Muhammad Zahir Iqbal

List of Publications by Year in Descending Order

129 papers	2,218 citations	27 h-index	39 g-index
139 ext. papers	3,114 ext. citations	5.5 avg, IF	5.97 L-index

#	Paper	IF	Citations
129	Synergetic electrochemical performance of strontium phosphate/polyaniline/graphene for high performance supercapattery devices. *Diamond and Related Materials*, **2022**, 108918	3.5	0
128	High performance and gate-controlled GeSe/HfS negative differential resistance device.. *RSC Advances*, **2022**, 12, 1278-1286	3.7	1
127	Supercapattery: Merging of battery-supercapacitor electrodes for hybrid energy storage devices. *Journal of Energy Storage*, **2022**, 46, 103823	7.8	9
126	Evaluation of spectral, optoelectrical, dielectric, magnetic, and morphological properties of RE3+ (La3+, and Ce3+) and Co2+ co-doped Zn0.75Cu0.25Fe2O4 ferrites. *Materials Chemistry and Physics*, **2022**, 275, 125301	4.4	4
125	Platinum Disulfide (PtS2) and Silicon Pyramids: Efficient 2D/3D Heterojunction Tunneling and Breakdown Diodes. *ACS Applied Electronic Materials*, **2022**, 4, 917-924	4	4
124	Recent progress of battery grade metal sulfides for hybrid energy storage devices. *International Journal of Energy Research*, **2022**, 46, 3906-3938	4.5	1
123	Cobalt manganese phosphate and sulfide electrode materials for potential applications of battery-supercapacitor hybrid devices. *Journal of Energy Storage*, **2022**, 50, 104632	7.8	1
122	Battery-type electrodeposited ternary metal sulfides electrodes for advanced hybrid energy storage devices. *Journal of Electroanalytical Chemistry*, **2021**, 115881	4.1	1
121	Ultrafast and Highly Stable Photodetectors Based on p-GeSe/n-ReSe Heterostructures. *ACS Applied Materials & Interfaces*, **2021**, 13, 47882-47894	9.5	6
120	Exalted redox frameworks of Cu-MOF/polyaniline/RGO based composite electrodes by integrating silver nanoparticles as a catalytic agent for superior energy featured supercapatteries. *Electrochimica Acta*, **2021**, 400, 139489	6.7	1
119	Effect of polyaniline on the performance of zinc phosphate as a battery-grade material for supercapattery. *Journal of Energy Storage*, **2021**, 44, 103329	7.8	5
118	Highly Sensitive, Ultrafast, and Broadband Photo-Detecting Field-Effect Transistor with Transition-Metal Dichalcogenide van der Waals Heterostructures of MoTe and PdSe. *Advanced Science*, **2021**, 8, e2003713	13.6	21
117	Recent progress in the role of two-dimensional materials as an efficient charge transport layer in perovskite solar cells. *International Journal of Energy Research*, **2021**, 45, 12598-12613	4.5	3
116	Green synthesis of nickel-manganese/polyaniline-based ternary composites for high-performance supercapattery devices. *International Journal of Energy Research*, **2021**, 45, 11109-11122	4.5	9
115	Optimizing electrochemical performance of sonochemically and hydrothermally synthesized cobalt phosphate for supercapattery devices. *International Journal of Hydrogen Energy*, **2021**, 46, 15807-15819	6.7	13
114	Nickel-manganese phosphate: An efficient battery-grade electrode for supercapattery devices. *Ceramics International*, **2021**, 47, 11220-11230	5.1	15
113	A reversible and stable doping technique to invert the carrier polarity of MoTe. *Nanotechnology*, **2021**, 32,	3.4	11

112	Charge carrier modulation in dual-gated graphene field effect transistor using honey as polar organic gate dielectric. *Applied Physics A: Materials Science and Processing*, **2021**, 127, 1	2.6	1
111	Effect of an optimal oxide layer on the efficiency of graphene-silicon Schottky junction solar cell. *International Journal of Energy Research*, **2021**, 45, 18173-18181	4.5	0
110	Enhanced electrochemical performance of battery-grade cobalt phosphate via magnetron sputtered copper interfacial layer for potential supercapattery applications. *International Journal of Energy Research*, **2021**, 45, 18658	4.5	3
109	Impact of interfacial trap states on achieving bias stability in polymer field-effect transistors. *Microelectronic Engineering*, **2021**, 247, 111602	2.5	0
108	Superior performance of electrodeposited CoMnS as novel electrode material for supercapattery devices. *Journal of Energy Storage*, **2021**, 39, 102608	7.8	2
107	Exploring the synergetic electrochemical performance of cobalt sulfide/cobalt phosphate composites for supercapattery devices with high-energy and rate capability. *Electrochimica Acta*, **2021**, 384, 138358	6.7	8
106	Fabrication of novel perovskite oxide BaxMn1O3 electrode for supercapacitors. *International Journal of Energy Research*, **2021**, 45, 4145-4154	4.5	6
105	Integration of supercapacitors and batteries towards high-performance hybrid energy storage devices. *International Journal of Energy Research*, **2021**, 45, 1449-1479	4.5	14
104	Optimization of cobalt-manganese binary sulfide for high performance supercapattery devices. *Electrochimica Acta*, **2021**, 368, 137529	6.7	22
103	Superior performance of cobalt oxide/carbon composite for solid-state supercapattery devices. *Physica B: Condensed Matter*, **2021**, 603, 412561	2.8	5
102	Single nanoflake-based PtSe2 p junction (in-plane) formed by optical excitation of point defects in BN for ultrafast switching photodiodes. *Journal of Materials Chemistry C*, **2021**, 9, 199-207	7.1	14
101	Binary composites of nickel-manganese phosphates for supercapattery devices. *Journal of Energy Storage*, **2021**, 33, 102020	7.8	10
100	Impact of Lanthanum-Doping on the Physical and Electrical Properties of Cobalt Ferrites. *Journal of Superconductivity and Novel Magnetism*, **2021**, 34, 1855-1864	1.5	7
99	Exploring the electrochemical performance of copper-doped cobalt-manganese phosphates for potential supercapattery applications.. *RSC Advances*, **2021**, 11, 28042-28051	3.7	2
98	Fast and high photoresponsivity gallium telluride/hafnium selenide van der Waals heterostructure photodiode. *Journal of Materials Chemistry C*, **2021**, 9, 7110-7118	7.1	5
97	Highly porous terpolymer-MOF composite electrode material for high performance supercapattery devices. *Journal of Electroanalytical Chemistry*, **2021**, 893, 115321	4.1	3
96	Biomass derived activated carbon based hybrid supercapacitors. *Journal of Energy Storage*, **2021**, 40, 102751	7.8	4
95	Synergestic effect of magnetron sputtered silver nano-islands and Co3(PO4)2 for high performance supercapattery devices. *Journal of Electroanalytical Chemistry*, **2021**, 898, 115612	4.1	0

94	Binary composites of sonochemically synthesized cobalt phosphates/polyaniline for supercapattery devices. *Journal of Energy Storage*, **2021**, 42, 103150	7.8	4
93	Self-biased photovoltaic behavior in van der Waals MoTe2/MoSe2 heterostructures. *Physica E: Low-Dimensional Systems and Nanostructures*, **2021**, 134, 114912	3	1
92	ReSe/metal interface for hydrogen gas sensing. *Journal of Colloid and Interface Science*, **2021**, 603, 511-517	9.3	2
91	Switching photodiodes based on (2D/3D) PdSe2/Si heterojunctions with a broadband spectral response. *Journal of Materials Chemistry C*, **2021**, 9, 3998-4007	7.1	12
90	Facile synthesis of strontium oxide/polyaniline/graphene composite for the high-performance supercapattery devices. *Journal of Electroanalytical Chemistry*, **2020**, 879, 114812	4.1	11
89	Van der Waals Multi-Heterostructures (PN, PIN, and NPN) for Dynamic Rectification in 2D Materials. *Advanced Materials Interfaces*, **2020**, 7, 2001479	4.6	11
88	Hydrothermally synthesized zinc phosphate-rGO composites for supercapattery devices. *Journal of Electroanalytical Chemistry*, **2020**, 871, 114299	4.1	10
87	Electrodeposited CuMnS and CoMnS electrodes for high-performance asymmetric supercapacitor devices. *Ceramics International*, **2020**, 46, 21343-21350	5.1	11
86	Carrier polarity modulation of molybdenum ditelluride (MoTe) for phototransistor and switching photodiode applications. *Nanoscale*, **2020**, 12, 15687-15696	7.7	18
85	Spin-valve effect of 2D-materials based magnetic junctions **2020**, 253-272		1
84	Co-MOF/polyaniline-based electrode material for high performance supercapattery devices. *Electrochimica Acta*, **2020**, 346, 136039	6.7	44
83	Electrode designed with a nanocomposite film of CuO Honeycombs/Ag nanoparticles electrogenerated on a magnetic platform as an amperometric glucose sensor. *Analytica Chimica Acta*, **2020**, 1111, 49-59	6.6	34
82	High-Performance p-BP/n-PdSe Near-Infrared Photodiodes with a Fast and Gate-Tunable Photoresponse. *ACS Applied Materials & Interfaces*, **2020**, 12, 19625-19634	9.5	32
81	Capacitive and diffusive contribution in strontium phosphide-polyaniline based supercapattery. *Journal of Energy Storage*, **2020**, 29, 101324	7.8	14
80	Multifunctional and high-performance GeSe/PdSe2 heterostructure device with a fast photoresponse. *Journal of Materials Chemistry C*, **2020**, 8, 4743-4753	7.1	25
79	Study of structural, optical, electrical and magnetic properties of Cu2+doped Zn0.4Co0.6-xCe0.1Fe1.9O4 spinel ferrites. *Physica B: Condensed Matter*, **2020**, 584, 412078	2.8	19
78	Binary composites of strontium oxide/polyaniline for high performance supercapattery devices. *Solid State Ionics*, **2020**, 347, 115276	3.3	19
77	Effect of post-deposition annealing temperature on the charge carrier mobility and morphology of DPPDTT based organic field effect transistors. *Chemical Physics Letters*, **2020**, 750, 137507	2.5	4

76	Structural, dielectric and magnetic properties of (ZnFe2O4/Polystyrene) nanocomposites synthesized by micro-emuslion technique. *Ceramics International*, **2020**, 46, 5920-5928	5.1	7
75	Enhancement in the mobility of solution processable polymer based FET by incorporating graphene interlayer. *Superlattices and Microstructures*, **2020**, 137, 106331	2.8	3
74	Strontium phosphide-polyaniline composites for high performance supercapattery devices. *Ceramics International*, **2020**, 46, 10203-10214	5.1	25
73	Role of aqueous electrolytes on the performance of electrochemical energy storage device. *Journal of Electroanalytical Chemistry*, **2020**, 858, 113793	4.1	41
72	Capacitive and diffusion-controlled mechanism of strontium oxide based symmetric and asymmetric devices. *Journal of Energy Storage*, **2020**, 27, 101056	7.8	32
71	Tunneling-based rectification and photoresponsivity in black phosphorus/hexagonal boron nitride/rhenium diselenide van der Waals heterojunction diode. *Nanoscale*, **2020**, 12, 3455-3468	7.7	25
70	Role of graphene and transition metal dichalcogenides as hole transport layer and counter electrode in solar cells. *International Journal of Energy Research*, **2020**, 44, 1464-1487	4.5	14
69	Ultraviolet-light-driven current modulation of Au/WS2/Gr Schottky barrier. *Physica E: Low-Dimensional Systems and Nanostructures*, **2020**, 117, 113837	3	4
68	Facile sonochemical synthesis of strontium phosphate based materials for potential application in supercapattery devices. *International Journal of Hydrogen Energy*, **2020**, 45, 32331-32342	6.7	6
67	Cobalt-manganese-zinc ternary phosphate for high performance supercapattery devices. *Dalton Transactions*, **2020**, 49, 16715-16727	4.3	12
66	WS/GeSe/WS Bipolar Transistor-Based Chemical Sensor with Fast Response and Recovery Times. *ACS Applied Materials & Interfaces*, **2020**, 12, 39524-39532	9.5	20
65	Scrutinizing the charge storage mechanism in SrO based composites for asymmetric supercapacitors by diffusion-controlled process. *Applied Nanoscience (Switzerland)*, **2020**, 10, 3999-4011	3.3	8
64	Recent developments in graphene based novel structures for efficient and durable fuel cells. *Materials Research Bulletin*, **2020**, 122, 110674	5.1	24
63	Ultrasonication-assisted synthesis of novel strontium based mixed phase structures for supercapattery devices. *Ultrasonics Sonochemistry*, **2019**, 59, 104736	8.9	37
62	Prospects and challenges of graphene based fuel cells. *Journal of Energy Chemistry*, **2019**, 39, 217-234	12	35
61	Fowler-Nordheim tunneling characteristics of graphene/hBN/metal heterojunctions. *Journal of Applied Physics*, **2019**, 125, 084902	2.5	13
60	Recent advancement in the performance of solar cells by incorporating transition metal dichalcogenides as counter electrode and photoabsorber. *International Journal of Energy Research*, **2019**, 43, 3058-3079	4.5	16
59	Layer dependent electrical transport in exfoliated graphene FETs under UV illumination. *Applied Surface Science*, **2019**, 479, 863-873	6.7	2

58	Progress in dye sensitized solar cell by incorporating natural photosensitizers. *Solar Energy*, **2019**, 181, 490-509	6.8	50
57	Tweaking the properties of aluminum oxide shielded graphene-based transistors. *Applied Surface Science*, **2019**, 491, 742-749	6.7	
56	Enhanced photoresponse and surface charge transfer mechanism of graphene-tungsten disulfide heterojunction. *Optical Materials*, **2019**, 98, 109426	3.3	1
55	On the Operational, shelf life and degradation mechanism in polymer field effect transistors. *Superlattices and Microstructures*, **2019**, 126, 125-131	2.8	5
54	Recent advancements in 2D-materials interface based magnetic junctions for spintronics. *Journal of Magnetism and Magnetic Materials*, **2018**, 457, 110-125	2.8	19
53	Gate-Dependent Tunnelling Current Modulation of Graphene/hBN Vertical Heterostructures. *Advanced Engineering Materials*, **2018**, 20, 1800159	3.5	5
52	Structural defects controlled oxidation of UV irradiated graphene-based field effect transistors. *Diamond and Related Materials*, **2018**, 85, 112-116	3.5	4
51	Influence of DC-biasing on the performance of graphene spin valve. *Solid State Communications*, **2018**, 272, 33-36	1.6	2
50	Progress in the performance of dye sensitized solar cells by incorporating cost effective counter electrodes. *Solar Energy*, **2018**, 160, 130-152	6.8	43
49	Ultraviolet-light-driven carrier density modulation of graphene based field effect transistors under oxygen- and argon atmosphere. *Applied Surface Science*, **2018**, 451, 40-44	6.7	4
48	Development and prospects of surface passivation schemes for high-efficiency c-Si solar cells. *Solar Energy*, **2018**, 166, 90-97	6.8	14
47	Ultraviolet-light-driven enhanced photoresponse of chemical-vapor-deposition grown graphene-WS2 heterojunction based FETs. *Sensors and Actuators B: Chemical*, **2018**, 257, 263-269	8.5	12
46	Ultraviolet-light-driven photoresponse of chemical vapor deposition grown molybdenum disulfide/graphene heterostructured FET. *Applied Surface Science*, **2018**, 459, 853-859	6.7	12
45	Spin Valve Effect of 2D-Materials Based Magnetic Junctions. *Advanced Engineering Materials*, **2018**, 20, 1700692	3.5	9
44	Recent progress in efficiency of hydrogen evolution process based photoelectrochemical cell. *International Journal of Hydrogen Energy*, **2018**, 43, 21502-21523	6.7	31
43	Ultraviolet-light-driven charge carriers tunability mechanism in graphene. *Materials and Design*, **2018**, 159, 232-239	8.1	6
42	Recent progress in graphene incorporated solar cell devices. *Solar Energy*, **2018**, 169, 634-647	6.8	29
41	Enhanced magnetoresistance in graphene spin valve. *Journal of Magnetism and Magnetic Materials*, **2017**, 429, 330-333	2.8	18

40	A facile route to a high-quality graphene/MoS2 vertical field-effect transistor with gate-modulated photocurrent response. *Journal of Materials Chemistry C*, **2017**, 5, 2337-2343	7.1	13
39	Graphene spin valve: An angle sensor. *Journal of Magnetism and Magnetic Materials*, **2017**, 432, 135-139	2.8	14
38	Formation of pn-junction with stable n-doping in graphene field effect transistors using e-beam irradiation. *Optical Materials*, **2017**, 69, 254-258	3.3	7
37	Interlayer reliant magnetotransport in graphene spin valve. *Journal of Magnetism and Magnetic Materials*, **2017**, 441, 39-42	2.8	13
36	Electron spin dynamics in vertical magnetic junctions incorporating two-dimensional layered materials. *Journal of Materials Chemistry C*, **2017**, 5, 11174-11184	7.1	8
35	Enhanced intervalley scattering of aluminum oxide-deposited graphene. *Carbon*, **2017**, 124, 188-192	10.4	7
34	Enhanced electrical performance and stability of graphene- l -cysteine bioelectronic devices. *Materials Chemistry and Physics*, **2017**, 201, 194-198	4.4	1
33	Realization of tunable artificial synapse and memory based on amorphous oxide semiconductor transistor. *Scientific Reports*, **2017**, 7, 10997	4.9	15
32	Ultraviolet-light-driven enhanced hysteresis effect in graphene-tungsten disulfide heterostructures. *Carbon*, **2017**, 123, 168-173	10.4	13
31	Cholesterol immobilization on chemical vapor deposition grown graphene nanosheets for biosensors and bioFETs with enhanced electrical performance. *Sensors and Actuators B: Chemical*, **2017**, 253, 559-565	8.5	12
30	Influence of electron beam and ultraviolet irradiations on graphene field effect transistors. *Optical Materials*, **2017**, 72, 496-500	3.3	5
29	Interlayer quality dependent graphene spin valve. *Journal of Magnetism and Magnetic Materials*, **2017**, 422, 322-327	2.8	12
28	Room temperature spin valve effect in the NiFe/Gr□BN/Co magnetic tunnel junction. *Journal of Materials Chemistry C*, **2016**, 4, 8711-8715	7.1	27
27	Layer-modulated, wafer scale and continuous ultra-thin WS2 films grown by RF sputtering via post-deposition annealing. *Journal of Materials Chemistry C*, **2016**, 4, 7846-7852	7.1	19
26	Large-area, continuous and high electrical performances of bilayer to few layers MoS2 fabricated by RF sputtering via post-deposition annealing method. *Scientific Reports*, **2016**, 6, 30791	4.9	62
25	Tailoring the electrical and photo-electrical properties of a WS2 field effect transistor by selective n-type chemical doping. *RSC Advances*, **2016**, 6, 24675-24682	3.7	34
24	Room temperature spin valve effect in NiFe/WS□/Co junctions. *Scientific Reports*, **2016**, 6, 21038	4.9	52
23	Interaction driven quantum Hall effect in artificially stacked graphene bilayers. *Scientific Reports*, **2016**, 6, 24815	4.9	1

22	High-mobility and air-stable single-layer WS2 field-effect transistors sandwiched between chemical vapor deposition-grown hexagonal BN films. *Scientific Reports*, **2015**, 5, 10699	4.9	187
21	Ultraviolet-light-driven doping modulation in chemical vapor deposition grown graphene. *Physical Chemistry Chemical Physics*, **2015**, 17, 20551-6	3.6	26
20	Controlled synthesis and optical properties of polycrystalline molybdenum disulfide atomic layers grown by chemical vapor deposition. *Journal of Alloys and Compounds*, **2015**, 653, 369-378	5.7	20
19	Interlayer dependent polarity of magnetoresistance in graphene spin valves. *Journal of Materials Chemistry C*, **2015**, 3, 298-302	7.1	30
18	Deep-ultraviolet-light-driven reversible doping of WS2 field-effect transistors. *Nanoscale*, **2015**, 7, 747-57	7.7	49
17	Stable and reversible doping of graphene by using KNO3 solution and photo-desorption current response. *RSC Advances*, **2015**, 5, 50040-50046	3.7	15
16	Photocurrent response of MoS□ field-effect transistor by deep ultraviolet light in atmospheric and N□ gas environments. *ACS Applied Materials & Interfaces*, **2014**, 6, 21645-51	9.5	37
15	Tuning the electrical properties of exfoliated graphene layers using deep ultraviolet irradiation. *Journal of Materials Chemistry C*, **2014**, 2, 5404-5410	7.1	32
14	Superior characteristics of graphene field effect transistor enclosed by chemical-vapor-deposition-grown hexagonal boron nitride. *Journal of Materials Chemistry C*, **2014**, 2, 7776-7784	7.1	17
13	Edge oxidation effect of chemical-vapor-deposition-grown graphene nanoconstriction. *ACS Applied Materials & Interfaces*, **2014**, 6, 4207-13	9.5	19
12	Improving the electrical properties of graphene layers by chemical doping. *Science and Technology of Advanced Materials*, **2014**, 15, 055004	7.1	40
11	Enhanced performance of graphene by using gold film for transfer and masking process. *Current Applied Physics*, **2014**, 14, 1045-1050	2.6	10
10	High-frequency impedance of single-walled carbon nanotube networks on transparent flexible substrate. *Physica Status Solidi (B): Basic Research*, **2014**, 251, 2461-2465	1.3	1
9	Modification of the structural and electrical properties of graphene layers by Pt adsorbates. *Science and Technology of Advanced Materials*, **2014**, 15, 055002	7.1	17
8	Spin valve effect of NiFe/graphene/NiFe junctions. *Nano Research*, **2013**, 6, 373-380	10	65
7	The structural and electrical evolution of chemical vapor deposition grown graphene by electron beam irradiation induced disorder. *Carbon*, **2013**, 59, 366-371	10.4	34
6	Formation of p□ junction with stable p-doping in graphene field effect transistors using deep UV irradiation. *Journal of Materials Chemistry C*, **2013**, 1, 3078	7.1	37
5	Relaxation in bi-stable resistive states of chemical vapor deposition grown graphene. *Thin Solid Films*, **2012**, 522, 468-472	2.2	6

4	Flexible, transparent electrodes using carbon nanotubes. *Nanoscale Research Letters*, **2012**, 7, 571	5	32
3	Raman fingerprint of doping due to metal adsorbates on graphene. *Journal of Physics Condensed Matter*, **2012**, 24, 335301	1.8	96
2	Molecular n-doping of chemical vapor deposition grown graphene. *Journal of Materials Chemistry*, **2012**, 22, 15168		53
1	Drive towards Sonochemically Synthesized Ternary Metal Sulfide for High-Energy Supercapattery. *Energy Technology*,2100110	3.5	0