

# Jichun Ye

## List of Publications by Year in Descending Order

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

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|--------------------|-------------------------|---------------|-----------------|
| 147<br>papers      | 2,783<br>citations      | 30<br>h-index | 45<br>g-index   |
| 154<br>ext. papers | 3,413<br>ext. citations | 8<br>avg, IF  | 5.24<br>L-index |

| #   | Paper   | IF   | Citations |
|-----|---|------|-----------|
| 147 | Fast-Response Amorphous GaN/Solar-Blind Ultraviolet Photodetectors Tuned by a Polar AlN Template. <i>IEEE Electron Device Letters</i> , <b>2022</b> , 43, 68-71   | 4.4  | 7         |
| 146 | Blistering-free polycrystalline silicon carbide films for double-sided passivating contact solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2022</b> , 238, 111586   | 6.4  | 1         |
| 145 | Structural and optical properties of AlN sputtering deposited on sapphire substrates with various orientations. <i>Journal of Semiconductors</i> , <b>2022</b> , 43, 022801   | 2.3  | 1         |
| 144 | Optical management for back-contact perovskite solar cells with diverse structure designs. <i>Solar Energy</i> , <b>2022</b> , 236, 100-106   | 6.8  | 2         |
| 143 | Emitter formation with boron diffusion from PECVD deposited boron-doped silicon oxide for high-efficiency TOPCon solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2022</b> , 240, 111713   | 6.4  | 1         |
| 142 | Approaching 23% efficient n-type crystalline silicon solar cells with a silicon oxide-based highly transparent passivating contact. <i>Nano Energy</i> , <b>2022</b> , 98, 107319   | 17.1 | 1         |
| 141 | 24.4% industrial tunnel oxide passivated contact solar cells with ozone-gas oxidation Nano SiO <sub>x</sub> and tube PECVD prepared in-situ doped polysilicon. <i>Solar Energy Materials and Solar Cells</i> , <b>2022</b> , 243, 111803                | 6.4  | 0         |
| 140 | 50- $\mu$ m thick flexible dopant-free interdigitated-back-contact silicon heterojunction solar cells with front MoO <sub>x</sub> coatings for efficient antireflection and passivation. <i>Optics Express</i> , <b>2022</b> , 30, 21309                | 3.3  | 1         |
| 139 | Evidence of Carrier Localization in AlGa <sub>N</sub> /Ga <sub>N</sub> -Based UV Multiple Quantum Wells with Opposite Polarity Domains Provided by Nanoscale Imaging. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2021</b> , 15, 2100035 | 2.5  | 2         |
| 138 | Annihilation and Regeneration of Defects in (112 2) Semipolar AlN via High-Temperature Annealing and MOVPE Regrowth. <i>Crystal Growth and Design</i> , <b>2021</b> , 21, 2911-2919   | 3.5  | 5         |
| 137 | Direct demonstration of carrier distribution and recombination within step-bunched UV-LEDs. <i>Photonics Research</i> , <b>2021</b> , 9, 764  | 6    | 2         |
| 136 | Efficient Carrier Recombination in InGa <sub>N</sub> Pyramidal $\mu$ -LEDs Obtained through Selective Area Growth. <i>Photonics</i> , <b>2021</b> , 8, 157  | 2.2  |           |
| 135 | Self-powered ultraviolet MSM photodetectors with high responsivity enabled by a lateral n/n homojunction from opposite polarity domains. <i>Optics Letters</i> , <b>2021</b> , 46, 3203-3206  | 3    | 6         |
| 134 | Epitaxial Growth and Stoichiometry Control of Ultrawide Bandgap ZnGa <sub>2</sub> O <sub>4</sub> Films by Pulsed Laser Deposition. <i>Coatings</i> , <b>2021</b> , 11, 782  | 2.9  | 2         |
| 133 | Significantly boosted external quantum efficiency of AlGa <sub>N</sub> -based DUV-LED utilizing thermal annealed Ni/Al reflective electrodes. <i>Applied Physics Express</i> , <b>2021</b> , 14, 072005   | 2.4  | 1         |
| 132 | Numerical and experimental exploration towards a 26% efficiency rear-junction n-type silicon solar cell with front local-area and rear full-area polysilicon passivated contacts. <i>Solar Energy</i> , <b>2021</b> , 221, 1-9                          | 6.8  | 4         |
| 131 | Carrier localization and defect-insensitive optical behaviors of ultraviolet multiple quantum wells grown on patterned AlN nucleation layer. <i>Journal of Alloys and Compounds</i> , <b>2021</b> , 861, 157589   | 5.7  |           |

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| 130 | Light-Promoted Electrostatic Adsorption of High-Density Lewis Base Monolayers as Passivating Electron-Selective Contacts. <i>Advanced Science</i> , <b>2021</b> , 8, 2003245   | 13.6 | 5  |
| 129 | Charge-transfer induced multifunctional BCP:Ag complexes for semi-transparent perovskite solar cells with a record fill factor of 80.1%. <i>Journal of Materials Chemistry A</i> , <b>2021</b> , 9, 12009-12018  | 13   | 16 |
| 128 | Solution-processed and annealing-free zirconium acetylacetonate electron-selective contacts for efficient crystalline silicon solar cells. <i>Solar Energy</i> , <b>2021</b> , 215, 410-415  | 6.8  | 3  |
| 127 | Highly sensitive flexible tactile perceptual interactive platform with functions of Braille code recognition. <i>Journal Physics D: Applied Physics</i> , <b>2021</b> , 54, 375102   | 3    | 0  |
| 126 | Scalable growth of vertically oriented graphene nanosheets with high rate by a high-flux mesoplasma chemical vapor deposition. <i>Carbon Trends</i> , <b>2021</b> , 4, 100069  | 0    |    |
| 125 | Self-powered ultraviolet photodiode based on lateral polarity structure GaN films. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2021</b> , 39, 052206   | 1.3  | 1  |
| 124 | Rapid-Thermal-Annealing-Induced Passivation Degradation and Recovery of Polysilicon Passivated Contact with Czochralski and Cast Multicrystalline Silicon Substrates. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2021</b> , 218, 2100344 | 1.6  | 1  |
| 123 | NiOx-Seeded Self-Assembled Monolayers as Highly Hole-Selective Passivating Contacts for Efficient Inverted Perovskite Solar Cells. <i>Solar Rrl</i> , <b>2021</b> , 5, 2100663   | 7.1  | 5  |
| 122 | Optical management of spacer layer of high-performance four-terminal perovskite/silicon tandem solar cells. <i>Solar Energy</i> , <b>2021</b> , 228, 226-234   | 6.8  | 4  |
| 121 | Charge-carrier dynamics for silicon oxide tunneling junctions mediated by local pinholes. <i>Cell Reports Physical Science</i> , <b>2021</b> , 2, 100667   | 6.1  | 5  |
| 120 | Artificial Tactile Perceptual Neuron with Nociceptive and Pressure Decoding Abilities. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 26258-26266   | 9.5  | 30 |
| 119 | Polarity Control and Nanoscale Optical Characterization of AlGaIn-Based Multiple-Quantum-Wells for Ultraviolet C Emitters. <i>ACS Applied Nano Materials</i> , <b>2020</b> , 3, 5335-5342  | 5.6  | 5  |
| 118 | Titanium Nitride Electron-Conductive Contact for Silicon Solar Cells By Radio Frequency Sputtering from a TiN Target. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 26177-26183  | 9.5  | 14 |
| 117 | Optical design and optimization for back-contact perovskite solar cells. <i>Solar Energy</i> , <b>2020</b> , 201, 84-91  | 6.8  | 20 |
| 116 | Comparison of different types of interfacial oxides on hole-selective p+-poly-Si passivated contacts for high-efficiency c-Si solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2020</b> , 210, 110487   | 6.4  | 15 |
| 115 | In-situ phosphorus-doped polysilicon prepared using rapid-thermal anneal (RTA) and its application for polysilicon passivated-contact solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2020</b> , 210, 110518   | 6.4  | 11 |
| 114 | Ultrasensitive micro/nanocrack-based graphene nanowall strain sensors derived from the substrate's Poisson's ratio effect. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 10310-10317  | 13   | 15 |
| 113 | Demonstration of ohmic contact using $\text{MoO}_3/\text{Al}$ on p-GaN and the proposal of a reflective electrode for AlGaIn-based DUV-LEDs. <i>Optics Letters</i> , <b>2020</b> , 45, 2427-2430   | 3    | 2  |

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|-----|---|------|----|
| 112 | Revealing the surface electronic structures of AlGaIn deep-ultraviolet multiple quantum wells with lateral polarity domains. <i>Photonics Research</i> , <b>2020</b> , 8, 812   | 6    | 1  |
| 111 | Polarity control and fabrication of lateral polarity structures of III-nitride thin films and devices: progress and prospects. <i>Journal Physics D: Applied Physics</i> , <b>2020</b> , 53, 483002                                 | 3    | 6  |
| 110 | Low-Temperature Oxidation-Processed Titanium Oxides as Dual-Functional Electron-Selective Passivation Contacts. <i>Solar Rrl</i> , <b>2020</b> , 4, 1900490   | 7.1  |    |
| 109 | Back-contact structures for optoelectronic devices: Applications and perspectives. <i>Nano Energy</i> , <b>2020</b> , 78, 105362  | 17.1 | 5  |
| 108 | Excellent passivation with implied open-circuit voltage of 710 mV for p-type multi-crystalline black silicon using PECVD grown a-Si:H passivation layer. <i>Solar Energy</i> , <b>2020</b> , 211, 753-758                           | 6.8  | 0  |
| 107 | Improved carrier confinement and stimulated recombination rate in GaN-based vertical-cavity surface-emitting lasers with buried p-AlGaIn inversion layer. <i>Superlattices and Microstructures</i> , <b>2020</b> , 146, 106654      | 2.8  |    |
| 106 | Room-Temperature Sputtered Aluminum-Doped Zinc Oxide for Semitransparent Perovskite Solar Cells. <i>ACS Applied Energy Materials</i> , <b>2020</b> , 3, 9610-9617   | 6.1  | 8  |
| 105 | A low-temperature TiO <sub>2</sub> /SnO <sub>2</sub> electron transport layer for high-performance planar perovskite solar cells. <i>Science China Materials</i> , <b>2020</b> , 63, 207-215  | 7.1  | 16 |
| 104 | Device physics of back-contact perovskite solar cells. <i>Energy and Environmental Science</i> , <b>2020</b> , 13, 1753-1765  | 13.4 | 30 |
| 103 | ZnO-Modified Anode for High-Performance SnO <sub>2</sub> -Based Planar Perovskite Solar Cells. <i>ACS Applied Energy Materials</i> , <b>2019</b> , 2, 7062-7069   | 6.1  | 14 |
| 102 | Hard mask processing of 20% efficiency back-contacted silicon solar cells with dopant-free heterojunctions. <i>Nano Energy</i> , <b>2019</b> , 66, 104116   | 17.1 | 7  |
| 101 | Deep UV Laser at 249 nm Based on GaN Quantum Wells. <i>ACS Photonics</i> , <b>2019</b> , 6, 2387-2391   | 6.3  | 13 |
| 100 | Phosphate-Passivated SnO Electron Transport Layer for High-Performance Perovskite Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 36727-36734  | 9.5  | 40 |
| 99  | Thickness-modulated passivation properties of PEDOT:PSS layers over crystalline silicon wafers in back junction organic/silicon solar cells. <i>Nanotechnology</i> , <b>2019</b> , 30, 195401                                       | 3.4  | 7  |
| 98  | An Expanded Cox and Strack Method for Precise Extraction of Specific Contact Resistance of Transition Metal Oxide/n-Silicon Heterojunction. <i>IEEE Journal of Photovoltaics</i> , <b>2019</b> , 9, 1113-1120                       | 3.7  | 19 |
| 97  | Improvement of Surface Passivation of Tunnel Oxide Passivated Contact Structure by Thermal Annealing in Mixture of Water Vapor and Nitrogen Environment. <i>Solar Rrl</i> , <b>2019</b> , 3, 1900105                                | 7.1  | 20 |
| 96  | Activating and optimizing evaporation-processed magnesium oxide passivating contact for silicon solar cells. <i>Nano Energy</i> , <b>2019</b> , 62, 181-188   | 17.1 | 23 |
| 95  | An industrially viable TOPCon structure with both ultra-thin SiO <sub>x</sub> and n <sup>+</sup> -poly-Si processed by PECVD for p-type c-Si solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2019</b> , 200, 109926 | 6.4  | 33 |

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| 94 | 15% Efficiency Ultrathin Silicon Solar Cells with Fluorine-Doped Titanium Oxide and Chemically Tailored Poly(3,4-ethylenedioxythiophene):Poly(styrenesulfonate) as Asymmetric Heterocontact. <i>ACS Nano</i> , <b>2019</b> , 13, 6356-6362 | 16.7 | 33 |
| 93 | Defect engineering of oxygen vacancies in SnOx electron transporting layer for perovskite solar cells. <i>Materials Today Energy</i> , <b>2019</b> , 12, 389-397   | 7    | 16 |
| 92 | Characterization of tunnel oxide passivated contact with n-type poly-Si on p-type c-Si wafer substrate. <i>Current Applied Physics</i> , <b>2019</b> , 19, 811-816   | 2.6  |    |
| 91 | Efficient and controllable growth of vertically oriented graphene nanosheets by mesoplasma chemical vapor deposition. <i>Carbon</i> , <b>2019</b> , 147, 341-347   | 10.4 | 23 |
| 90 | Single peak deep ultraviolet emission and high internal quantum efficiency in AlGaN quantum wells grown on large miscut sapphire substrates. <i>Superlattices and Microstructures</i> , <b>2019</b> , 129, 20-27                           | 2.8  | 8  |
| 89 | The role of front-surface charges in interdigitated back contact silicon heterojunction solar cells. <i>Nano Energy</i> , <b>2019</b> , 61, 221-227  | 17.1 | 9  |
| 88 | Engineering of hole-selective contact for high-performance perovskite solar cell featuring silver back-electrode. <i>Journal of Materials Science</i> , <b>2019</b> , 54, 7789-7797  | 4.3  | 37 |
| 87 | Suppression of surface and Auger recombination by formation and control of radial junction in silicon microwire solar cells. <i>Nano Energy</i> , <b>2019</b> , 58, 817-824  | 17.1 | 13 |
| 86 | Strain modulated nanostructure patterned AlGaN-based deep ultraviolet multiple-quantum-wells for polarization control and light extraction efficiency enhancement. <i>Nanotechnology</i> , <b>2019</b> , 30, 435202                        | 3.4  | 7  |
| 85 | The role of transition region charges between dopant-free asymmetric heterocontacts in interdigitated back contact silicon heterojunction solar cells. <i>Solar Energy</i> , <b>2019</b> , 188, 1201-1208                                  | 6.8  | 3  |
| 84 | Design Principles of Silicon Heterojunction Solar Cells with Dopant-Free Interdigitated Back Contacts. <i>Solar Rrl</i> , <b>2019</b> , 3, 1900230   | 7.1  | 6  |
| 83 | On the passivation mechanism of poly-silicon and thin silicon oxide on crystal silicon wafers. <i>Solar Energy</i> , <b>2019</b> , 194, 18-26  | 6.8  | 16 |
| 82 | SnO2 surface defects tuned by (NH4)2S for high-efficiency perovskite solar cells. <i>Solar Energy</i> , <b>2019</b> , 194, 541-547   | 6.8  | 23 |
| 81 | Design Principles of Silicon Heterojunction Solar Cells with Dopant-Free Interdigitated Back Contacts. <i>Solar Rrl</i> , <b>2019</b> , 3, 1970104   | 7.1  | 5  |
| 80 | Unambiguously Enhanced Ultraviolet Luminescence of AlGaN Wavy Quantum Well Structures Grown on Large Misoriented Sapphire Substrate. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1905445                                      | 15.6 | 85 |
| 79 | Omnidirectional whispering-gallery-mode lasing in GaN microdisk obtained by selective area growth on sapphire substrate. <i>Optics Express</i> , <b>2019</b> , 27, 16195-16205   | 3.3  | 4  |
| 78 | Design and simulation of perovskite solar cells with Gaussian structured gradient-index optics. <i>Optics Letters</i> , <b>2019</b> , 44, 4865-4868  | 3    | 5  |
| 77 | Three-dimensional band diagram in lateral polarity junction III-nitride heterostructures. <i>Optica</i> , <b>2019</b> , 6, 1058  | 8.6  | 10 |

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| 76 | Enhanced perovskite crystallization by the polyvinylpyrrolidone additive for high efficiency solar cells. <i>Sustainable Energy and Fuels</i> , <b>2019</b> , 3, 3448-3454   | 5.8  | 6  |
| 75 | GaN based UV-LEDs with Ni/Au Nanomeshes as Transparent p-type Electrodes. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2019</b> , 216, 1800684   | 1.6  | 2  |
| 74 | Numerical exploration for structure design and free-energy loss analysis of the high-efficiency polysilicon passivated-contact p-type silicon solar cell. <i>Solar Energy</i> , <b>2019</b> , 178, 249-256                 | 6.8  | 14 |
| 73 | Dual Functional Electron-Selective Contacts Based on Silicon Oxide/Magnesium: Tailoring Heterointerface Band Structures while Maintaining Surface Passivation. <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1702921 | 21.8 | 43 |
| 72 | Rapid crystallization of amorphous silicon films utilizing Ar-H <sub>2</sub> mesoplasma annealing. <i>Journal of Crystal Growth</i> , <b>2018</b> , 486, 142-147   | 1.6  | 3  |
| 71 | Heterojunction Hybrid Solar Cells by Formation of Conformal Contacts between PEDOT:PSS and Periodic Silicon Nanopyramid Arrays. <i>Small</i> , <b>2018</b> , 14, e1704493  | 11   | 24 |
| 70 | Carrier Dynamics of Nanopillar Textured Ultrathin Si Film/PEDOT:PSS Heterojunction Solar Cell. <i>IEEE Journal of Photovoltaics</i> , <b>2018</b> , 8, 757-762   | 3.7  | 2  |
| 69 | Principles of dopant-free electron-selective contacts based on tunnel oxide/low work-function metal stacks and their applications in heterojunction solar cells. <i>Nano Energy</i> , <b>2018</b> , 46, 133-140            | 17.1 | 21 |
| 68 | Achieving a Record Fill Factor for Silicon/Organic Hybrid Heterojunction Solar Cells by Using a Full-Area Metal Polymer Nanocomposite Top Electrode. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1705425      | 15.6 | 20 |
| 67 | High-Performance Organic-Silicon Heterojunction Solar Cells by Using Al-Doped ZnO as Cathode Interlayer. <i>Solar Rrl</i> , <b>2018</b> , 2, 1700223   | 7.1  | 5  |
| 66 | Improving Li anode performance by a porous 3D carbon paper host with plasma assisted sponge carbon coating. <i>Energy Storage Materials</i> , <b>2018</b> , 11, 47-56  | 19.4 | 41 |
| 65 | Comparative study on luminescence extraction strategies of LED by large-scale fabrication of nanopillar and nanohole structures. <i>Journal Physics D: Applied Physics</i> , <b>2018</b> , 51, 24LT01                      | 3    | 3  |
| 64 | Lateral-Polarity Structure of AlGaN Quantum Wells: A Promising Approach to Enhancing the Ultraviolet Luminescence. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1802395  | 15.6 | 37 |
| 63 | Realization of interdigitated back contact silicon solar cells by using dopant-free heterocontacts for both polarities. <i>Nano Energy</i> , <b>2018</b> , 50, 777-784   | 17.1 | 17 |
| 62 | Electron-Selective Scandium Tunnel Oxide Passivated Contact for n-Type Silicon Solar Cells. <i>Solar Rrl</i> , <b>2018</b> , 2, 1800071  | 7.1  | 11 |
| 61 | Heterojunction solar cells with asymmetrically carrier-selective contact structure of molybdenum-oxide/silicon/magnesium-oxide. <i>Solar Energy</i> , <b>2018</b> , 159, 704-709   | 6.8  | 55 |
| 60 | Dopant-Free and Carrier-Selective Heterocontacts for Silicon Solar Cells: Recent Advances and Perspectives. <i>Advanced Science</i> , <b>2018</b> , 5, 1700547   | 13.6 | 70 |
| 59 | 16% efficient silicon/organic heterojunction solar cells using narrow band-gap conjugated polyelectrolytes based low resistance electron-selective contacts. <i>Nano Energy</i> , <b>2018</b> , 43, 117-123                | 17.1 | 31 |



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| 58 | Modulation-doped ZnO as high performance electron-selective layer for efficient silicon heterojunction solar cells. <i>Nano Energy</i> , <b>2018</b> , 54, 99-105  | 17.1 | 24  |
| 57 | Tunnel Oxide [Magnesium as Electron-Selective Passivated Contact for n-type Silicon Solar Cell. <i>Solar Rrl</i> , <b>2018</b> , 2, 1800241  | 7.1  | 4   |
| 56 | Pseudocapacitance Induced Uniform Plating/Stripping of Li Metal Anode in Vertical Graphene Nanowalls. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1805638   | 15.6 | 46  |
| 55 | Tuning photonic crystal fabrication by nanosphere lithography and surface treatment of AlGaIn-based ultraviolet light-emitting diodes. <i>Materials and Design</i> , <b>2018</b> , 160, 661-670                              | 8.1  | 11  |
| 54 | Performance enhancement of ultraviolet light emitting diode incorporating Al nanohole arrays. <i>Nanotechnology</i> , <b>2018</b> , 29, 45LT01   | 3.4  | 6   |
| 53 | Temperature and Humidity Stable Alkali/Alkaline-Earth Metal Carbonates as Electron Heterocontacts for Silicon Photovoltaics. <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1800743                                     | 21.8 | 25  |
| 52 | Double-Layered PEDOT:PSS Films Inducing Strong Inversion Layers in Organic/Silicon Hybrid Heterojunction Solar Cells. <i>ACS Applied Energy Materials</i> , <b>2018</b> , 1, 2874-2881                                       | 6.1  | 15  |
| 51 | Over 16.7% Efficiency Organic-Silicon Heterojunction Solar Cells with Solution-Processed Dopant-Free Contacts for Both Polarities. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1802192                          | 15.6 | 44  |
| 50 | Computational analysis of a high-efficiency tunnel oxide passivated contact (TOPCon) solar cell with a low-work-function electron-selective-collection layer. <i>Solar Energy</i> , <b>2018</b> , 170, 780-787               | 6.8  | 15  |
| 49 | Silicon/Organic Hybrid Solar Cells with 16.2% Efficiency and Improved Stability by Formation of Conformal Heterojunction Coating and Moisture-Resistant Capping Layer. <i>Advanced Materials</i> , <b>2017</b> , 29, 1606321 | 24   | 104 |
| 48 | Optoelectronic Evaluation and Loss Analysis of PEDOT:PSS/Si Hybrid Heterojunction Solar Cells. <i>Nanoscale Research Letters</i> , <b>2017</b> , 12, 26  | 5    | 17  |
| 47 | Tuning of the Contact Properties for High-Efficiency Si/PEDOT:PSS Heterojunction Solar Cells. <i>ACS Energy Letters</i> , <b>2017</b> , 2, 556-562   | 20.1 | 64  |
| 46 | Illumination-Induced Hole Doping for Performance Improvement of Graphene/n-Silicon Solar Cells with P3HT Interlayer. <i>Advanced Electronic Materials</i> , <b>2017</b> , 3, 1600516   | 6.4  | 15  |
| 45 | Synergistic effect of TiO <sub>2</sub> hierarchical submicrospheres for high performance dye-sensitized solar cells. <i>Science China Chemistry</i> , <b>2017</b> , 60, 822-828  | 7.9  | 5   |
| 44 | Optimizing ultrathin Ag films for high performance oxide-metal-oxide flexible transparent electrodes through surface energy modulation and template-stripping procedures. <i>Scientific Reports</i> , <b>2017</b> , 7, 44576 | 4.9  | 41  |
| 43 | Polarity Control of GaN and Realization of GaN Schottky Barrier Diode Based on Lateral Polarity Structure. <i>IEEE Transactions on Electron Devices</i> , <b>2017</b> , 64, 4424-4429  | 2.9  | 10  |
| 42 | Excellent Passivation of Silicon Surfaces by Thin Films of Electron-Beam-Processed Titanium Dioxide. <i>IEEE Journal of Photovoltaics</i> , <b>2017</b> , 7, 1551-1555   | 3.7  | 18  |
| 41 | Junction Quality of SnO-Based Perovskite Solar Cells Investigated by Nanometer-Scale Electrical Potential Profiling. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 38373-38380                            | 9.5  | 41  |

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| 40 | Tunable THz Multiband Frequency-Selective Surface Based on Hybrid Metal/Graphene Structures. <i>IEEE Nanotechnology Magazine</i> , <b>2017</b> , 16, 1132-1137  | 2.6  | 32 |
| 39 | Large-scale nanostructured low-temperature solar selective absorber. <i>Optics Letters</i> , <b>2017</b> , 42, 1891-1894  | 3.4  | 10 |
| 38 | Enhancing light coupling and emission efficiencies of AlGaIn thin film and AlGaIn/GaN multiple quantum wells with periodicity-wavelength matched nanostructure array. <i>Nanoscale</i> , <b>2017</b> , 9, 15477-15483 | 7.7  | 13 |
| 37 | Theoretical exploration towards high-efficiency tunnel oxide passivated carrier-selective contacts (TOPCon) solar cells. <i>Solar Energy</i> , <b>2017</b> , 155, 654-660   | 6.8  | 39 |
| 36 | Photoinduced Field-Effect Passivation from Negative Carrier Accumulation for High-Efficiency Silicon/Organic Heterojunction Solar Cells. <i>ACS Nano</i> , <b>2017</b> , 11, 12687-12695                              | 16.7 | 10 |
| 35 | Development of in-situ high-voltage and high-temperature stressing capability on atomic force microscopy platform. <i>Solar Energy</i> , <b>2017</b> , 158, 746-752   | 6.8  | 4  |
| 34 | Fabrication of highly ordered 2D metallic arrays with disc-in-hole binary nanostructures via a newly developed nanosphere lithography. <i>Nanotechnology</i> , <b>2017</b> , 28, 474001                               | 3.4  | 6  |
| 33 | TiO <sub>2</sub> Films from the Low-Temperature Oxidation of Ti as Passivating-Contact Layers for Si Heterojunction Solar Cells. <i>Solar Rrl</i> , <b>2017</b> , 1, 1700154  | 7.1  | 15 |
| 32 | Opto-electric investigation for Si/organic heterojunction single-nanowire solar cells. <i>Scientific Reports</i> , <b>2017</b> , 7, 14575   | 4.9  | 14 |
| 31 | Fully Coupled Multiphysics Simulation of Crosstalk Effect in Bipolar Resistive Random Access Memory. <i>IEEE Transactions on Electron Devices</i> , <b>2017</b> , 64, 3647-3653                                       | 2.9  | 19 |
| 30 | Improved optical absorption in visible wavelength range for silicon solar cells via texturing with nanopyramid arrays. <i>Optics Express</i> , <b>2017</b> , 25, 10464-10472  | 3.3  | 26 |
| 29 | Rear-Sided Passivation by SiN <sub>x</sub> :H Dielectric Layer for Improved Si/PEDOT:PSS Hybrid Heterojunction Solar Cells. <i>Nanoscale Research Letters</i> , <b>2016</b> , 11, 310                                 | 5    | 3  |
| 28 | TiO hierarchical sub-wavelength microspheres for high efficiency dye-sensitized solar cells. <i>Physical Chemistry Chemical Physics</i> , <b>2016</b> , 18, 32293-32301   | 3.6  | 9  |
| 27 | In situ annealing and high-rate silicon epitaxy on porous silicon by mesoplasma process. <i>Applied Physics Express</i> , <b>2016</b> , 9, 055506   | 2.4  | 7  |
| 26 | High-Performance Black Multicrystalline Silicon Solar Cells by a Highly Simplified Metal-Catalyzed Chemical Etching Method. <i>IEEE Journal of Photovoltaics</i> , <b>2016</b> , 6, 888-893                           | 3.7  | 17 |
| 25 | Enhanced Photoelectrical Response of Hydrogenated Amorphous Silicon Single-Nanowire Solar Cells by Front-Opening Crescent Design. <i>Nanoscale Research Letters</i> , <b>2016</b> , 11, 233                           | 5    | 11 |
| 24 | Enhanced Electro-Optical Properties of Nanocone/Nanopillar Dual-Structured Arrays for Ultrathin Silicon/Organic Hybrid Solar Cell Applications. <i>Advanced Energy Materials</i> , <b>2016</b> , 6, 1501793           | 21.8 | 61 |
| 23 | Ideal rear contact formed via employing a conjugated polymer for Si/PEDOT:PSS hybrid solar cells. <i>RSC Advances</i> , <b>2016</b> , 6, 16010-16017  | 3.7  | 29 |



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|----|---|------|-----|
| 22 | Hybrid Solar Cells: Enhanced Electro-Optical Properties of Nanocone/Nanopillar Dual-Structured Arrays for Ultrathin Silicon/Organic Hybrid Solar Cell Applications (Adv. Energy Mater. 8/2016). <i>Advanced Energy Materials</i> , <b>2016</b> , 6, | 21.8 | 2   |
| 21 | Tuning back contact property via artificial interface dipoles in Si/organic hybrid solar cells. <i>Applied Physics Letters</i> , <b>2016</b> , 109, 043901  | 3.4  | 21  |
| 20 | High-Efficiency Silicon/Organic Heterojunction Solar Cells with Improved Junction Quality and Interface Passivation. <i>ACS Nano</i> , <b>2016</b> , 10, 11525-11531  | 16.7 | 65  |
| 19 | Scattering effect of the high-index dielectric nanospheres for high performance hydrogenated amorphous silicon thin-film solar cells. <i>Scientific Reports</i> , <b>2016</b> , 6, 30503  | 4.9  | 27  |
| 18 | Broadband and wide-angle light harvesting by ultra-thin silicon solar cells with partially embedded dielectric spheres. <i>Optics Letters</i> , <b>2016</b> , 41, 1329-32   | 3    | 22  |
| 17 | Wafer-Scale Integration of Inverted Nanopyramid Arrays for Advanced Light Trapping in Crystalline Silicon Thin Film Solar Cells. <i>Nanoscale Research Letters</i> , <b>2016</b> , 11, 194  | 5    | 21  |
| 16 | Flexible Proton-Gated Oxide Synaptic Transistors on Si Membrane. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 21770-5   | 9.5  | 41  |
| 15 | Si/PEDOT:PSS Hybrid Solar Cells with Advanced Antireflection and Back Surface Field Designs. <i>Nanoscale Research Letters</i> , <b>2016</b> , 11, 356  | 5    | 11  |
| 14 | Light Trapping Enhancement in a Thin Film with 2D Conformal Periodic Hexagonal Arrays. <i>Nanoscale Research Letters</i> , <b>2015</b> , 10, 988  | 5    | 9   |
| 13 | Colloidal transfer printing method for periodically textured thin films in flexible media with greatly enhanced solar energy harvesting. <i>Materials Research Express</i> , <b>2015</b> , 2, 106402  | 1.7  | 4   |
| 12 | Large-Area Nanosphere Self-Assembly by a Micro-Propulsive Injection Method for High Throughput Periodic Surface Nanotexturing. <i>Nano Letters</i> , <b>2015</b> , 15, 4591-8   | 11.5 | 158 |
| 11 | Realization of 13.6% Efficiency on 20 $\mu$ m Thick Si/Organic Hybrid Heterojunction Solar Cells via Advanced Nanotexturing and Surface Recombination Suppression. <i>ACS Nano</i> , <b>2015</b> , 9, 6522-31                                       | 16.7 | 107 |
| 10 | High-efficiency photon capturing in ultrathin silicon solar cells with front nanobowl texture and truncated-nanopyramid reflector. <i>Optics Letters</i> , <b>2015</b> , 40, 1077-80  | 3    | 30  |
| 9  | The electrochemical self-assembly of hierarchical dendritic Bi <sub>2</sub> Se <sub>3</sub> nanostructures. <i>CrystEngComm</i> , <b>2014</b> , 16, 2823  | 3.3  | 16  |
| 8  | Improvement of the SiO <sub>x</sub> passivation layer for high-efficiency Si/PEDOT:PSS heterojunction solar cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2014</b> , 6, 16027-34  | 9.5  | 96  |
| 7  | Efficient light trapping in low aspect-ratio honeycomb nanobowl surface texturing for crystalline silicon solar cell applications. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 253105   | 3.4  | 40  |
| 6  | Dry sliding friction and wear properties of B <sub>4</sub> C particulate-reinforced Al-5083 matrix composites. <i>Wear</i> , <b>2008</b> , 264, 555-561   | 3.5  | 120 |
| 5  | Unlocking Voltage Potentials of Mixed-Halide Perovskite Solar Cells via Phase Segregation Suppression. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 2110698   | 15.6 | 8   |

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| 4 | Dual-functional carbon-doped polysilicon films for passivating contact solar cells: regulating physical contacts while promoting photoelectrical properties. <i>Energy and Environmental Science</i> ,                               | 35.4 | 7 |
| 3 | Optimization of Tunnel-Junction for Perovskite/Tunnel Oxide Passivated Contact (TOPCon) Tandem Solar Cells. <i>Physica Status Solidi (A) Applications and Materials Science</i> ,2100562   | 1.6  | 2 |
| 2 | ITO/SnO <sub>2</sub> Interface Defect Passivation via Atomic Layer Deposited Al <sub>2</sub> O <sub>3</sub> for High-Efficiency Perovskite Solar Cells. <i>Physica Status Solidi (A) Applications and Materials Science</i> ,2100406 | 1.6  | 2 |
| 1 | Passivating Contact with Phosphorus-Doped Polycrystalline Silicon-Nitride with an Excellent Implied Open-Circuit Voltage of 745 mV and Its Application in 23.88% Efficiency TOPCon Solar Cells. <i>Solar Rrl</i> ,2100644            | 7.1  | 2 |