Xudong Xiao

List of Publications by Year in descending order

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76 papers	2,962 citations	218592 26 h-index	168321 53 g-index
76 all docs	76 docs citations	76 times ranked	5153 citing authors

#	Article	IF	Citations
1	Reversible structural transition of two-dimensional copper selenide on Cu(111). Nanotechnology, 2022, 33, 095704.	1.3	1
2	Zinc-based electron transport materials for over 9.6%-efficient S-rich Sb₂(S,Se)₃ solar cells. Journal of Materials Chemistry A, 2021, 9, 12644-12651.	5.2	35
3	Reducing the Energy Loss to Achieve High Openâ€circuit Voltage and Efficiency by Coordinating Energyâ€Level Matching in Snâ€“Pb Binary Perovskite Solar Cells. Solar Rrl, 2021, 5, 2100287.	3.1	19
4	Doping and orientation regulation of p-type Cu:CdS1â^'Se /Pt thin film photocathodes for enhanced photoelectrochemical water splitting. Applied Surface Science, 2021, 566, 150723.	3.1	2
5	Fabrication of high-efficiency Cu₂(Zn,Cd)SnS₄ solar cells by a rubidium fluoride assisted co-evaporation/annealing method. Journal of Materials Chemistry A, 2021, 9, 25522-25530.	5.2	11
6	A two-dimensional ErCu₂ intermetallic compound on Cu(111) with moirÃ©-pattern-modulated electronic structures. Physical Chemistry Chemical Physics, 2020, 22, 1693-1700.	1.3	9
7	Failure and Recovery Modes of Submicron Cu(In,Ga)Se₂ Solar Cells with High Cu Content. ACS Applied Materials & Interfaces, 2020, 12, 52857-52863.	4.0	8
8	Double-Sided Heat-Exchange CBD System for Homogeneous Zn(O,S) Thin Films in Highly Efficient CIGS Solar Devices. ACS Applied Energy Materials, 2020, 3, 11242-11248.	2.5	3
9	Role of ZnS Particles in the Performance of Cu 2 ZnSnS 4 Thin Film Solar Cells: A Comparative Study by Active Control of Zinc Deposition in Coevaporated Precursors. Solar Rrl, 2020, 4, 2000334.	3.1	6
10	Effects of Laserâ€Scribed Mo Groove Shape on Highly Efficient Zn(O,S)â€Based Cu(In,Ga)Se₂ Solar Modules. Solar Rrl, 2020, 4, 2070042.	3.1	1
11	Two-Dimensional Rare Earthâ€“Gold Intermetallic Compounds on Au(111) by Surface Alloying. Journal of Physical Chemistry Letters, 2020, 11, 4107-4112.	2.1	10
12	On-Surface Synthesis of Graphene Nanoribbons on Two-Dimensional Rare Earthâ€“Gold Intermetallic Compounds. Journal of Physical Chemistry Letters, 2020, 11, 5044-5050.	2.1	9
13	STM study of selenium adsorption on Au(111) surface. Chinese Physics B, 2020, 29, 056801.	0.7	7
14	Constructing a Spectral Down Converter to Enhance Cu(In,Ga)Se₂ Solar Cell Performance Using Yttrium Aluminum Garnet:Ce³⁺ Ceramics. Solar Rrl, 2020, 4, 1900518.	3.1	3
15	Stable pâ€type Cu:CdS_{1â^'x}Se_x/Pt Thinâ€Film Photocathodes with Fully Tunable Bandgap for Scavengerâ€Free Photoelectrochemical Water Splitting. Solar Rrl, 2020, 4, 1900567.	3.1	10
16	Effects of Laserâ€Scribed Mo Groove Shape on Highly Efficient Zn(O,S)â€Based Cu(In,Ga)Se 2 Solar Modules. Solar Rrl, 2020, 4, 1900510.	3.1	5
17	Formation of Ga double grading in submicron Cu(In,Ga)Se₂ solar cells by pre-depositing a CuGaSe₂ layer. Journal of Materials Chemistry A, 2020, 8, 9760-9767.	5.2	8
18	Manipulating the Edge of a Two-Dimensional MgO Nanoisland. Journal of Physical Chemistry C, 2019, 123, 19619-19624.	1.5	3

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19	Construction of a gigahertz-bandwidth radio-frequency scanning tunneling microscope based on a commercial low-temperature system. Review of Scientific Instruments, 2019, 90, .	0.6	5
20	Effects of substrate orientation and solution movement in chemical bath deposition on Zn(O,S) buffer layer and Cu(In,Ga)Se2 thin film solar cells. Nano Energy, 2019, 58, 427-436.	8.2	33
21	Enhancing photocurrent of Cu(In,Ga)Se2 solar cells with actively controlled Ga grading in the absorber layer. Nano Energy, 2019, 62, 205-211.	8.2	47
22	Role of surface microstructure of Mo back contact on alkali atom diffusion and Ga grading in Cu(In,Ga)Se₂ thin film solar cells. Energy Science and Engineering, 2019, 7, 754-763.	1.9	10
23	Effects of Ammoniaâ€Induced Surface Modification of Cu(In,Ga)Se₂ on Highâ€Efficiency Zn(O,S)â€Based Cu(In,Ga)Se₂ Solar Cells. Solar Rrl, 2019, 3, 1800254.	3.1	29
24	Mechanically-stacked perovskite/CIGS tandem solar cells with efficiency of 23.9% and reduced oxygen sensitivity. Energy and Environmental Science, 2018, 11, 394-406.	15.6	209
25	Growth Behavior of Pristine and Potassium Doped Coronene Thin Films on Substrates with Tuned Coupling Strength. Journal of Physical Chemistry B, 2018, 122, 601-611.	1.2	6
26	Modification of Mo Back Contact with MoO_{3â^'x} Layer and its Effect to Enhance the Performance of Cu₂ZnSnS₄ Solar Cells. Solar Rrl, 2018, 2, 1800243.	3.1	28
27	Band bending near grain boundaries of Cu2ZnSn(S,Se)4 thin films and its effect on photovoltaic performance. Nano Energy, 2018, 51, 37-44.	8.2	30
28	High efficiency ternary organic solar cell with morphology-compatible polymers. Journal of Materials Chemistry A, 2017, 5, 11739-11745.	5.2	74
29	Strongly Asymmetric Spectroscopy in Plasmon-Exciton Hybrid Systems due to Interference-Induced Energy Repartitioning. Physical Review Letters, 2017, 119, 177401.	2.9	26
30	Charge Transfer, Phase Separation, and Mottâ€“Hubbard Transition in Potassium-Doped Coronene Films. Journal of Physical Chemistry C, 2016, 120, 15446-15452.	1.5	14
31	Understanding Morphology Compatibility for High-Performance Ternary Organic Solar Cells. Chemistry of Materials, 2016, 28, 6186-6195.	3.2	150
32	A low-temperature formation path toward highly efficient Se-free Cu₂ZnSnS₄ solar cells fabricated through sputtering and sulfurization. CrystEngComm, 2016, 18, 1070-1077.	1.3	37
33	Systematic investigation of pseudogaps in In, Al, and Pb islands. Physical Review B, 2015, 92, .	1.1	6
34	Tunable spin helical Dirac quasiparticles on the surface of three-dimensional HgTe. Physical Review B, 2015, 92, .	1.1	19
35	Mapping potential energy landscape of a probing atom in a complex surface environment. Physical Review B, 2015, 92, .	1.1	2
36	Controlling adsorption and spin configurations of Co atoms on<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Si</mml:mi><mml:mo>(</mml:mo><mml:mn>111</mml:mn></mml: Physical Review B, 2015, 91, .	1.1	6

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37	Elucidating the Reaction Pathways in the Synthesis of Organolead Trihalide Perovskite for High-Performance Solar Cells. Scientific Reports, 2015, 5, 10557.	1.6	48
38	Recent progress in photocathodes for hydrogen evolution. Journal of Materials Chemistry A, 2015, 3, 15824-15837.	5.2	160
39	Limitation factors for the performance of kesterite Cu₂ZnSnS₄thin film solar cells studied by defect characterization. RSC Advances, 2015, 5, 40369-40374.	1.7	121
40	Ternary morphology facilitated thick-film organic solar cell. RSC Advances, 2015, 5, 88500-88507.	1.7	27
41	Searching for a fabrication route of efficient Cu₂ZnSnS₄ solar cells by post-sulfuration of co-sputtered Sn-enriched precursors. Journal of Materials Chemistry C, 2015, 3, 9650-9656.	2.7	32
42	Bandgap optimization of submicronâ€thick Cu(In,Ga)Se₂ solar cells. Progress in Photovoltaics: Research and Applications, 2015, 23, 1157-1163.	4.4	26
43	Application of CVD graphene as transparent front electrode in Cu(In,Ga)Se<inf>2</inf> solar cell. , 2014, , .		5
44	Stabilization and Manipulation of Electronically Phase-Separated Ground States in Defective Indium Atom Wires on Silicon. Physical Review Letters, 2014, 113, 196802.	2.9	22
45	Effective improvement of the photovoltaic performance of black dye sensitized quasi-solid-state solar cells. RSC Advances, 2014, 4, 31759-31763.	1.7	11
46	Panchromatic light harvesting by N719 with a porphyrin molecule for high-performance dye-sensitized solar cells. Journal of Materials Chemistry C, 2014, 2, 3521.	2.7	26
47	Hydrogen Evolution from Pt Nanoparticles Covered p-Type CdS:Cu Photocathode in Scavenger-Free Electrolyte. Journal of Physical Chemistry C, 2014, 118, 2306-2311.	1.5	22
48	Few-Layer MoSe2 Possessing High Catalytic Activity towards Iodide/Tri-iodide Redox Shuttles. Scientific Reports, 2014, 4, 4063.	1.6	70
49	Conformational engineering of co-sensitizers to retard back charge transfer for high-efficiency dye-sensitized solar cells. Journal of Materials Chemistry A, 2013, 1, 11553.	5.2	94
50	Highly aligned Cu₂O/CuO/TiO₂core/shell nanowire arrays as photocathodes for water photoelectrolysis. Journal of Materials Chemistry A, 2013, 1, 2418-2425.	5.2	195
51	Probing the generalized magicity of Ag nanoclusters constructed on Si(111) by atomic manipulation. Physical Review B, 2013, 88, .	1.1	7
52	The epitaxial growth of ZnS nanowire arrays and their applications in UV-light detection. Journal of Materials Chemistry, 2012, 22, 1199-1205.	6.7	55
53	Enhancement of low energy sunlight harvesting in dye-sensitized solar cells using plasmonic gold nanorods. Energy and Environmental Science, 2012, 5, 9444.	15.6	203
54	Identifying the Numbers of Ag Atoms in Their Nanostructures Grown on a Si(111)-(7 Ã— 7) Surface. Journal of Physical Chemistry C, 2011, 115, 3847-3853.	1.5	11

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55	Electrical rectification by selective wave-function coupling in small Ag clusters on<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mtext>Si</mml:mtext><mml:mrow><mml:mo>(</mml:mo><mml:mrow><mml:mn>111</mml:mn></mml:mrow></mml:mrow></mml:mrow></mml:math> Physical Review B, 2010, 81, .	1.1	11
56	CdSe Nanotube Arrays on ITO via Aligned ZnO Nanorods Templating. Chemistry of Materials, 2010, 22, 64-69.	3.2	45
57	CdTe Nanorod Arrays on ITO: From Microstructure to Photoelectrical Property. Journal of Physical Chemistry C, 2009, 113, 16951-16953.	1.5	45
58	Comparative study of single Cu, Ag, Au, and K atoms adsorbed on<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mtext>Si</mml:mtext><mml:mrow><mml:mo>(</mml:mo><mml:mrow><mml:mn>111</mml:mn></mml:mrow></mml:mrow></mml:mrow></mml:math> Physical Review B, 2009, 79, .	1.1	15
59	Low-energy electron microscopy of CO/Pt(111) surface diffusion by nonequilibrium coverage profile evolution. Physical Review B, 2008, 78, .	1.1	27
60	Kondo effect of single Co atoms adsorbed on Pb/Si(111) nanoislands. Physical Review B, 2008, 78, .	1.1	4
61	Geometric and electronic structure of aC60monolayer on Ag(100). Physical Review B, 2007, 75, .	1.1	42
62	Initial stages of the adsorption of Ge atoms on theSi(111)â˜(7Ã—7)surface. Physical Review B, 2006, 74, .	1.1	8
63	Frictional properties of alkanethiol self-assembled monolayers with different thermal annealing. Journal of Applied Physics, 2004, 95, 3411-3416.	1.1	8
64	Efficient Visible Photoluminescence from Carbon Nanotubes in Zeolite Templates. Physical Review Letters, 2004, 93, .	2.9	61
65	Title is missing!. Tribology Letters, 2003, 15, 169-176.	1.2	60
66	Step effects on diffusion near a substrate reconstructive phase transition:â€ƒH on W(100). Physical Review B, 2003, 68, .	1.1	4
67	Desorption of polyatomic molecules from the Pt(111) surface by femtosecond laser radiation. Journal of Chemical Physics, 2001, 115, 9490-9495.	1.2	10
68	The experimental rules of mica as a reference sample of AFM/FFM measurement. Science Bulletin, 2001, 46, 349-352.	1.7	7
69	Nonclassical Behavior in the Capacitance of a Nanojunction. Physical Review Letters, 2001, 86, 5321-5324.	2.9	77
70	Growth and characterization of Au clusters on alkanethiol self-assembled monolayers. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2000, 18, 2351.	1.6	22
71	Tip in Situ Chemical Modification and Its Effects on Tribological Measurements. Langmuir, 2000, 16, 662-670.	1.6	52
72	Investigation of Humidity-Dependent Capillary Force. Langmuir, 2000, 16, 8153-8158.	1.6	428

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73	Defect-enhanced second-harmonic generation in (SimGen)p superlattices. Applied Physics Letters, 1998, 72, 2072-2074.	1.5	15
74	Kinetics of thermal annealing in strained ultrathin Si/Ge superlattices on vicinal Si(100) studied by Raman scattering. Journal of Applied Physics, 1996, 80, 2211-2215.	1.1	3
75	Rear Interface Modification by the ZnTe Layer Enables High-Efficient Cu2(Zn,Cd)SnS4 Thin-Film Solar Cells. ACS Applied Energy Materials, 0, , .	2.5	2
76	Traces of iron impurities in copper sources can be a poison to Cu(In, Ga)Se ₂ solar cells. Nano Select, 0, , .	1.9	0