

# Yuanyuan Shi

## List of Publications by Year in descending order

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Version: 2024-02-01

64  
papers

2,831  
citations

279487

23  
h-index

197535

49  
g-index

65  
all docs

65  
docs citations

65  
times ranked

3577  
citing authors

#	ARTICLE	IF	CITATIONS
1	Temperature of Conductive Nanofilaments in Hexagonal Boron Nitride Based Memristors Showing Threshold Resistive Switching. <i>Advanced Electronic Materials</i> , 2022, 8, 2100580.	2.6	16
2	ALD Encapsulation of CVD WS <sub>2</sub> for Stable and High-Performance FET Devices. , 2021, , .		3
3	Engineering Wafer-Scale Epitaxial Two-Dimensional Materials through Sapphire Template Screening for Advanced High-Performance Nanoelectronics. <i>ACS Nano</i> , 2021, 15, 9482-9494.	7.3	26
4	Advanced Data Encryption â€œusing 2D Materials. <i>Advanced Materials</i> , 2021, 33, e2100185.	11.1	67
5	Superior electrostatic control in uniform monolayer MoS <sub>2</sub> scaled transistors via in-situ surface smoothing. , 2021, , .		8
6	Dual gate synthetic MoS <sub>2</sub> MOSFETs with 4.56â€‰F/cm <sup>2</sup> channel capacitance, 320â€‰S/â€‰m Gm and 420 â€‰A/â€‰m Id at 1V Vd/100nm Lg. , 2021, , .		5
7	Aging of a Vanadium Precursor Solution: Influencing Material Properties and Photoelectrochemical Water Oxidation Performance of Solutionâ€œProcessed BiVO <sub>4</sub> Photoanodes. <i>Advanced Functional Materials</i> , 2020, 30, 1806662.	7.8	16
8	Engineering Field Effect Transistors with 2D Semiconducting Channels: Status and Prospects. <i>Advanced Functional Materials</i> , 2020, 30, 1901971.	7.8	58
9	Water oxidation electrocatalysis using ruthenium coordination oligomers adsorbed on multiwalled carbon nanotubes. <i>Nature Chemistry</i> , 2020, 12, 1060-1066.	6.6	54
10	Wafer-scale integration of two-dimensional materials in high-density memristive crossbar arrays for artificial neural networks. <i>Nature Electronics</i> , 2020, 3, 638-645.	13.1	222
11	High Solar-to-Hydrogen Conversion Efficiency at pH 7 Based on a PV-EC Cell with an Oligomeric Molecular Anode. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 55856-55864.	4.0	16
12	150â€‰nm Ã— 200â€‰nm Crossâ€œPoint Hexagonal Boron Nitrideâ€œBased Memristors. <i>Advanced Electronic Materials</i> , 2020, 6, 1900115.	2.6	22
13	Field Effect Transistors: Engineering Field Effect Transistors with 2D Semiconducting Channels: Status and Prospects ( <i>Adv. Funct. Mater.</i> 18/2020). <i>Advanced Functional Materials</i> , 2020, 30, 2070116.	7.8	0
14	Transmission Electron Microscopyâ€œBased Statistical Analysis of Commercially Available Graphene Oxide Quantum Dots. <i>Crystal Research and Technology</i> , 2020, 55, 1900231.	0.6	8
15	Electroforming in Metal-Oxide Memristive Synapses. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 11806-11814.	4.0	23
16	Sources of variability in scaled MoS <sub>2</sub> FETs. , 2020, , .		11
17	Variability of metal/h-BN/metal memristors grown via chemical vapor deposition on different materials. <i>Microelectronics Reliability</i> , 2019, 102, 113410.	0.9	17
18	Potassium Hydroxide Mixed with Lithium Hydroxide: An Advanced Electrolyte for Oxygen Evolution Reaction. <i>Solar Rrl</i> , 2019, 3, 1900195.	3.1	4

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19	Grapheneâ€“Boron Nitrideâ€“Graphene Cross-Point Memristors with Three Stable Resistive States. ACS Applied Materials & Interfaces, 2019, 11, 37999-38005.	4.0	52
20	Memristive Electronic Synapses Made by Anodic Oxidation. Chemistry of Materials, 2019, 31, 8394-8401.	3.2	26
21	Tristate Resistive Switching in Heterogenous Van Der Waals Dielectric Structures. , 2019, , .		1
22	Recommended Methods to Study Resistive Switching Devices. Advanced Electronic Materials, 2019, 5, 1800143.	2.6	452
23	Scaling the CBRAM Switching Layer Diameter to 30 nm Improves Cycling Endurance. IEEE Electron Device Letters, 2018, 39, 23-26.	2.2	24
24	Experimental Observation and Mitigation of Dielectric Screening in Hexagonal Boron Nitride Based Resistive Switching Devices. Crystal Research and Technology, 2018, 53, 1800006.	0.6	8
25	Bimodal Dielectric Breakdown in Electronic Devices Using Chemical Vapor Deposited Hexagonal Boron Nitride as Dielectric. Advanced Electronic Materials, 2018, 4, 1700506.	2.6	13
26	Nano-carriers for targeted delivery and biomedical imaging enhancement. Therapeutic Delivery, 2018, 9, 451-468.	1.2	61
27	3D Monolithic Stacked 1T1R cells using Monolayer MoS <sub>2</sub> ; FET and hBN RRAM Fabricated at Low (150Å°C) Temperature. , 2018, , .		25
28	On the Limits of Scalpel AFM for the 3D Electrical Characterization of Nanomaterials. Advanced Functional Materials, 2018, 28, 1802266.	7.8	19
29	Using Liquid Electrolytes in Dielectric Reliability Studies. , 2018, , .		0
30	Uniformity of Multilayer Hexagonal Boron Nitride Dielectric Stacks Grown by Chemical Vapor Deposition on Platinum and Copper Substrates. , 2018, , .		0
31	Synthesis of large-area multilayer hexagonal boron nitride sheets on iron substrates and its use in resistive switching devices. 2D Materials, 2018, 5, 031011.	2.0	45
32	Enhanced reliability of hexagonal boron nitride dielectric stacks due to high thermal conductivity. , 2018, , .		1
33	Electronic synapses made of layered two-dimensional materials. Nature Electronics, 2018, 1, 458-465.	13.1	459
34	Coexistence of Grainâ€“Boundariesâ€“Assisted Bipolar and Threshold Resistive Switching in Multilayer Hexagonal Boron Nitride. Advanced Functional Materials, 2017, 27, 1604811.	7.8	229
35	High-resolution characterization of hexagonal boron nitride coatings exposed to aqueous and air oxidative environments. Nano Research, 2017, 10, 2046-2055.	5.8	21
36	Enhanced piezoelectric effect at the edges of stepped molybdenum disulfide nanosheets. Nanoscale, 2017, 9, 6237-6245.	2.8	24

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37	Resistive Switching: Coexistence of Grain-Boundaries-Assisted Bipolar and Threshold Resistive Switching in Multilayer Hexagonal Boron Nitride (Adv. Funct. Mater. 10/2017). Advanced Functional Materials, 2017, 27, .	7.8	4
38	Model for multi-filamentary conduction in graphene/hexagonal-boron-nitride/graphene based resistive switching devices. 2D Materials, 2017, 4, 025099.	2.0	51
39	Distinguishing Oxygen Vacancy Electromigration and Conductive Filament Formation in TiO <sub>2</sub> Resistance Switching Using Liquid Electrolyte Contacts. Nano Letters, 2017, 17, 4390-4399.	4.5	50
40	Substitution of native silicon oxide by titanium in Ni-coated silicon photoanodes for water splitting solar cells. Journal of Materials Chemistry A, 2017, 5, 1996-2003.	5.2	20
41	Variability of graphene devices fabricated using graphene inks: Atomic force microscope tips. Surface and Coatings Technology, 2017, 320, 391-395.	2.2	6
42	Dielectric Breakdown in Chemical Vapor Deposited Hexagonal Boron Nitride. ACS Applied Materials & Interfaces, 2017, 9, 39758-39770.	4.0	48
43	Piezoelectricity in two dimensions: Graphene vs. molybdenum disulfide. Applied Physics Letters, 2017, 111, .	1.5	27
44	Photo-electrochemical water splitting in silicon based photocathodes enhanced by plasmonic/catalytic nanostructures. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2017, 225, 128-133.	1.7	13
45	Resistive Random Access Memory Cells with a Bilayer TiO <sub>2</sub> /SiO <sub>x</sub> Insulating Stack for Simultaneous Filamentary and Distributed Resistive Switching. Advanced Functional Materials, 2017, 27, 1700384.	7.8	70
46	Coexistence of volatile and non-volatile resistive switching in 2D h-BN based electronic synapses. , 2017, , .		17
47	Graphene Coated Nanoprobes: A Review. Crystals, 2017, 7, 269.	1.0	15
48	Characterization of the photocurrents generated by the laser of atomic force microscopes. Review of Scientific Instruments, 2016, 87, 083703.	0.6	4
49	Boron nitride as two dimensional dielectric: Reliability and dielectric breakdown. Applied Physics Letters, 2016, 108, .	1.5	98
50	2D h-BN based RRAM devices. , 2016, , .		33
51	Ageing mechanisms of highly active and stable nickel-coated silicon photoanodes for water splitting. Journal of Materials Chemistry A, 2016, 4, 8053-8060.	5.2	29
52	Nanoscale homogeneity and degradation process of two dimensional atomically thin hexagonal boron nitride dielectric stacks. , 2016, , .		0
53	Fabrication of scalable and ultra low power photodetectors with high light/dark current ratios using polycrystalline monolayer MoS <sub>2</sub> sheets. Nano Energy, 2016, 30, 494-502.	8.2	19
54	On the use of two dimensional hexagonal boron nitride as dielectric. Microelectronic Engineering, 2016, 163, 119-133.	1.1	96

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55	CuO-Functionalized Silicon Photoanodes for Photoelectrochemical Water Splitting Devices. ACS Applied Materials & Interfaces, 2016, 8, 696-702.	4.0	29
56	Moving graphene devices from lab to market: advanced graphene-coated nanopores. Nanoscale, 2016, 8, 8466-8473.	2.8	31
57	Nanoscale characterization of PM2.5 airborne pollutants reveals high adhesiveness and aggregation capability of soot particles. Scientific Reports, 2015, 5, 11232.	1.6	61
58	Note: Fabrication of a fast-response and user-friendly environmental chamber for atomic force microscopes. Review of Scientific Instruments, 2015, 86, 106105.	0.6	5
59	New insights on the origin of Resistive switching in HfO <sub>2</sub> thin films: The role of local mechanical strength. , 2015, , .		0
60	Mechanical properties of locally oxidized graphene electrodes. Archive of Applied Mechanics, 2015, 85, 339-345.	1.2	8
61	On the ageing mechanisms of graphene-on-metal electrodes. , 2015, , .		2
62	In Situ Demonstration of the Link Between Mechanical Strength and Resistive Switching in Resistive Random-Access Memories. Advanced Electronic Materials, 2015, 1, 1400058.	2.6	13
63	(Invited) Elucidating the Origin of Resistive Switching in Ultrathin Hafnium Oxides through High Spatial Resolution Tools. ECS Transactions, 2014, 64, 19-28.	0.3	13
64	Ageing mechanisms and reliability of graphene-based electrodes. Nano Research, 2014, 7, 1820-1831.	5.8	23