

Muhammad Farooq Khan

List of Publications by Year in descending order

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74
papers

2,386
citations

218677

26
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233421

45
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74
docs citations

74
times ranked

3533
citing authors

#	ARTICLE	IF	CITATIONS
1	High-mobility and air-stable single-layer WS ₂ field-effect transistors sandwiched between chemical vapor deposition-grown hexagonal BN films. <i>Scientific Reports</i> , 2015, 5, 10699.	3.3	258
2	Highly Stable and Tunable Chemical Doping of Multilayer WS ₂ Field Effect Transistor: Reduction in Contact Resistance. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 23589-23596.	8.0	120
3	Large-area, continuous and high electrical performances of bilayer to few layers MoS ₂ fabricated by RF sputtering via post-deposition annealing method. <i>Scientific Reports</i> , 2016, 6, 30791.	3.3	104
4	n-MoS ₂ /p-Si Solar Cells with Al ₂ O ₃ Passivation for Enhanced Photogeneration. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 29383-29390.	8.0	77
5	Synthesis and characterization of large-area and continuous MoS ₂ atomic layers by RF magnetron sputtering. <i>Nanoscale</i> , 2016, 8, 4340-4347.	5.6	74
6	Synthesis, properties and novel electrocatalytic applications of the 2D-borophene Xenes. <i>Progress in Solid State Chemistry</i> , 2020, 59, 100283.	7.2	65
7	Room temperature spin valve effect in NiFe/WS ₂ /Co junctions. <i>Scientific Reports</i> , 2016, 6, 21038.	3.3	64
8	Ultimate limit in size and performance of WSe ₂ vertical diodes. <i>Nature Communications</i> , 2018, 9, 5371.	12.8	63
9	Deep-ultraviolet-light-driven reversible doping of WS ₂ field-effect transistors. <i>Nanoscale</i> , 2015, 7, 747-757.	5.6	62
10	Temperature-Dependent and Gate-Tunable Rectification in a Black Phosphorus/WS ₂ van der Waals Heterojunction Diode. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 13150-13157.	8.0	61
11	Enhanced photoresponse of ZnO quantum dot-decorated MoS ₂ thin films. <i>RSC Advances</i> , 2017, 7, 16890-16900.	3.6	59
12	MoTe ₂ van der Waals homojunction p-n diode with low resistance metal contacts. <i>Nanoscale</i> , 2019, 11, 9518-9525.	5.6	54
13	Thickness-dependent resistive switching in black phosphorus CBRAM. <i>Journal of Materials Chemistry C</i> , 2019, 7, 725-732.	5.5	51
14	Thickness-dependent efficiency of directly grown graphene based solar cells. <i>Carbon</i> , 2019, 148, 187-195.	10.3	49
15	Improving the electrical properties of graphene layers by chemical doping. <i>Science and Technology of Advanced Materials</i> , 2014, 15, 055004.	6.1	46
16	Photocurrent Response of MoS ₂ Field-Effect Transistor by Deep Ultraviolet Light in Atmospheric and N ₂ Gas Environments. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 21645-21651.	8.0	44
17	Comparison of Electrical and Photoelectrical Properties of ReS ₂ Field-Effect Transistors on Different Dielectric Substrates. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 32501-32509.	8.0	44
18	Tuning the electrical properties of exfoliated graphene layers using deep ultraviolet irradiation. <i>Journal of Materials Chemistry C</i> , 2014, 2, 5404-5410.	5.5	40

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19	Tailoring the electrical and photo-electrical properties of a WS ₂ field effect transistor by selective n-type chemical doping. RSC Advances, 2016, 6, 24675-24682.	3.6	40
20	Tunable resistive switching of vertical ReSe ₂ /graphene hetero-structure enabled by Schottky barrier height and DUV light. Journal of Alloys and Compounds, 2021, 855, 157310.	5.5	37
21	Ultraviolet-light-driven doping modulation in chemical vapor deposition grown graphene. Physical Chemistry Chemical Physics, 2015, 17, 20551-20556.	2.8	36
22	Electrical and photo-electrical properties of MoS ₂ nanosheets with and without an Al ₂ O ₃ capping layer under various environmental conditions. Science and Technology of Advanced Materials, 2016, 17, 166-176.	6.1	36
23	High mobility ReSe ₂ field effect transistors: Schottky-barrier-height-dependent photoresponsivity and broadband light detection with Co decoration. 2D Materials, 2020, 7, 015010.	4.4	36
24	Enhanced electrical and broad spectral (UV-Vis-NIR) photodetection in a Gr/ReSe ₂ /Gr heterojunction. Dalton Transactions, 2020, 49, 10017-10027.	3.3	36
25	Putting DFT to the trial: First principles pressure dependent analysis on optical properties of cubic perovskite SrZrO ₃ . Computational Condensed Matter, 2015, 4, 32-39.	2.1	32
26	Black Phosphorus-IGZO van der Waals Diode with Low-Resistivity Metal Contacts. ACS Applied Materials & Interfaces, 2019, 11, 10959-10966.	8.0	31
27	Tuning of ionic mobility to improve the resistive switching behavior of Zn-doped CeO ₂ . Scientific Reports, 2019, 9, 19387.	3.3	28
28	Chemical Nature of Electrode and the Switching Response of RF-Sputtered NbO _x Films. Nanomaterials, 2020, 10, 2164.	4.1	28
29	Stable and Multilevel Data Storage Resistive Switching of Organic Bulk Heterojunction. Nanomaterials, 2021, 11, 359.	4.1	28
30	Layer dependent magnetoresistance of vertical MoS ₂ magnetic tunnel junctions. Nanoscale, 2018, 10, 16703-16710.	5.6	27
31	High performance complementary WS ₂ devices with hybrid Gr/Ni contacts. Nanoscale, 2020, 12, 21280-21290.	5.6	27
32	Optimization of ZnO:PEIE as an Electron Transport Layer for Flexible Organic Solar Cells. Energy & Fuels, 2021, 35, 12416-12424.	5.1	27
33	Layer-modulated, wafer scale and continuous ultra-thin WS ₂ films grown by RF sputtering via post-deposition annealing. Journal of Materials Chemistry C, 2016, 4, 7846-7852.	5.5	26
34	Neuro-Transistor Based on UV-Treated Charge Trapping in MoTe ₂ for Artificial Synaptic Features. Nanomaterials, 2020, 10, 2326.	4.1	26
35	Graphene foam "polymer based electronic skin for flexible tactile sensor. Sensors and Actuators A: Physical, 2021, 327, 112697.	4.1	26
36	Two- and four-probe field-effect and Hall mobilities in transition metal dichalcogenide field-effect transistors. RSC Advances, 2016, 6, 60787-60793.	3.6	24

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37	Development and prospects of surface passivation schemes for high-efficiency c-Si solar cells. <i>Solar Energy</i> , 2018, 166, 90-97.	6.1	24
38	Nitrogen-doped carbon integrated nickel-cobalt metal phosphide marigold flowers as a high capacity electrode for hybrid supercapacitors. <i>CrystEngComm</i> , 2020, 22, 6360-6370.	2.6	23
39	Solar cell based on vertical graphene nano hills directly grown on silicon. <i>Carbon</i> , 2020, 164, 235-243.	10.3	23
40	Effect of grain boundaries on electrical properties of polycrystalline graphene. <i>Carbon</i> , 2017, 112, 142-148.	10.3	22
41	Gate Tunable Transport in Graphene/MoS ₂ /(Cr/Au) Vertical Field-Effect Transistors. <i>Nanomaterials</i> , 2018, 8, 14.	4.1	22
42	Discrete memristive levels and logic gate applications of Nb ₂ O ₅ devices. <i>Journal of Alloys and Compounds</i> , 2021, 879, 160385.	5.5	22
43	Van der Waals heterojunction diode composed of WS ₂ flake placed on p-type Si substrate. <i>Nanotechnology</i> , 2018, 29, 045201.	2.6	21
44	Modification of the structural and electrical properties of graphene layers by Pt adsorbates. <i>Science and Technology of Advanced Materials</i> , 2014, 15, 055002.	6.1	20
45	Gate Modulation of the Spin-orbit Interaction in Bilayer Graphene Encapsulated by WS ₂ films. <i>Scientific Reports</i> , 2018, 8, 3412.	3.3	20
46	A facile route to a high-quality graphene/MoS ₂ vertical field-effect transistor with gate-modulated photocurrent response. <i>Journal of Materials Chemistry C</i> , 2017, 5, 2337-2343.	5.5	19
47	Current Rectification, Resistive Switching, and Stable NDR Effect in BaTiO ₃ /CeO ₂ Heterostructure Devices. <i>Advanced Electronic Materials</i> , 2021, 7, 2001237.	5.1	19
48	Stable and reversible doping of graphene by using KNO ₃ solution and photo-desorption current response. <i>RSC Advances</i> , 2015, 5, 50040-50046.	3.6	18
49	Effect of oxygen stoichiometry on the threshold switching of RF-sputtered NbO _x (x=2.5) films. <i>Materials Research Bulletin</i> , 2021, 144, 111492.	5.2	18
50	A novel MnO-CrN nanocomposite based non-enzymatic hydrogen peroxide sensor. <i>RSC Advances</i> , 2021, 11, 19316-19322.	3.6	18
51	Power efficient transistors with low subthreshold swing using abrupt switching devices. <i>Nano Energy</i> , 2022, 95, 107060.	16.0	16
52	Controlling the Wettability of ZnO Thin Films by Spray Pyrolysis for Photocatalytic Applications. <i>Materials</i> , 2022, 15, 3364.	2.9	16
53	Investigation of dielectric and optical properties of structurally modified bismuth ferrite nanomaterials. <i>Ceramics International</i> , 2016, 42, 11447-11452.	4.8	15
54	Surface spin accumulation due to the inverse spin Hall effect in WS ₂ crystals. <i>2D Materials</i> , 2019, 6, 011007.	4.4	15

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55	A progressive route for tailoring electrical transport in MoS ₂ . Nano Research, 2016, 9, 380-391.	10.4	14
56	Polymer-based non-volatile resistive random-access memory device fabrication with multi-level switching and negative differential resistance state. Organic Electronics, 2021, 96, 106228.	2.6	14
57	Analog-digital hybrid computing with SnS ₂ memtransistor for low-powered sensor fusion. Nature Communications, 2022, 13, 2804.	12.8	14
58	Compositional dynamics of the electron transport layer (ZnO:PEIE) in P3HT:PC61BM organic solar cells. Materials Science in Semiconductor Processing, 2021, 136, 106118.	4.0	13
59	Multi-heterostructured spin-valve junction of vertical FLG/MoSe ₂ /FLG. APL Materials, 2020, 8, .	5.1	11
60	Development of directly grown-graphene-silicon Schottky barrier solar cell using co-doping technique. International Journal of Energy Research, 2022, 46, 11510-11522.	4.5	11
61	Visualizing Degradation of Black Phosphorus Using Liquid Crystals. Scientific Reports, 2018, 8, 12966.	3.3	10
62	An effectual enhancement to the electrical conductivity of graphene FET by silver nanoparticles. Diamond and Related Materials, 2020, 106, 107833.	3.9	10
63	Rapid conjunction of 1D carbon nanotubes and 2D graphitic carbon nitride with ZnO for improved optoelectronic properties. Applied Nanoscience (Switzerland), 2020, 10, 3805-3817.	3.1	8
64	Flexible Diodes with Low Breakdown Voltage for Steep Slope Transistors and One Diode-One Resistor Applications. Advanced Electronic Materials, 2022, 8, .	5.1	8
65	Gate-Dependent Tunnelling Current Modulation of Graphene/hBN Vertical Heterostructures. Advanced Engineering Materials, 2018, 20, 1800159.	3.5	5
66	Dynamics of liquid crystal on hexagonal lattice. 2D Materials, 2018, 5, 045021.	4.4	5
67	Tunable Martensitic Transformation and Magnetic Properties of Sm-Doped NiMnSn Ferromagnetic Shape Memory Alloys. Crystals, 2021, 11, 1115.	2.2	5
68	Gate-Voltage-Modulated Spin Precession in Graphene/WS ₂ Field-Effect Transistors. Electronics (Switzerland), 2021, 10, 2879.	3.1	5
69	Modulation of Magnetoresistance Polarity in BLG/SL-MoSe ₂ Heterostacks. Nanoscale Research Letters, 2020, 15, 136.	5.7	4
70	Morphologically Divergent Development of SnS Photocatalysts from Under-Utilized Ionic Precursors of SILAR Process. Journal of Cluster Science, 2022, 33, 2443-2454.	3.3	3
71	Unusual magnetotransport properties in graphene fibers. Physical Chemistry Chemical Physics, 2020, 22, 25712-25719.	2.8	3
72	Reconfigurable carrier type and photodetection of MoTe ₂ of various thicknesses by deep ultraviolet light illumination. Nanoscale Advances, 2022, 4, 2744-2751.	4.6	3

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73	Interaction driven quantum Hall effect in artificially stacked graphene bilayers. Scientific Reports, 2016, 6, 24815.	3.3	2
74	Optimization of $\text{SiO}_2/\text{TiO}_2$ nanocomposite in hole-transporting layer (PEDOT:PSS) for enhanced performance of planar Si -based hybrid solar cells. International Journal of Energy Research, 0, , .	4.5	1