perovskite phases and hysteresis-free perovskite solar cells. <b>2018</b> , 56, 163-169   |     | 23  |
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| 677 | Orientation Regulation of Phenylethylammonium Cation Based 2D Perovskite Solar Cell with Efficiency Higher Than 11%. <b>2018</b> , 8, 1702498   |     | 240 |
| 676 | Efficient Perovskite Solar Cells Fabricated by Co Partially Substituted Hybrid Perovskite. <b>2018</b> , 8, 1703178   |     | 88  |
| 675 | Efficient and Reproducible CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Layer Prepared Using a Binary Solvent Containing a Cyclic Urea Additive. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 9390-9397                           | 9.5 | 23  |
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| 673 | Low-dimensional halide perovskites: review and issues. <b>2018</b> , 6, 2189-2209   |     | 113 |
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| 671 | All Sequential Dip-Coating Processed Perovskite Layers from an Aqueous Lead Precursor for High Efficiency Perovskite Solar Cells. <b>2018</b> , 8, 2168   |     | 54  |
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| 666 | Carbon Nanoparticles in High-Performance Perovskite Solar Cells. <b>2018</b> , 8, 1702719   |     | 59  |
| 665 | Flash Infrared Annealing for Antisolvent-Free Highly Efficient Perovskite Solar Cells. <b>2018</b> , 8, 1702915   |     | 88  |
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| 661 | Stoichiometry control of sputtered zinc oxide films by adjusting Ar/O <sub>2</sub> gas ratios as electron transport layers for efficient planar perovskite solar cells. <b>2018</b> , 178, 200-207                                |     | 16  |
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| 659 | Unraveling the efficiency-limiting morphological issues of the perylene diimide-based non-fullerene organic solar cells. <b>2018</b> , 8, 2849  |     | 20  |
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| 656 | Simultaneous Improvement in Efficiency and Stability of Low-Temperature-Processed Perovskite Solar Cells by Interfacial Control. <b>2018</b> , 8, 1702934   |     | 63  |
| 655 | Synergistic Hematite-Fullerene Electron-Extracting Layers for Improved Efficiency and Stability in Perovskite Solar Cells. <b>2018</b> , 5, 726-731   |     | 66  |
| 654 | Fabrication of Perovskite Films with Large Columnar Grains via Solvent-Mediated Ostwald Ripening for Efficient Inverted Perovskite Solar Cells. <i>ACS Applied Energy Materials</i> , <b>2018</b> , 1, 868-875                    | 6.1 | 38  |
| 653 | An additive dripping technique using diphenyl ether for tuning perovskite crystallization for high-efficiency solar cells. <b>2018</b> , 11, 2648-2657  |     | 9   |
| 652 | Grain Boundary Modification via F4TCNQ To Reduce Defects of Perovskite Solar Cells with Excellent Device Performance. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 1909-1916                                 | 9.5 | 91  |
| 651 | Efficient and stable CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3-x</sub> (SCN) <sub>x</sub> planar perovskite solar cells fabricated in ambient air with low-temperature process. <b>2018</b> , 377, 52-58                         |     | 42  |
| 650 | Chemical Stabilization of Perovskite Solar Cells with Functional Fulleropyrrolidines. <b>2018</b> , 4, 216-222  |     | 10  |
| 649 | Two-in-one additive-engineering strategy for improved air stability of planar perovskite solar cells. <b>2018</b> , 45, 229-235   |     | 33  |

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| 647 | Incorporating C as Nucleation Sites Optimizing Pbl Films To Achieve Perovskite Solar Cells Showing Excellent Efficiency and Stability via Vapor-Assisted Deposition Method. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 2603-2611                      | 9.5  | 21  |
| 646 | Realizing Efficient Lead-Free Formamidinium Tin Triiodide Perovskite Solar Cells via a Sequential Deposition Route. <i>Advanced Materials</i> , <b>2018</b> , 30, 1703800  | 24   | 151 |
| 645 | Oriented Grains with Preferred Low-Angle Grain Boundaries in Halide Perovskite Films by Pressure-Induced Crystallization. <b>2018</b> , 8, 1702369   |      | 56  |
| 644 | Development of organic-inorganic double hole-transporting material for high performance perovskite solar cells. <b>2018</b> , 378, 98-104  |      | 20  |
| 643 | Electron-Transport-Layer-Assisted Crystallization of Perovskite Films for High-Efficiency Planar Heterojunction Solar Cells. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1706317  | 15.6 | 63  |
| 642 | Fully metal oxide charge selective layers for n-i-p perovskite solar cells employing nickel oxide nanoparticles. <b>2018</b> , 263, 338-345  |      | 26  |
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| 640 | Metal-organic frameworks at interfaces of hybrid perovskite solar cells for enhanced photovoltaic properties. <b>2018</b> , 54, 1253-1256  |      | 77  |
| 639 | Fully Solution-Processed Semi-Transparent Perovskite Solar Cells With Ink-Jet Printed Silver Nanowires Top Electrode. <b>2018</b> , 2, 1700184   |      | 47  |
| 638 | Crystallization manipulation and morphology evolution for highly efficient perovskite solar cell fabrication via hydration water induced intermediate phase formation under heat assisted spin-coating. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 3012-3021 | 13   | 32  |
| 637 | Perovskite-based solar cells with inorganic inverted hybrid planar heterojunction structure. <b>2018</b> , 8, 015109   |      | 15  |
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| 634 | A strategic review on processing routes towards highly efficient perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 2406-2431  | 13   | 150 |
| 633 | Introducing paired electric dipole layers for efficient and reproducible perovskite solar cells. <b>2018</b> , 11, 1742-1751   |      | 59  |
| 632 | Nanocrystalline Titanium Metal-Organic Frameworks for Highly Efficient and Flexible Perovskite Solar Cells. <b>2018</b> , 12, 4968-4975  |      | 93  |
| 631 | Interface modification by up-conversion material of Ho <sup>3+</sup> -Yb <sup>3+</sup> -Li <sup>+</sup> tri-doped TiO <sub>2</sub> to improve the performance of perovskite solar cells. <i>Journal of Alloys and Compounds</i> , <b>2018</b> , 754, 124-130                 | 5.7  | 15  |

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| 630 | High Efficiency Low-Temperature Processed Perovskite Solar Cells Integrated with Alkali Metal Doped ZnO Electron Transport Layers. <b>2018</b> , 3, 1241-1246  |     | 43  |
| 629 | Rapid thermal annealing of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite thin films by intense pulsed light with aid of diiodomethane additive. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 9378-9383 | 13  | 30  |
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| 627 | Progress towards highly stable and lead-free perovskite solar cells. <i>Materials for Renewable and Sustainable Energy</i> , <b>2018</b> , 7, 1  | 4-7 | 19  |
| 626 | Scalable fabrication of perovskite solar cells. <b>2018</b> , 3,   |     | 532 |
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| 623 | Printed hole-conductor-free mesoscopic perovskite solar cells with excellent long-term stability using PEAI as an additive. <i>Journal of Energy Chemistry</i> , <b>2018</b> , 27, 764-768   | 12  | 18  |
| 622 | Thermodynamically Self-Healing 1D/2D Hybrid Perovskite Solar Cells. <b>2018</b> , 8, 1703421   |     | 107 |
| 621 | Recent progress in perovskite solar cells. <b>2018</b> , 81, 2812-2822   |     | 109 |
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| 619 | Scalable solution coating of the absorber for perovskite solar cells. <i>Journal of Energy Chemistry</i> , <b>2018</b> , 27, 1101-1110   | 12  | 33  |
| 618 | A mixed-cation lead iodide MA <sub>1-x</sub> EAxPbI <sub>3</sub> absorber for perovskite solar cells. <i>Journal of Energy Chemistry</i> , <b>2018</b> , 27, 215-218   | 12  | 18  |
| 617 | Advances and challenges to the commercialization of organic/organic halide perovskite solar cell technology. <b>2018</b> , 7, 169-189  |     | 172 |
| 616 | Enhanced crystallization and performance of formamidinium lead triiodide perovskite solar cells through PbI <sub>2</sub> -SrCl <sub>2</sub> modulation. <b>2018</b> , 7, 239-245   |     | 9   |
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| 599 | Enhanced p-i-n type perovskite solar cells by doping AuAg@AuAg core-shell alloy nanocrystals into PEDOT:PSS layer. <b>2018</b> , 52, 309-316   |     | 19  |
| 598 | Inkjet-Printing of Methylammonium Lead Trihalide Perovskite-Based Flexible Optoelectronic Devices. <b>2018</b> ,   |     | 1   |
| 597 | An inverted planar solar cell with 13% efficiency and a sensitive visible light detector based on orientation regulated 2D perovskites. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 24633-24640   | 13  | 26  |
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| 595 | Thiazole-Induced Surface Passivation and Recrystallization of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Films for Perovskite Solar Cells with Ultrahigh Fill Factors. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 42436-42443 | 9.5 | 36  |

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| 589 | Thiourea Interfacial Modification for Highly Efficient Planar Perovskite Solar Cells. <i>ACS Applied Energy Materials</i> , <b>2018</b> , 1, 6700-6706  | 6.1  | 15 |
| 588 | Effect of High Dipole Moment Cation on Layered 2D Organic-Inorganic Halide Perovskite Solar Cells. <b>2018</b> , 9, 1803024   |      | 65 |
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| 584 | Efficient dual cathode interfacial layer for high performance organic and perovskite solar cells. <b>2018</b> , 63, 222-230   |      | 10 |
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| 582 | Graphene quantum dots decorated TiO <sub>2</sub> mesoporous film as an efficient electron transport layer for high-performance perovskite solar cells. <b>2018</b> , 402, 320-326                       |      | 61 |
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| 579 | Effect of surface recombination in high performance white-light CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> single crystal photodetectors. <b>2018</b> , 26, 26307-26316                           |      | 6  |
| 578 | Large grain size CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> film for perovskite solar cells with hydroic acid additive. <b>2018</b> , 8, 095226   |      | 15 |
| 577 | Probing and Controlling Intragrain Crystallinity for Improved Low Temperature-Processed Perovskite Solar Cells. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1803943                        | 15.6 | 14 |

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| 572 | Rational Strategies for Large-area Perovskite Solar Cells. <b>2018</b> , 307-337   |     | 1   |
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| 566 | Metal Counter Electrodes for Perovskite Solar Cells. <b>2018</b> , 421-456   |     | 6   |
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| 564 | Application of copper phthalocyanin for surface modification of perovskite solar cells. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2018</b> , 29, 18187-18192  | 2.1 | 3   |
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| 555 | Grain-boundary effect and post treatment of active layer for efficient inverted planar perovskite solar cells. <b>2018</b> , 281, 9-16  |    | 12  |
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| 551 | Organic-Inorganic Hybrid Halide Perovskites for Memories, Transistors, and Artificial Synapses. <i>Advanced Materials</i> , <b>2018</b> , 30, e1704002  | 24 | 149 |
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| 548 | MAPbCl <sub>3</sub> -Mediated Decomposition Process to Tune Cl/PbI <sub>2</sub> Distribution in MAPbI <sub>3</sub> Films. <b>2018</b> , 3, 1801-1807  |    | 14  |
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| 542 | New thiophene-based C fullerene derivatives as efficient electron transporting materials for perovskite solar cells. <b>2018</b> , 42, 14551-14558  |    | 24  |
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| 539 | Bulk heterojunction polymer solar cell and perovskite solar cell: Concepts, materials, current status, and opto-electronic properties. <b>2018</b> , 173, 407-424   |      | 40  |
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| 530 | Perovskites-Based Solar Cells: A Review of Recent Progress, Materials and Processing Methods. <i>Materials</i> , <b>2018</b> , 11,  | 3.5  | 138 |
| 529 | Excitation of Wet Perovskite Films by Ultrasonic Vibration Improves the Device Performance. <b>2018</b> , 8, 308  |      | 15  |
| 528 | Two-dimensional organic-inorganic hybrid perovskite: from material properties to device applications. <i>Science China Materials</i> , <b>2018</b> , 61, 1257-1277  | 7.1  | 64  |
| 527 | Manipulation of facet orientation in hybrid perovskite polycrystalline films by cation cascade. <i>Nature Communications</i> , <b>2018</b> , 9, 2793  | 17.4 | 127 |
| 526 | Record Efficiency Stable Flexible Perovskite Solar Cell Using Effective Additive Assistant Strategy. <i>Advanced Materials</i> , <b>2018</b> , 30, e1801418   | 24   | 286 |
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| 523 | Laser-Induced Flash-Evaporation Printing CH <sub>3</sub> NHPbI Thin Films for High-Performance Planar Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 26206-26212                                | 9.5  | 7   |

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| 522 | Highly Conjugated Three-Dimensional Covalent Organic Frameworks Based on Spirobifluorene for Perovskite Solar Cell Enhancement. <b>2018</b> , 140, 10016-10024   |      | 111 |
| 521 | Layered hybrid perovskite solar cells based on single-crystalline precursor solutions with superior reproducibility. <i>Sustainable Energy and Fuels</i> , <b>2018</b> , 2, 2237-2243  | 5.8  | 15  |
| 520 | Fast vaporizing anti-solvent for high crystalline perovskite to achieve high performance perovskite solar cells. <b>2018</b> , 661, 122-127  |      | 7   |
| 519 | 18.0% efficiency flexible perovskite solar cells based on double hole transport layers and CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> /Clx with dual additives. <b>2018</b> , 6, 8770-8777   |      | 22  |
| 518 | Recent Advance in Solution-Processed Organic Interlayers for High-Performance Planar Perovskite Solar Cells. <b>2018</b> , 5, 1800159  |      | 64  |
| 517 | Top Illuminated Hysteresis-Free Perovskite Solar Cells Incorporating Microcavity Structures on Metal Electrodes: A Combined Experimental and Theoretical Approach. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 17973-17984       | 9.5  | 23  |
| 516 | Sequential deposition of hybrid halide perovskite starting both from lead iodide and lead chloride on the most widely employed substrates. <b>2018</b> , 657, 110-117  |      | 3   |
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| 514 | Enhanced Power Conversion Efficiency of Perovskite Solar Cells with an Up-Conversion Material of Er-Yb-Li Tri-doped TiO <sub>2</sub> . <b>2018</b> , 13, 147   |      | 19  |
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