

Tao Xu

List of Publications by Year in descending order

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84
papers

6,556
citations

196777

29
h-index

75989

78
g-index

86
all docs

86
docs citations

86
times ranked

13895
citing authors

#	ARTICLE	IF	CITATIONS
19	Phase transformation at controlled locations in nanowires by in situ electron irradiation. Nano Research, 2020, 13, 1912-1919.	5.8	8
20	In situ interface engineering for probing the limit of quantum dot photovoltaic devices. Nature Nanotechnology, 2019, 14, 950-956.	15.6	30
21	Controlled Vapor Growth and Nonlinear Optical Applications of Large-Area 3R Phase WS ₂ and WSe ₂ Atomic Layers. Advanced Functional Materials, 2019, 29, 1806874.	7.8	92
22	Controllable Growth of Lead-Free All-Inorganic Perovskite Nanowire Array with Fast and Stable Near-Infrared Photodetection. Journal of Physical Chemistry C, 2019, 123, 17566-17573.	1.5	78
23	Precisely monitoring and tailoring 2D nanostructures at the atomic scale. APL Materials, 2019, 7, .	2.2	16
24	Novel Interface in CuAg Nanostructure Induced by Size Effect. Journal of Physical Chemistry Letters, 2019, 10, 1973-1980.	2.1	19
25	Chemical vapor deposition synthesis of two-dimensional freestanding transition metal oxychloride for electronic applications. Science China Information Sciences, 2019, 62, 1.	2.7	5
26	Compact and low loss electrochemical capacitors using a graphite / carbon nanotube hybrid material for miniaturized systems. Journal of Power Sources, 2019, 412, 374-383.	4.0	32
27	In Situ Observation of Crystalline Silicon Growth from SiO ₂ at Atomic Scale. Research, 2019, 2019, 3289247.	2.8	8
28	Defect Engineering in 2D Materials: Precise Manipulation and Improved Functionalities. Research, 2019, 2019, 4641739.	2.8	101
29	A Novel Domain-Confined Growth Strategy for In Situ Controllable Fabrication of Individual Hollow Nanostructures. Advanced Science, 2018, 5, 1700213.	5.6	10
30	Bidirectional Photoswitching via Alternating NIR and UV Irradiation on a Core-Shell UCNPs@SCO Nanosphere. ACS Applied Materials & Interfaces, 2018, 10, 16666-16673.	4.0	34
31	In Situ Repair of 2D Chalcogenides under Electron Beam Irradiation. Advanced Materials, 2018, 30, e1705954.	11.1	36
32	In situ atomic-scale observation of monolayer graphene growth from SiC. Nano Research, 2018, 11, 2809-2820.	5.8	21
33	Simultaneous atomic-level visualization and high precision photocurrent measurements on photoelectric devices by in situ TEM. RSC Advances, 2018, 8, 948-953.	1.7	7
34	Combination of Fe-Mn based Li-rich cathode materials and conducting-polymer polypyrrole nanowires with high rate capability. Ionics, 2018, 24, 51-60.	1.2	6
35	In situ observation of atomic-scale stability limit of Cu nanoparticles. Materials Today Nano, 2018, 4, 32-37.	2.3	7
36	Defect Engineering for Modulating the Trap States in 2D Photoconductors. Advanced Materials, 2018, 30, e1804332.	11.1	146

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37	In-situ TEM Study on Sub-10 nm Materials. <i>Microscopy and Microanalysis</i> , 2018, 24, 1650-1651.	0.2	0
38	Structural defects in graphene. , 2018, , 137-160.		28
39	Low-temperature Eutectic Synthesis of PtTe ₂ with Weak Antilocalization and Controlled Layer Thinning. <i>Advanced Functional Materials</i> , 2018, 28, 1803746.	7.8	70
40	A Highly Skin-Conformal and Biodegradable Graphene-Based Strain Sensor. <i>Small Methods</i> , 2018, 2, 1700374.	4.6	41
41	Improving Thermal Transport at Carbon Hybrid Interfaces by Covalent Bonds. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800318.	1.9	20
42	Molecular Origin of Donor- and Acceptor-Rich Domain Formation in Bulk-Heterojunction Solar Cells with an Enhanced Charge Transport Efficiency. <i>Journal of Physical Chemistry C</i> , 2017, 121, 5864-5870.	1.5	18
43	Electrically driven cation exchange for in situ fabrication of individual nanostructures. <i>Nature Communications</i> , 2017, 8, 14889.	5.8	29
44	Broken Symmetry Induced Strong Nonlinear Optical Effects in Spiral WS ₂ Nanosheets. <i>ACS Nano</i> , 2017, 11, 4892-4898.	7.3	123
45	Surface Energy and Surface Stability of Ag Nanocrystals at Elevated Temperatures and Their Dominance in Sublimation-Induced Shape Evolution. <i>Small</i> , 2017, 13, 1700743.	5.2	27
46	Magnetic properties of Co ₃ O ₄ nanoparticles on graphene substrate. <i>Journal of Alloys and Compounds</i> , 2017, 720, 345-351.	2.8	27
47	Vapor Growth and Tunable Lasing of Band Gap Engineered Cesium Lead Halide Perovskite Micro/Nanorods with Triangular Cross Section. <i>ACS Nano</i> , 2017, 11, 1189-1195.	7.3	245
48	Directional Growth of Ultralong CsPbBr ₃ Perovskite Nanowires for High-Performance Photodetectors. <i>Journal of the American Chemical Society</i> , 2017, 139, 15592-15595.	6.6	260
49	Growth and assembly of cobalt oxide nanoparticle rings at liquid nanodroplets with solid junction. <i>Nanoscale</i> , 2017, 9, 13915-13921.	2.8	10
50	Electron Beam Etching of CaO Crystals Observed Atom by Atom. <i>Nano Letters</i> , 2017, 17, 5119-5125.	4.5	20
51	Van der Waals epitaxial growth and optoelectronics of large-scale WSe ₂ /SnS ₂ vertical bilayer p-n junctions. <i>Nature Communications</i> , 2017, 8, 1906.	5.8	369
52	Damage-free and rapid transfer of CVD-grown two-dimensional transition metal dichalcogenides by dissolving sacrificial water-soluble layers. <i>Nanoscale</i> , 2017, 9, 19124-19130.	2.8	27
53	Creating the Smallest BN Nanotube from Bilayer h-BN. <i>Advanced Functional Materials</i> , 2017, 27, 1603897.	7.8	28
54	<italic>In-situ study of electron irradiation on two-dimensional layered materials. <i>Chinese Science Bulletin</i> , 2017, 62, 2919-2930.	0.4	7

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55	Enhanced Ultraviolet Photon Capture in Ligand-Sensitized Nanocrystals. ACS Photonics, 2016, 3, 547-552.	3.2	18
56	Investigation on material behavior in liquid by in situ TEM. Superlattices and Microstructures, 2016, 99, 24-34.	1.4	14
57	Electron transport and device physics in monolayer transition-metal dichalcogenides. , 2016, , .		2
58	A facile strategy for rapid preparation of graphene spongy balls. Scientific Reports, 2016, 6, 32746.	1.6	4
59	Sublimation of Ag nanocrystals and their wetting behaviors with graphene and carbon nanotubes. Carbon, 2016, 101, 368-376.	5.4	27
60	A single iron site confined in a graphene matrix for the catalytic oxidation of benzene at room temperature. Science Advances, 2015, 1, e1500462.	4.7	719
61	The observation of square ice in graphene questioned. Nature, 2015, 528, E1-E2.	13.7	95
62	Dynamic In-situ Experimentation on Nanomaterials at the Atomic Scale. Small, 2015, 11, 3247-3262.	5.2	36
63	Ultra-High Quantum Yield of Graphene Quantum Dots: Aromatic-Nitrogen Doping and Photoluminescence Mechanism. Particle and Particle Systems Characterization, 2015, 32, 434-440.	1.2	182
64	Controllable Atomic-Scale Sculpting and Deposition of Carbon Nanostructures on Graphene. Small, 2014, 10, 1724-1728.	5.2	30
65	Towards intrinsic charge transport in monolayer molybdenum disulfide by defect and interface engineering. Nature Communications, 2014, 5, 5290.	5.8	563
66	Gram-scale synthesis of single-crystalline graphene quantum dots with superior optical properties. Nature Communications, 2014, 5, 5357.	5.8	750
67	Liquid-like pseudoelasticity of sub-10-nm crystalline silver particles. Nature Materials, 2014, 13, 1007-1012.	13.3	255
68	In Situ Atom Scale Visualization of Domain Wall Dynamics in VO ₂ Insulator-Metal Phase Transition. Scientific Reports, 2014, 4, 6544.	1.6	31
69	Synthesis of graphene-CNT hybrids via joule heating: Structural characterization and electrical transport. Carbon, 2013, 53, 260-268.	5.4	28
70	Hopping transport through defect-induced localized states in molybdenum disulphide. Nature Communications, 2013, 4, 2642.	5.8	935
71	Surface energy guided sub-10 nm hierarchy structures fabrication by direct e-beam etching. RSC Advances, 2013, 3, 17860.	1.7	3
72	Self healing of defected graphene. Applied Physics Letters, 2013, 102, .	1.5	105

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73	Mechanism of Photoluminescence from Chemically Derived Graphene Oxide: Role of Chemical Reduction. <i>Advanced Optical Materials</i> , 2013, 1, 926-932.	3.6	160
74	Fabrication of nanopores using electron beam. , 2013, , .		6
75	<i>In situ</i> observation of nickel as an oxidizable electrode material for the solid-electrolyte-based resistive random access memory. <i>Applied Physics Letters</i> , 2013, 102, .	1.5	65
76	Top-down fabrication of sub-nanometre semiconducting nanoribbons derived from molybdenum disulfide sheets. <i>Nature Communications</i> , 2013, 4, 1776.	5.8	220
77	Graphene as dry adhesive interacting with semiconductor substrates. , 2013, , .		0
78	Charge Supported Growth and Superplasticity of Sodium Nanostructures. <i>Crystal Growth and Design</i> , 2012, 12, 3899-3905.	1.4	10
79	Size-Dependent Evolution of Graphene Nanopores Under Thermal Excitation. <i>Small</i> , 2012, 8, 3422-3426.	5.2	47
80	Direct observation of blocked nanoscale surface evaporation on SiO ₂ nanodroplets. <i>Applied Physics Letters</i> , 2012, 101, 183114.	1.5	1
81	Fullerene as electrical hinge. <i>Applied Physics Letters</i> , 2012, 100, 193111.	1.5	6
82	Investment casting of carbon tubular structures. <i>Carbon</i> , 2012, 50, 2845-2852.	5.4	13
83	Nano-ballistas based on carbon nanotubes. , 2010, , .		0
84	Vibrational behavior of graphene nanoribbon-based nanoresonators. , 2010, , .		0