

Muhammad Aftab Rafiq

List of Publications by Year in descending order

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Version: 2024-02-01

101
papers

2,029
citations

201674

27
h-index

289244

40
g-index

102
all docs

102
docs citations

102
times ranked

2609
citing authors

#	ARTICLE	IF	CITATIONS
1	Sustainable chemical processing of flowing wastewater through microwave energy. <i>Chemosphere</i> , 2022, 287, 132035.	8.2	5
2	Electro-tunable optical cavity filters in near-infrared regime. <i>Optik</i> , 2021, 225, 165714.	2.9	2
3	Effect on electrical and magnetic behavior of Al-Cu-Fe quasicrystals during surface leaching. <i>Applied Physics A: Materials Science and Processing</i> , 2021, 127, 1.	2.3	2
4	Synthesis of randomly oriented self-assembled WO ₃ and WO ₃ -WS ₂ nanoplates for selective oxygen sensing. <i>Journal of the Australian Ceramic Society</i> , 2021, 57, 1231-1240.	1.9	5
5	Effect of Pressure on Mechanical and Thermal Properties of SnSe ₂ . <i>International Journal of Thermophysics</i> , 2021, 42, 1.	2.1	3
6	Study of electric conduction mechanisms, dielectric relaxation behaviour and density of states in zinc sulphide nanoparticles. <i>Journal of Taibah University for Science</i> , 2021, 15, 1144-1155.	2.5	5
7	Tailoring oxygen sensing characteristics of Co ₃ O ₄ nanostructures through Gd doping. <i>Ceramics International</i> , 2020, 46, 9498-9506.	4.8	31
8	Identifying defect-related quantum emitters in monolayer WSe ₂ . <i>Npj 2D Materials and Applications</i> , 2020, 4, .	7.9	35
9	Single-electron pumping in a ZnO single-nanobelt quantum dot transistor. <i>Science China: Physics, Mechanics and Astronomy</i> , 2020, 63, 1.	5.1	1
10	Study of electric conduction mechanisms in bismuth silicate nanofibers. <i>Scientific Reports</i> , 2020, 10, 2775.	3.3	16
11	Effect of surface modification and H ₂ reduction of WO ₃ nanoparticles in Methylene Blue photodegradation. <i>Surface Topography: Metrology and Properties</i> , 2020, 8, 045012.	1.6	3
12	Selective Oxygen Sensor Prepared Using Ni-doped Zinc Ferrite Nanoparticles. <i>Journal of Electronic Materials</i> , 2019, 48, 5677-5685.	2.2	7
13	Development of high performance Bi ₅ Ti ₃ FeO ₁₅ layered perovskite oxygen gas sensor and its dielectric behavior. <i>Materials Research Express</i> , 2019, 6, 115028.	1.6	6
14	Nickel Manganese Oxide Nanoparticles Based Humidity Sensors. <i>Journal of Electronic Materials</i> , 2019, 48, 2289-2293.	2.2	6
15	Development of High-Performance Bismuth Sulfide Nanobelts Humidity Sensor and Effect of Humid Environment on its Transport Properties. <i>ACS Omega</i> , 2019, 4, 2030-2039.	3.5	17
16	Humidity and selective oxygen detection by Ag ₂ S nanoparticles gas sensor. <i>Journal of Materials Science: Materials in Electronics</i> , 2019, 30, 10117-10127.	2.2	3
17	Large g factor in bilayer WS ₂ flakes. <i>Applied Physics Letters</i> , 2019, 114, .	3.3	10
18	The role of biaxial strain and pressure on the thermoelectric performance of SnSe ₂ : a first principles study. <i>Semiconductor Science and Technology</i> , 2019, 34, 055009.	2.0	9

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19	Effect of titanium doping on conductivity, density of states and conduction mechanism in ZnO thin film. <i>Applied Physics A: Materials Science and Processing</i> , 2019, 125, 1.	2.3	16
20	Influence of Cr doping on Schottky barrier height and visible light detection of ZnO thin films deposited by magnetron sputtering. <i>Micro and Nano Engineering</i> , 2019, 2, 48-52.	2.9	10
21	Many-body effect of mesoscopic localized states in MoS_2 monolayer. <i>Physical Review Materials</i> , 2019, 3, .		
22	Facile chemical strategy to synthesize Ag@polypyrrole microarrays and investigating its anisotropic effect on polymer conductivity. <i>Materials Science-Poland</i> , 2019, 37, 563-569.	1.0	0
23	Effect of electrochemical reduction on the structural and electrical properties of anodic TiO ₂ nanotubes. <i>Current Applied Physics</i> , 2018, 18, 297-303.	2.4	11
24	Zinc modified cadmium titanite nanoparticles: Electrical and room temperature methanol sensing properties. <i>Ceramics International</i> , 2018, 44, 4751-4757.	4.8	7
25	Investigation of intrinsic electrical properties of cerium doped lithium cobalt oxide, nanostructured materials. <i>AIP Advances</i> , 2018, 8, .	1.3	9
26	Ferroelectric, dielectric properties and electrical conduction mechanism of epitaxial $\text{Bi}_{1-x}\text{Dy}_x\text{FeO}_3$ ($x = 0.05, 0.075, 0.1, 0.125$) thin films prepared by pulsed laser deposition. <i>Ceramics International</i> , 2018, 44, 4.8 22574-22582.		6
27	Enhancement of degradation of mordant orange, safranin-O and acridine orange by CuS nanoparticles in the presence of H ₂ O ₂ in dark and in ambient light. <i>Journal of Materials Science: Materials in Electronics</i> , 2018, 29, 19180-19191.	2.2	11
28	Two-dimensional molybdenum disulphide nanoflakes synthesized by liquid-solid phase reaction method: regenerative photocatalytic performance under UV-visible light irradiation by advance oxidation process. <i>Materials Research Express</i> , 2018, 5, 056206.	1.6	6
29	Carrier transport mechanisms in semiconductor nanostructures and devices. <i>Journal of Semiconductors</i> , 2018, 39, 061002.	3.7	38
30	Improvement in Thermoelectric Performance of SnS Due to Electronic Structure Modification Under Biaxial Strain. <i>Journal of Electronic Materials</i> , 2018, 47, 6443-6449.	2.2	3
31	Ultrasound promoted synthesis and properties of chitosan nanocomposites containing carbon nanotubes and silver nanoparticles. <i>European Polymer Journal</i> , 2018, 105, 297-303.	5.4	15
32	Temperature dependent dielectric and electric modulus properties of ZnS nano particles. <i>Semiconductor Science and Technology</i> , 2017, 32, 035008.	2.0	6
33	Elastic properties of perovskite-type hydrides LiBeH_3 and NaBeH_3 for hydrogen storage. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 10038-10046.	7.1	45
34	Two-dimensional SnS nanoflakes: synthesis and application to acetone and alcohol sensors. <i>RSC Advances</i> , 2017, 7, 21556-21566.	3.6	72
35	Electrolyte-induced modulation of electronic transport in the presence of surface charge impurities on bilayer graphene. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2017, 214, 1700156.	1.8	2
36	Ferroelectric, dielectric and electrical behavior of two-dimensional lead sulphide nanosheets. <i>Advances in Natural Sciences: Nanoscience and Nanotechnology</i> , 2017, 8, 045010.	1.5	12

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37	Silanization of ZnO nanofibers by tetraethoxysilane. Journal of Applied Polymer Science, 2017, 134, 45378.	2.6	4
38	Effect of Fe Doping on Magnetic Properties and Lattice Structure of Ferromagnetic EuO. Journal of Superconductivity and Novel Magnetism, 2017, 30, 2891-2899.	1.8	2
39	Pressure-induced changes in the electronic structure and enhancement of the thermoelectric performance of SnS ₂ : a first principles study. RSC Advances, 2017, 7, 38834-38843.	3.6	21
40	An SOI CMOS-Based Multi-Sensor MEMS Chip for Fluidic Applications. Sensors, 2016, 16, 1608.	3.8	20
41	Synthesis of polypyrrole nano/microspheres using cobalt(III) as an oxidizing agent and its ammonia sensing behavior. Macromolecular Research, 2016, 24, 596-601.	2.4	36
42	Richardson-Schottky transport mechanism in ZnS nanoparticles. AIP Advances, 2016, 6, .	1.3	11
43	Determination of density of states, conduction mechanisms and dielectric properties of nickel disulfide nanoparticles. AIP Advances, 2016, 6, .	1.3	18
44	Thermal conductivity enhancement of ethylene glycol based nanofluids. , 2016, , .		0
45	Comparison of different phases of bismuth silicate nanofibers for photodegradation of organic dyes. International Journal of Environmental Science and Technology, 2016, 13, 1497-1504.	3.5	16
46	Effect of different electrodes on the transport properties of ZnO nanofibers under humid environment. AIP Advances, 2015, 5, .	1.3	13
47	Charge injection and trapping in TiO ₂ nanoparticles decorated silicon nanowires arrays. Applied Physics Letters, 2015, 106, 073101.	3.3	6
48	First principles study of structural, electronic and magnetic properties of ferromagnetic Bi ₂ Fe ₄ O ₉ . Journal of Alloys and Compounds, 2015, 624, 131-136.	5.5	32
49	Charge carrier transport mechanisms in perovskite CdTiO ₃ fibers. AIP Advances, 2014, 4, .	1.3	44
50	SOI CMOS multi-sensors MEMS chip for aerospace applications. , 2014, , .		13
51	Analysis of electro-active regions and conductivity of BaMnO ₃ ceramic by impedance spectroscopy. Applied Physics A: Materials Science and Processing, 2014, 115, 1281-1289.	2.3	15
52	Structural, thermal, and antibacterial properties of chitosan/ZnO composites. Polymer Composites, 2014, 35, 79-85.	4.6	46
53	Investigation of Change in Surface Area and Grain Size of Cadmium Titanate Nanofibers upon Annealing and Their Effect on Oxygen Sensing. ACS Applied Materials & Interfaces, 2014, 6, 4542-4549.	8.0	21
54	Enhancement in the multiferroic properties of BiFeO ₃ by charge compensated aliovalent substitution of Ba and Nb. AIP Advances, 2014, 4, .	1.3	61

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55	Correlation between magnetic and electrical properties of Co _{0.6} Sn _{0.4} Fe ₂ O ₄ nanoparticles. Journal of Nanoparticle Research, 2014, 16, 1.	1.9	3
56	The enhancement in photocatalytic activity of bismuth modified silica and bismuth silicate nanofibers. Catalysis Communications, 2014, 49, 39-42.	3.3	23
57	Tailoring transport and dielectric properties by surface passivation of silicon nanowires with Polyacrylic acid/TiO ₂ nanoparticles composite. Microelectronic Engineering, 2014, 119, 141-145.	2.4	7
58	Oxygen sensing and transport properties of nanofibers of silica, bismuth doped silica and bismuth silicate prepared via electrospinning. Sensors and Actuators B: Chemical, 2014, 192, 429-438.	7.8	15
59	Humidity Effect on Transport Properties of Titanium Dioxide Nanoparticles. Journal of Materials Science and Technology, 2014, 30, 748-752.	10.7	17
60	Electrical conduction mechanism in ZnS nanoparticles. Journal of Alloys and Compounds, 2014, 612, 64-68.	5.5	38
61	Enhancement of electrical conductivity and dielectric constant in Sn-doped nanocrystalline CoFe ₂ O ₄ . Journal of Nanoparticle Research, 2013, 15, 1.	1.9	16
62	Charge conduction and relaxation in MoS ₂ nanoflakes synthesized by simple solid state reaction. Journal of Applied Physics, 2013, 114, .	2.5	44
63	Association of microstructure and electric heterogeneity in BiFeO ₃ . Materials Chemistry and Physics, 2013, 143, 256-262.	4.0	27
64	Excellent humidity sensing properties of cadmium titanate nanofibers. Ceramics International, 2013, 39, 457-462.	4.8	52
65	Transport characteristics and colossal dielectric response of cadmium sulfide nanoparticles. Journal of Applied Physics, 2013, 114, .	2.5	32
66	Size-manipulation, compaction and electrical properties of barium manganite nanorods synthesized via the CHM method. Progress in Natural Science: Materials International, 2013, 23, 388-394.	4.4	13
67	Dielectric and transport properties of bismuth sulfide prepared by solid state reaction method. Journal of Applied Physics, 2013, 113, .	2.5	42
68	Investigation of dielectric relaxation behavior of electrospun titanium dioxide nanofibers using temperature dependent impedance spectroscopy. Ceramics International, 2013, 39, 1775-1783.	4.8	20
69	The role of surface states in modification of carrier transport in silicon nanowires. Journal of Applied Physics, 2013, 113, .	2.5	16
70	Temperature dependent transport and dielectric properties of cadmium titanate nanofiber mats. AIP Advances, 2013, 3, .	1.3	62
71	Comparative Analysis of Ti, Ni, and Au Electrodes on Characteristics of TiO ₂ Nanofibers for Humidity Sensor Application. Journal of Materials Science and Technology, 2013, 29, 411-414.	10.7	15
72	Silica nanofibers based impedance type humidity detector prepared on glass substrate. Vacuum, 2013, 87, 1-6.	3.5	14

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73	The potential of PEGylated BaMnO ₃ nanoparticles as drug delivery agents. Laser Physics Letters, 2013, 10, 025603.	1.4	3
74	Photodetection and transport properties of surface capped silicon nanowires arrays with polyacrylic acid. AIP Advances, 2013, 3, 082111.	1.3	10
75	Synthesis and Characterization of Titanium Dioxide Nano Particles and their Application in Environmental Remediation of Textile Dyes. Asian Journal of Chemistry, 2013, 25, 9766-9774.	0.3	1
76	Temperature induced delocalization of charge carriers and metallic phase in Co _{0.6} Sn _{0.4} Fe ₂ O ₄ nanoparticles. Journal of Applied Physics, 2012, 112, .	2.5	37
77	Conduction Bottleneck in Silicon Nanochain Single Electron Transistors Operating at Room Temperature. Japanese Journal of Applied Physics, 2012, 51, 025202.	1.5	4
78	High ON/OFF ratio and multimode transport in silicon nanochains field effect transistors. Applied Physics Letters, 2012, 100, 113108.	3.3	5
79	Effect of incorporation of zinc sulfide nanoparticles on carrier transport in silicon nanowires. Physica E: Low-Dimensional Systems and Nanostructures, 2012, 45, 201-206.	2.7	14
80	Enhanced electrical and dielectric properties of polymer covered silicon nanowire arrays. Applied Physics Letters, 2012, 101, .	3.3	21
81	Enhanced and persistent photoconductivity in vertical silicon nanowires and ZnS nanoparticles hybrid devices. Applied Physics Letters, 2012, 101, .	3.3	22
82	TiO ₂ nanoparticles and silicon nanowires hybrid device: Role of interface on electrical, dielectric, and photodetection properties. Applied Physics Letters, 2012, 101, .	3.3	50
83	Conduction in nanostructured La ^{1-x} Sr ^x FeO ₃ (0 ≤ x ≤ 1). Materials Science-Poland, 2012, 30, 240-247.	1.0	3
84	Synthesis and optimization of barium manganate nanofibers by electrospinning. Ceramics International, 2012, 38, 1441-1445.	4.8	17
85	Electrospun titanium dioxide nanofiber humidity sensors with high sensitivity. Ceramics International, 2012, 38, 2437-2441.	4.8	39
86	Fabrication of cadmium titanate nanofibers via electrospinning technique. Ceramics International, 2012, 38, 3361-3365.	4.8	17
87	Investigation of transport behavior in Ba doped BiFeO ₃ . Ceramics International, 2012, 38, 3829-3834.	4.8	154
88	Evidence of Pool-Frenkel conduction mechanism in Sr-doped lanthanum ferrite La _{1-x} Sr _x FeO ₃ system. , 2011, , .		41
89	Semiconductor to metallic transition and polaron conduction in nanostructured cobalt ferrite. Journal Physics D: Applied Physics, 2011, 44, 165404.	2.8	54
90	Structural and electrical properties of Zinc sulfide nanoparticles. , 2011, , .		0

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91	Effect of modifiers on structural and optical properties of Titania (TiO ₂) nanoparticles. , 2011, , .		5
92	Reduced conductivity and enhancement of Debye orientational polarization in lanthanum doped cobalt ferrite nanoparticles. Physica B: Condensed Matter, 2011, 406, 4393-4399.	2.7	48
93	Impedance spectroscopy and investigation of conduction mechanism in BaMnO ₃ nanorods. Physica B: Condensed Matter, 2011, 406, 309-314.	2.7	39
94	Electronic transport in silicon nanocrystals and nanochains. Microelectronic Engineering, 2009, 86, 456-466.	2.4	22
95	Influence of nanocrystal size on the transport properties of Si nanocrystals. Journal of Applied Physics, 2008, 104, .	2.5	30
96	Room temperature single electron charging in single silicon nanochains. Journal of Applied Physics, 2008, 103, 053705.	2.5	27
97	Field-dependant hopping conduction in silicon nanocrystal films. Journal of Applied Physics, 2008, 104, .	2.5	10
98	Fabrication of vertical nanopillar devices. Microelectronic Engineering, 2007, 84, 1515-1518.	2.4	5
99	Hopping conduction in size-controlled Si nanocrystals. Journal of Applied Physics, 2006, 100, 014303.	2.5	46
100	Charge injection and trapping in silicon nanocrystals. Applied Physics Letters, 2005, 87, 182101.	3.3	66
101	A Comparison of the Electrical and Thermal Behavior of ZrO ₂ -Ni Interpenetrating Phase Composite Produced by Microwave and Conventional Sintering. Key Engineering Materials, 0, 510-511, 293-300.	0.4	1