Kai Xiao

List of Publications by Year
in descending order

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Version: 2024-02-01

169	12,901	26405	24808
papers	citations	56 h-index	110 g-index

173	173	173	19439
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Atomic Defects in Monolayer Titanium Carbide (Ti₃C₂T_x) MXene. ACS Nano, 2016, 10, 9193-9200.	15.3	879
2	Synthesis of Few-Layer GaSe Nanosheets for High Performance Photodetectors. ACS Nano, 2012, 6, 5988-5994.	15.3	818
3	Highly Responsive Ultrathin GaS Nanosheet Photodetectors on Rigid and Flexible Substrates. Nano Letters, 2013, 13, 1649-1654.	9.5	714
4	PdSe₂: Pentagonal Two-Dimensional Layers with High Air Stability for Electronics. Journal of the American Chemical Society, 2017, 139, 14090-14097.	14.6	562
5	2D materials advances: from large scale synthesis and controlled heterostructures to improved characterization techniques, defects and applications. 2D Materials, 2016, 3, 042001.	4.5	426
6	A Highly Ï€-Stacked Organic Semiconductor for Field-Effect Transistors Based on Linearly Condensed Pentathienoacene. Journal of the American Chemical Society, 2005, 127, 13281-13286.	14.6	335
7	Deep Learning of Atomically Resolved Scanning Transmission Electron Microscopy Images: Chemical Identification and Tracking Local Transformations. ACS Nano, 2017, 11, 12742-12752.	15.3	301
8	High-Performance Flexible Perovskite Solar Cells by Using a Combination of Ultrasonic Spray-Coating and Low Thermal Budget Photonic Curing. ACS Photonics, 2015, 2, 680-686.	6.9	272
9	Interlayer Coupling in Twisted WSe₂/WS₂ Bilayer Heterostructures Revealed by Optical Spectroscopy. ACS Nano, 2016, 10, 6612-6622.	15.3	262
10	Perovskite Solar Cells with Near 100% Internal Quantum Efficiency Based on Large Single Crystalline Grains and Vertical Bulk Heterojunctions. Journal of the American Chemical Society, 2015, 137, 9210-9213.	14.6	251
11	Two-dimensional GaSe/MoSe ₂ misfit bilayer heterojunctions by van der Waals epitaxy. Science Advances, 2016, 2, e1501882.	10.9	249
12	Ultrathin nanosheets of CrSiTe₃: a semiconducting two-dimensional ferromagnetic material. Journal of Materials Chemistry C, 2016, 4, 315-322.	5.6	244
13	Controlled Vapor Phase Growth of Single Crystalline, Two-Dimensional GaSe Crystals with High Photoresponse. Scientific Reports, 2014, 4, 5497.	3.4	229
14	A roadmap for electronic grade 2D materials. 2D Materials, 2019, 6, 022001.	4.5	226
15	Patterned arrays of lateral heterojunctions within monolayer two-dimensional semiconductors. Nature Communications, 2015, 6, 7749.	13.2	218
16	Ultrahigh photo-responsivity and detectivity in multilayer InSe nanosheets phototransistors with broadband response. Journal of Materials Chemistry C, 2015, 3, 7022-7028.	5.6	212
17	Chemical nature of ferroelastic twin domains in CH3NH3PbI3 perovskite. Nature Materials, 2018, 17, 1013-1019.	26.6	190
18	Low-Frequency Raman Fingerprints of Two-Dimensional Metal Dichalcogenide Layer Stacking Configurations. ACS Nano, 2015, 9, 6333-6342.	15.3	157

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19	Low Energy Implantation into Transition-Metal Dichalcogenide Monolayers to Form Janus Structures. ACS Nano, 2020, 14, 3896-3906.	15.3	155
20	Highly sensitive phototransistors based on two-dimensional GaTe nanosheets with direct bandgap. Nano Research, 2014, 7, 694-703.	10.6	147
21	In situ atomistic insight into the growth mechanisms of single layer 2D transition metal carbides. Nature Communications, 2018, 9, 2266.	13.2	135
22	Thickness-dependent charge transport in few-layer MoS₂field-effect transistors. Nanotechnology, 2016, 27, 165203.	2.7	132
23	Tailoring Vacancies Far Beyond Intrinsic Levels Changes the Carrier Type and Optical Response in Monolayer MoSe_{2â^'x} Crystals. Nano Letters, 2016, 16, 5213-5220.	9.5	131
24	Twisted MoSe₂ Bilayers with Variable Local Stacking and Interlayer Coupling Revealed by Low-Frequency Raman Spectroscopy. ACS Nano, 2016, 10, 2736-2744.	15.3	128
25	Surface-Induced Orientation Control of CuPc Molecules for the Epitaxial Growth of Highly Ordered Organic Crystals on Graphene. Journal of the American Chemical Society, 2013, 135, 3680-3687.	14.6	125
26	High-Performance Field-Effect Transistors Based on Polystyrene-b-Poly(3-hexylthiophene) Diblock Copolymers. ACS Nano, 2011, 5, 3559-3567.	15.3	122
27	Deep learning analysis of defect and phase evolution during electron beam-induced transformations in WS2. Npj Computational Materials, 2019, 5, .	9.1	122
28	The isotopic effects of deuteration on optoelectronic properties of conducting polymers. Nature Communications, 2014, 5, 3180.	13.2	114
29	In situ edge engineering in two-dimensional transition metal dichalcogenides. Nature Communications, 2018, 9, 2051.	13.2	113
30	PSâ€bâ€P3HT Copolymers as P3HT/PCBM Interfacial Compatibilizers for High Efficiency Photovoltaics. Advanced Materials, 2011, 23, 5529-5535.	24.3	112
31	Pulsed Laser Deposition of Photoresponsive Twoâ€Dimensional GaSe Nanosheet Networks. Advanced Functional Materials, 2014, 24, 6365-6371.	16.5	111
32	High-performance multilayer WSe2 field-effect transistors with carrier type control. Nano Research, 2018, 11, 722-730.	10.6	110
33	Van der Waals Epitaxial Growth of Two-Dimensional Single-Crystalline GaSe Domains on Graphene. ACS Nano, 2015, 9, 8078-8088.	15.3	108
34	Synthesis and emerging properties of 2D layered IIIâ€“VI metal chalcogenides. Applied Physics Reviews, 2019, 6, 041312.	11.7	108
35	Ultrafast Charge Transfer and Hybrid Exciton Formation in 2D/0D Heterostructures. Journal of the American Chemical Society, 2016, 138, 14713-14719.	14.6	107
36	Tunable quasiparticle band gap in few-layer GaSe/graphene van der Waals heterostructures. Physical Review B, 2017, 96, .	3.3	105

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37	Excitonic Dynamics in Janus MoSSe and WSSe Monolayers. Nano Letters, 2021, 21, 931-937.	9.5	100
38	Deciphering Halogen Competition in Organometallic Halide Perovskite Growth. Journal of the American Chemical Society, 2016, 138, 5028-5035.	14.6	94
39	Nanoforging Single Layer MoSe2 Through Defect Engineering with Focused Helium Ion Beams. Scientific Reports, 2016, 6, 30481.	3.4	92
40	Defect-Mediated Phase Transformation in Anisotropic Two-Dimensional PdSe₂ Crystals for Seamless Electrical Contacts. Journal of the American Chemical Society, 2019, 141, 8928-8936.	14.6	91
41	Twoâ€Dimensional Palladium Diselenide with Strong Inâ€Plane Optical Anisotropy and High Mobility Grown by Chemical Vapor Deposition. Advanced Materials, 2020, 32, e1906238.	24.3	91
42	Single-Crystal Organic Nanowires of Copperâ€“Tetracyanoquinodimethane: Synthesis, Patterning, Characterization, and Device Applications. Angewandte Chemie - International Edition, 2007, 46, 2650-2654.	14.8	90
43	Isoelectronic Tungsten Doping in Monolayer MoSe₂ for Carrier Type Modulation. Advanced Materials, 2016, 28, 8240-8247.	24.3	89
44	Suppression of Defects and Deep Levels Using Isoelectronic Tungsten Substitution in Monolayer MoSe₂. Advanced Functional Materials, 2017, 27, 1603850.	16.5	89
45	Enhanced Performance Consistency in Nanoparticle/TIPS Pentaceneâ€Based Organic Thin Film Transistors. Advanced Functional Materials, 2011, 21, 3617-3623.	16.5	83
46	Metastable Copperâ€Phthalocyanine Singleâ€Crystal Nanowires and Their Use in Fabricating Highâ€Performance Fieldâ€Effect Transistors. Advanced Functional Materials, 2009, 19, 3776-3780.	16.5	82
47	Enhancing Ion Migration in Grain Boundaries of Hybrid Organicâ€“Inorganic Perovskites by Chlorine. Advanced Functional Materials, 2017, 27, 1700749.	16.5	80
48	Conjugated Polymer-Mediated Polymorphism of a High Performance, Small-Molecule Organic Semiconductor with Tuned Intermolecular Interactions, Enhanced Long-Range Order, and Charge Transport. Chemistry of Materials, 2013, 25, 4378-4386.	7.1	77
49	Field-Effect Transistors Based on Langmuirâ^'Blodgett Films of Phthalocyanine Derivatives as Semiconductor Layers. Journal of Physical Chemistry B, 2003, 107, 9226-9230.	2.7	73
50	Edge-Controlled Growth and Etching of Two-Dimensional GaSe Monolayers. Journal of the American Chemical Society, 2017, 139, 482-491.	14.6	72
51	3D Imaging and Manipulation of Subsurface Selenium Vacancies in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>PdSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow> Physical Review Letters, 2018, 121, 086101.	8.0	70
52	Thin-Film Transistors Based on Langmuirâ^'Blodgett Films of Heteroleptic Bis(phthalocyaninato) Rare Earth Complexes. Langmuir, 2005, 21, 6527-6531.	3.7	68
53	Realâ€Time Observation of Orderâ€Disorder Transformation of Organic Cations Induced Phase Transition and Anomalous Photoluminescence in Hybrid Perovskites. Advanced Materials, 2018, 30, e1705801.	24.3	65
54	Anomalous interlayer vibrations in strongly coupled layered PdSe ₂. 2D Materials, 2018, 5, 035016.	4.5	65

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55	Reduced Grain Size and Improved Thermoelectric Properties of Melt Spun (Hf,Zr)NiSn Half-Heusler Alloys. Journal of Electronic Materials, 2010, 39, 2008-2012.	2.2	60
56	Controllable Thinâ€Film Approaches for Doping and Alloying Transition Metal Dichalcogenides Monolayers. Advanced Science, 2021, 8, 2004249.	12.4	60
57	Spatial Localization of Excitons and Charge Carriers in Hybrid Perovskite Thin Films. Journal of Physical Chemistry Letters, 2015, 6, 3041-3047.	4.9	59
58	Selective Patterned Growth of Singleâ€Crystal Agâ€“TCNQ Nanowires for Devices by Vaporâ€“Solid Chemical Reaction. Advanced Functional Materials, 2008, 18, 3043-3048.	16.5	58
59	Exploring the air stability of PdSe2 via electrical transport measurements and defect calculations. Npj 2D Materials and Applications, 2019, 3, .	8.3	58
60	Electronâ€Beamâ€Related Studies of Halide Perovskites: Challenges and Opportunities. Advanced Energy Materials, 2020, 10, 1903191.	22.2	58
61	High Conduction Hopping Behavior Induced in Transition Metal Dichalcogenides by Percolating Defect Networks: Toward Atomically Thin Circuits. Advanced Functional Materials, 2017, 27, 1702829.	16.5	57
62	Correlating high power conversion efficiency of PTB7:PC₇₁BM inverted organic solar cells with nanoscale structures. Nanoscale, 2015, 7, 15576-15583.	5.8	56
63	Observation of Nanoscale Morphological and Structural Degradation in Perovskite Solar Cells by in Situ TEM. ACS Applied Materials & Interfaces, 2016, 8, 32333-32340.	8.3	54
64	Ternary behavior and systematic nanoscale manipulation of domain structures in P3HT/PCBM/P3HT-b-PEO films. Journal of Materials Chemistry, 2012, 22, 13013.	6.7	53
65	Solvent quality-induced nucleation and growth of parallelepiped nanorods in dilute poly(3-hexylthiophene) (P3HT) solution and the impact on the crystalline morphology of solution-cast thin film. CrystEngComm, 2013, 15, 1114-1124.	2.4	52
66	Valence band inversion and spin-orbit effects in the electronic structure of monolayer GaSe. Physical Review B, 2018, 98, .	3.3	52
67	Low thermal budget, photonic-cured compact TiO₂ layers for high-efficiency perovskite solar cells. Journal of Materials Chemistry A, 2016, 4, 9685-9690.	10.5	51
68	Imaging Electronic Trap States in Perovskite Thin Films with Combined Fluorescence and Femtosecond Transient Absorption Microscopy. Journal of Physical Chemistry Letters, 2016, 7, 1725-1731.	4.9	51
69	Strain tolerance of two-dimensional crystal growth on curved surfaces. Science Advances, 2019, 5, eaav4028.	10.9	50
70	Digital Transfer Growth of Patterned 2D Metal Chalcogenides by Confined Nanoparticle Evaporation. ACS Nano, 2014, 8, 11567-11575.	15.3	49
71	Perovskites: transforming photovoltaics, a mini-review. Journal of Photonics for Energy, 2015, 5, 057402.	1.4	49
72	Growth, Patterning, and One-Dimensional Electron -Transport Properties of Self-Assembled Ag-TCNQF4 Organic Nanowires. Chemistry of Materials, 2009, 21, 4275-4281.	7.1	48

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73	The impact of controlled solvent exposure on the morphology, structure and function of bulk heterojunction solar cells. Solar Energy Materials and Solar Cells, 2012, 107, 112-124.	6.3	48
74	Revealing the Preferred Interlayer Orientations and Stackings of Twoâ€Dimensional Bilayer Gallium Selenide Crystals. Angewandte Chemie - International Edition, 2015, 54, 2712-2717.	14.8	45
75	Observation of two distinct negative trions in tungsten disulfide monolayers. Physical Review B, 2015, 92, .	3.3	44
76	Ultrafast Dynamics of Metal Plasmons Induced by 2D Semiconductor Excitons in Hybrid Nanostructure Arrays. ACS Photonics, 2016, 3, 2389-2395.	6.9	44
77	Isotope-Engineering the Thermal Conductivity of Two-Dimensional MoS₂. ACS Nano, 2019, 13, 2481-2489.	15.3	44
78	Controllable Growth of Perovskite Films by Roomâ€Temperature Air Exposure for Efficient Planar Heterojunction Photovoltaic Cells. Angewandte Chemie - International Edition, 2015, 54, 14862-14865.	14.8	41
79	Understanding How Processing Additives Tune the Nanoscale Morphology of High Efficiency Organic Photovoltaic Blends: From Casting Solution to Spunâ€Cast Thin Film. Advanced Functional Materials, 2014, 24, 6647-6657.	16.5	39
80	Nonequilibrium Synthesis of TiO₂ Nanoparticle â€œBuilding Blocksâ€•for Crystal Growth by Sequential Attachment in Pulsed Laser Deposition. Nano Letters, 2017, 17, 4624-4633.	9.5	37
81	Atmospheric and Long-term Aging Effects on the Electrical Properties of Variable Thickness WSe₂ Transistors. ACS Applied Materials & Interfaces, 2018, 10, 36540-36548.	8.3	37
82	Correlation of polymeric compatibilizer structure to its impact on the morphology and function of P3HT:PCBM bulk heterojunctions. Journal of Materials Chemistry A, 2013, 1, 5309.	10.5	35
83	Patterned Growth of Pâ€Type MoS₂ Atomic Layers Using Solâ€“Gel as Precursor. Advanced Functional Materials, 2016, 26, 6371-6379.	16.5	34
84	Surfactant-Mediated Growth and Patterning of Atomically Thin Transition Metal Dichalcogenides. ACS Nano, 2020, 14, 6570-6581.	15.3	34
85	High performance top-gated multilayer WSe₂ field effect transistors. Nanotechnology, 2017, 28, 475202.	2.7	34
86	Effect of Charge Localization on the Effective Hyperfine Interaction in Organic Semiconducting Polymers. Physical Review Letters, 2018, 120, 086602.	8.0	33
87	Low temperature synthesis of hierarchical TiO₂ nanostructures for high performance perovskite solar cells by pulsed laser deposition. Physical Chemistry Chemical Physics, 2016, 18, 27067-27072.	2.9	31
88	Mapping mesoscopic phase evolution during E-beam induced transformations via deep learning of atomically resolved images. Npj Computational Materials, 2018, 4, .	9.1	31
89	Anisotropic Phonon Response of Fewâ€Layer PdSe₂ under Uniaxial Strain. Advanced Functional Materials, 2020, 30, 2003215.	16.5	31
90	Defects in Highly Anisotropic Transition-Metal Dichalcogenide PdSe₂. Journal of Physical Chemistry Letters, 2020, 11, 740-746.	4.9	30

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91	Multiwall nanotubes with intramolecular junctions (CNx/C): Preparation, rectification, logic gates, and application. Applied Physics Letters, 2004, 84, 4932-4934.	3.2	29
92	Synthesis and Photoluminescence Properties of 2D Phenethylammonium Lead Bromide Perovskite Nanocrystals. Small Methods, 2017, 1, 1700245.	9.6	29
93	Effect of Metal Doping and Vacancies on the Thermal Conductivity of Monolayer Molybdenum Diselenide. ACS Applied Materials & Interfaces, 2018, 10, 4921-4928.	8.3	29
94	Atomic Insight into Thermolysisâ€Driven Growth of 2D MoS₂. Advanced Functional Materials, 2019, 29, 1902149.	16.5	29
95	High-performance organic field-effect transistors with dielectric and active layers printed sequentially by ultrasonic spraying. Journal of Materials Chemistry C, 2013, 1, 4384.	5.6	27
96	Comparison of twice refocused spin echo versus stimulated echo diffusion tensor imaging for tracking muscle fibers. Journal of Magnetic Resonance Imaging, 2015, 41, 624-632.	3.6	27
97	Tilt Grain Boundary Topology Induced by Substrate Topography. ACS Nano, 2017, 11, 8612-8618.	15.3	27
98	Dynamic behavior of CH3NH3PbI3 perovskite twin domains. Applied Physics Letters, 2018, 113, .	3.2	27
99	Janus Monolayers for Ultrafast and Directional Charge Transfer in Transition Metal Dichalcogenide Heterostructures. ACS Nano, 2022, 16, 4197-4205.	15.3	26
100	Does Off-pump Coronary Revascularization Reduce the Release of the Cerebral Markers, S-100Î² and NSE?. Heart Lung and Circulation, 2006, 15, 314-319.	0.4	25
101	High-performance polymer photovoltaics based on rationally designed fullerene acceptors. Solar Energy Materials and Solar Cells, 2013, 118, 171-178.	6.3	25
102	Ultrafast Exciton Dissociation at the 2D-WS₂ Monolayer/Perovskite Interface. Journal of Physical Chemistry C, 2018, 122, 28910-28917.	3.3	25
103	Impact of Crystallographic Orientation Disorders on Electronic Heterogeneities in Metal Halide Perovskite Thin Films. Nano Letters, 2018, 18, 6271-6278.	9.5	25
104	Photocarrier Transfer across Monolayer MoS₂â€“MoSe₂ Lateral Heterojunctions. ACS Nano, 2018, 12, 7086-7092.	15.3	25
105	High performance field-effect transistors made of a multiwall CNx/C nanotube intramolecular junction. Applied Physics Letters, 2003, 83, 4824-4826.	3.2	24
106	Elucidation of Perovskite Film Micro-Orientations Using Two-Photon Total Internal Reflectance Fluorescence Microscopy. Journal of Physical Chemistry Letters, 2015, 6, 3283-3288.	4.9	24
107	Lightâ€Ferroic Interaction in Hybrid Organicâ€“Inorganic Perovskites. Advanced Optical Materials, 2019, 7, 1901451.	7.9	24
108	The growth and assembly of organic molecules and inorganic 2D materials on graphene for van der Waals heterostructures. Carbon, 2018, 131, 246-257.	10.7	23

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109	Lithographically patterned metallic conduction in single-layer MoS2 via plasma processing. Npj 2D Materials and Applications, 2019, 3, .	8.3	23
110	Atomically Precise PdSe₂ Pentagonal Nanoribbons. ACS Nano, 2020, 14, 1951-1957.	15.3	23
111	Layer-by-Layer Thinning of PdSe₂ Flakes via Plasma Induced Oxidation and Sublimation. ACS Applied Materials & Interfaces, 2020, 12, 7345-7350.	8.3	23
112	One-dimensional electron transport in Cu-tetracyanoquinodimethane organic nanowires. Applied Physics Letters, 2007, 90, 193115.	3.2	22
113	Reply to: On the ferroelectricity of CH3NH3PbI3 perovskites. Nature Materials, 2019, 18, 1051-1053.	26.6	22
114	Persistent photoconductivity in two-dimensional Mo_{1â^'x}W_xSe₂â€“MoSe₂ van der Waals heterojunctions. Journal of Materials Research, 2016, 31, 923-930.	2.6	21
115	Strain-Induced Growth of Twisted Bilayers during the Coalescence of Monolayer MoS₂ Crystals. ACS Nano, 2021, 15, 4504-4517.	15.3	21
116	Phase segregation mechanisms of small moleculeâ€polymer blends unraveled by varying polymer chain architecture. SmartMat, 2021, 2, 367-377.	14.9	21
117	Separating Bulk and Surface Contributions to Electronic Excited-State Processes in Hybrid Mixed Perovskite Thin Films via Multimodal All-Optical Imaging. Journal of Physical Chemistry Letters, 2017, 8, 3299-3305.	4.9	20
118	Stabilized Synthesis of 2D Verbeekite: Monoclinic PdSe₂ Crystals with High Mobility and In-Plane Optical and Electrical Anisotropy. ACS Nano, 2022, 16, 13900-13910.	15.3	19
119	Real-Time Diagnostics of 2D Crystal Transformations by Pulsed Laser Deposition: Controlled Synthesis of Janus WSSe Monolayers and Alloys. ACS Nano, 2023, 17, 2472-2486.	15.3	19
120	Separation of Distinct Photoexcitation Species in Femtosecond Transient Absorption Microscopy. ACS Photonics, 2016, 3, 434-442.	6.9	18
121	Selective Antisite Defect Formation in WS₂ Monolayers via Reactive Growth on Dilute Wâ€Au Alloy Substrates. Advanced Materials, 2022, 34, e2106674.	24.3	18
122	Understanding the Metal-Directed Growth of Single-Crystal M-TCNQF₄ Organic Nanowires with Time-Resolved, in Situ X-ray Diffraction and First-Principles Theoretical Studies. Journal of the American Chemical Society, 2012, 134, 14353-14361.	14.6	17
123	Peculiarity of Two Thermodynamically-Stable Morphologies and Their Impact on the Efficiency of Small Molecule Bulk Heterojunction Solar Cells. Scientific Reports, 2015, 5, 13407.	3.4	17
124	Spatial Mapping of Thermal Boundary Conductance at Metalâ€“Molybdenum Diselenide Interfaces. ACS Applied Materials & Interfaces, 2019, 11, 14418-14426.	8.3	17
125	Twin domains modulate light-matter interactions in metal halide perovskites. APL Materials, 2020, 8, .	4.8	17
126	Quantitative Phase Fraction Detection in Organic Photovoltaic Materials through EELS Imaging. Polymers, 2015, 7, 2446-2460.	4.6	16

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127	In situ laser reflectivity to monitor and control the nucleation and growth of atomically thin 2D materials*. 2D Materials, 2020, 7, 025048.	4.5	16
128	Excitonâ€“Exciton Annihilation in Copper-phthalocyanine Single-Crystal Nanowires. Journal of Physical Chemistry C, 2012, 116, 21588-21593.	3.3	15
129	Morphological origin for the stratification of P3HT:PCBM blend film studied by neutron reflectometry. Applied Physics Letters, 2013, 103, .	3.2	14
130	Defect detection in atomic-resolution images via unsupervised learning with translational invariance. Npj Computational Materials, 2021, 7, .	9.1	14
131	Ion Migration Studies in Exfoliated 2D Molybdenum Oxide via Ionic Liquid Gating for Neuromorphic Device Applications. ACS Applied Materials & Interfaces, 2018, 10, 22623-22631.	8.3	13
132	Simplification of femtosecond transient absorption microscopy data from CH₃NH₃PbI₃perovskite thin films into decay associated amplitude maps. Nanotechnology, 2016, 27, 114002.	2.7	11
133	Relationship between the Nature of Monovalent Cations and Charge Recombination in Metal Halide Perovskites. ACS Applied Energy Materials, 2020, 3, 1298-1304.	5.3	11
134	Molecular Scaffold Growth of Two-Dimensional, Strong Interlayer-Bonding-Layered Materials. CCS Chemistry, 2019, 1, 117-127.	8.6	11
135	Understanding Heterogeneities in Quantum Materials. Advanced Materials, 2023, 35, e2106909.	24.3	10
136	Heterogeneities at multiple length scales in 2D layered materials: From localized defects and dopants to mesoscopic heterostructures. Nano Research, 2021, 14, 1625-1649.	10.6	9
137	Unraveling the Fundamental Mechanisms of Solvent-Additive-Induced Optimization of Power Conversion Efficiencies in Organic Photovoltaic Devices. ACS Applied Materials & Interfaces, 2016, 8, 20220-20229.	8.3	8
138	Understanding Substrate-Guided Assembly in van der Waals Epitaxy by in Situ Laser Crystallization within a Transmission Electron Microscope. ACS Nano, 2021, 15, 8638-8652.	15.3	8
139	Atomic Defects and Edge Structure in Single-layer Ti₃C₂T_x MXene. Microscopy and Microanalysis, 2017, 23, 1704-1705.	0.4	7
140	Tip-induced local strain on <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mo>/</mml:mo><mml:mi>graphite</mml:mi></mml:mro detected by inelastic electron tunneling spectroscopy. Physical Review B, 2018, 97, .	3.3	7
141	Transformation of 2D group-III selenides to ultra-thin nitrides: enabling epitaxy on amorphous substrates. Nanotechnology, 2018, 29, 47LT02.	2.7	7
142	van der Waals Semiconductor Empowered Vertical Color Sensor. ACS Nano, 2022, 16, 8619-8629.	15.3	7
143	Atomic Edge-Guided Polyethylene Crystallization on Monolayer Two-Dimensional Materials. Macromolecules, 2022, 55, 559-567.	5.1	6
144	Excitation-Dependent Anisotropic Raman Response of Atomically Thin Pentagonal PdSe₂. ACS Physical Chemistry Au, 2022, 2, 482-489.	4.1	6

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145	High-speed mapping of surface charge dynamics using sparse scanning Kelvin probe force microscopy. Nature Communications, 2023, 14, .	13.2	6
146	Revealing the Preferred Interlayer Orientations and Stackings of Twoâ€Ðimensional Bilayer Gallium Selenide Crystals. Angewandte Chemie, 2015, 127, 2750-2755.	2.1	5
147	Connecting Femtosecond Transient Absorption Microscopy with Spatially Coregistered Time Averaged Optical Imaging Modalities. Journal of Physical Chemistry A, 2020, 124, 3915-3923.	2.6	4
148	Laser Interactions for the Synthesis and In Situ Diagnostics of Nanomaterials. Springer Series in Materials Science, 2014, , 143-173.	0.0	4
149	Nanophase Engineering of Organic Semiconductor-Based Solar Cells. Springer Series in Materials Science, 2016, , 197-228.	0.0	3
150	Socioeconomic adversityâ€”an important barrier to healthy aging. BMJ: British Medical Journal, 2018, 360, k1288.	5.6	3
151	Use of Impedance Spectroscopy for the Characterization of In-Vitro Osteoblast Cell Response in Porous Titanium Bone Implants. Metals, 2020, 10, 1077.	2.4	3
152	The role of mid-gap phonon modes in thermal transport of transition metal dichalcogenides. Journal of Physics Condensed Matter, 2020, 32, 025306.	1.9	3
153	Magnetostriction of Î±-RuCl₃ Flakes in the Zigzag Phase. Journal of Physical Chemistry C, 2021, 125, 25687-25694.	3.3	3
154	Controllable Growth of Perovskite Films by Roomâ€Temperature Air Exposure for Efficient Planar Heterojunction Photovoltaic Cells. Angewandte Chemie, 2015, 127, 15075-15078.	2.1	2
155	Perovskite Materials: Solar Cell and Optoelectronic Applications. , 0, , 1-14.		2
156	On the origin of spatially dependent electronic excited-state dynamics in mixed hybrid perovskite thin films. Lithuanian Journal of Physics, 2019, 58, .	0.4	2
157	Laser Synthesis, Processing, and Spectroscopy of Atomically-Thin Two Dimensional Materials. Springer Series in Materials Science, 2018, , 1-37.	0.0	1
158	Automatic detection of crystallographic defects in STEM images by unsupervised learning with translational invariance. Microscopy and Microanalysis, 2021, 27, 1460-1462.	0.4	1
159	Nonequilibrium synthesis and processing approaches to tailor heterogeneity in 2D materials. , 2022, , 221-258.		1
160	Laser synthesis and processing of atomically thin 2D materials. Trends in Chemistry, 2022, 4, 769-772.	9.0	1
161	Deep learning with plasma plume image sequences for anomaly detection and prediction of growth kinetics during pulsed laser deposition. Npj Computational Materials, 2024, 10, .	9.1	1
162	Mining Conserved Structures of Enzymes from Functional Hierarchical Classification. , 2007, , .		0

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163	In Situ X-Ray Studies of Crystallization Kinetics and Ordering in Functional Organic and Hybrid Materials. , 2018, , 33-60.		0
164	Investigation of Structural Phases in Mo1-xWxTe2 in STEM. Microscopy and Microanalysis, 2020, 26, 2362-2364.	0.4	0
165	Designing Atomic Edge Structures in 2D Transition Metal Dichalcogenides for Improved Catalytic Activity. Microscopy and Microanalysis, 2021, 27, 964-965.	0.4	0
166	Atomic-scale Feedback-controlled Electron Beam Fabrication of 2D Materials. Microscopy and Microanalysis, 2021, 27, 3072-3073.	0.4	0
167	Growing tunable moirÃ© matter. Nature Materials, 2024, 23, 308-309.	26.6	0
168	Nanoscale Probing of Electrical Memory Effects in van der Waals Layered PdSe₂. ACS Applied Materials & Interfaces, 2024, 16, 3665-3673.	8.3	0
169	Selected Area Manipulation of MoS₂ via Focused Electron Beam-Induced Etching for Nanoscale Device Editing. ACS Applied Materials & Interfaces, 2024, 16, 9144-9154.	8.3	0