Tania Roy

List of Publications by Year in descending order

31 papers	2,846 citations	304368 22 h-index	476904 29 g-index
31 all docs	31 docs citations	31 times ranked	4995 citing authors

#	Article	IF	Citations
1	Field-Effect Transistors Built from All Two-Dimensional Material Components. ACS Nano, 2014, 8, 6259-6264.	7.3	582
2	Dual-Gated MoS₂/WSe₂ van der Waals Tunnel Diodes and Transistors. ACS Nano, 2015, 9, 2071-2079.	7.3	560
3	The Role of Graphene and Other 2D Materials in Solar Photovoltaics. Advanced Materials, 2019, 31, e1802722.	11.1	268
4	2D-2D tunneling field-effect transistors using WSe2/SnSe2 heterostructures. Applied Physics Letters, 2016, 108, .	1.5	252
5	Ultrasensitive and ultrathin phototransistors and photonic synapses using perovskite quantum dots grown from graphene lattice. Science Advances, 2020, 6, eaay5225.	4.7	178
6	Engineering Light Outcoupling in 2D Materials. Nano Letters, 2015, 15, 1356-1361.	4.5	138
7	A leaf-inspired photon management scheme using optically tuned bilayer nanoparticles for ultra-thin and highly efficient photovoltaic devices. Nano Energy, 2019, 58, 47-56.	8.2	86
8	Novel mesoporous electrode materials for symmetric, asymmetric and hybrid supercapacitors. Nanotechnology, 2019, 30, 202001.	1.3	75
9	Artificial Neuron using Vertical MoS2/Graphene Threshold Switching Memristors. Scientific Reports, 2019, 9, 53.	1.6	69
10	2D MoS₂-Based Threshold Switching Memristor for Artificial Neuron. IEEE Electron Device Letters, 2020, 41, 936-939.	2.2	64
11	Optoelectronic synapse using monolayer MoS2 field effect transistors. Scientific Reports, 2020, 10, 21870.	1.6	61
12	Electronic synapses with near-linear weight update using MoS2/graphene memristors. Applied Physics Letters, 2019, 115, .	1.5	52
13	Thickness-Independent Semiconducting-to-Metallic Conversion in Wafer-Scale Two-Dimensional PtSe₂ Layers by Plasma-Driven Chalcogen Defect Engineering. ACS Applied Materials & Interfaces, 2020, 12, 14341-14351.	4.0	51
14	Multiwavelength Optoelectronic Synapse with 2D Materials for Mixed-Color Pattern Recognition. ACS Nano, 2022, 16, 10188-10198.	7.3	47
15	Two-Dimensional/Three-Dimensional Schottky Junction Photovoltaic Devices Realized by the Direct CVD Growth of vdW 2D PtSe₂ Layers on Silicon. ACS Applied Materials & Interfaces, 2019, 11, 27251-27258.	4.0	46
16	Two-Dimensional Near-Atom-Thickness Materials for Emerging Neuromorphic Devices and Applications. IScience, 2020, 23, 101676.	1.9	44
17	MoS₂ Synapses with Ultra-low Variability and Their Implementation in Boolean Logic. ACS Nano, 2022, 16, 2866-2876.	7.3	38
18	Artificial Nociceptor Using 2D MoS₂ Threshold Switching Memristor. IEEE Electron Device Letters, 2020, 41, 1440-1443.	2.2	37

#	Article	IF	Citations
19	Uniform Vapor-Pressure-Based Chemical Vapor Deposition Growth of MoS₂ Using MoO₃ Thin Film as a Precursor for Coevaporation. ACS Omega, 2018, 3, 18943-18949.	1.6	30
20	Growing Perovskite Quantum Dots on Carbon Nanotubes for Neuromorphic Optoelectronic Computing. Advanced Electronic Materials, 2021, 7, .	2.6	29
21	Centimeter-Scale 2D van der Waals Vertical Heterostructures Integrated on Deformable Substrates Enabled by Gold Sacrificial Layer-Assisted Growth. Nano Letters, 2017, 17, 6157-6165.	4.5	28
22	Scalable Van der Waals Two-Dimensional PtTe₂ Layers Integrated onto Silicon for Efficient Near-to-Mid Infrared Photodetection. ACS Applied Materials & Interfaces, 2021, 13, 15542-15550.	4.0	27
23	Centimeter-Scale Periodically Corrugated Few-Layer 2D MoS₂ with Tensile Stretch-Driven Tunable Multifunctionalities. ACS Applied Materials & Interfaces, 2018, 10, 30623-30630.	4.0	21
24	High quality gate dielectric/MoS2 interfaces probed by the conductance method. Applied Physics Letters, 2018, 112, .	1.5	19
25	Grapheneâ€“oxide interface for optoelectronic synapse application. Scientific Reports, 2022, 12, 5880.	1.6	11
26	2D layered materials: From materials properties to device applications. , 2015, , .		9
27	2D Materials: The Role of Graphene and Other 2D Materials in Solar Photovoltaics (Adv. Mater. 1/2019). Advanced Materials, 2019, 31, 1970006.	11.1	8
28	Total-Ionizing-Dose Response of MoS₂Transistors With ZrO₂and h-BN Gate Dielectrics. IEEE Transactions on Nuclear Science, 2019, 66, 1584-1591.	1.2	6
29	Graphene Enhances Actin Filament Assembly Kinetics and Modulates NIH-3T3 Fibroblast Cell Spreading. International Journal of Molecular Sciences, 2022, 23, 509.	1.8	6
30	Semiconductor-to-metal transition in atomic layer deposition (ALD) of VO2 films using VCl4 and water. Applied Physics Letters, 2021, 118, .	1.5	4
31	The artificial intelligent Pixel (aiPixel). , 2022, , .		0