

Muhammad Rafique

List of Publications by Year in descending order

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102
papers

3,339
citations

159585

30
h-index

168389

53
g-index

102
all docs

102
docs citations

102
times ranked

3057
citing authors

#	ARTICLE	IF	CITATIONS
1	A review on green synthesis of silver nanoparticles and their applications. <i>Artificial Cells, Nanomedicine and Biotechnology</i> , 2017, 45, 1272-1291.	2.8	542
2	Nanostructured-based WO ₃ photocatalysts: recent development, activity enhancement, perspectives and applications for wastewater treatment. <i>International Journal of Environmental Science and Technology</i> , 2017, 14, 2519-2542.	3.5	138
3	Enhanced photocatalytic activity of Al and Fe co-doped ZnO nanorods for methylene blue degradation. <i>Ceramics International</i> , 2019, 45, 21430-21435.	4.8	122
4	Role of MoSe ₂ on nanostructures WO ₃ -CNT performance for photocatalytic hydrogen evolution. <i>Ceramics International</i> , 2018, 44, 6686-6690.	4.8	111
5	Role of europium on WO ₃ performance under visible-light for photocatalytic activity. <i>Ceramics International</i> , 2018, 44, 5705-5709.	4.8	101
6	Eco-friendly green and biosynthesis of copper oxide nanoparticles using <i>Citrofortunella microcarpa</i> leaves extract for efficient photocatalytic degradation of Rhodamin B dye form textile wastewater. <i>Optik</i> , 2020, 208, 164053.	2.9	97
7	Novel and facile synthesis of silver nanoparticles using <i>Albizia procera</i> leaf extract for dye degradation and antibacterial applications. <i>Materials Science and Engineering C</i> , 2019, 99, 1313-1324.	7.3	88
8	A Review on Novel Eco-Friendly Green Approach to Synthesis TiO ₂ Nanoparticles Using Different Extracts. <i>Journal of Inorganic and Organometallic Polymers and Materials</i> , 2018, 28, 1552-1564.	3.7	85
9	A Review on Synthesis, Characterization and Applications of Copper Nanoparticles Using Green Method. <i>Nano</i> , 2017, 12, 1750043.	1.0	83
10	Plant-mediated green synthesis of zinc oxide nanoparticles from <i>Syzygium Cumini</i> for seed germination and wastewater purification. <i>International Journal of Environmental Analytical Chemistry</i> , 2022, 102, 23-38.	3.3	83
11	WO ₃ Nanostructures-Based Photocatalyst Approach Towards Degradation of RhB Dye. <i>Journal of Inorganic and Organometallic Polymers and Materials</i> , 2018, 28, 1107-1113.	3.7	79
12	Fabrication of heterogeneous photocatalysts for insight role of carbon nanofibre in hierarchical WO ₃ / MoSe ₂ composite for enhanced photocatalytic hydrogen generation. <i>Ceramics International</i> , 2019, 45, 5547-5552.	4.8	75
13	Green synthesis of TiO ₂ nanoparticles using lemon peel extract: their optical and photocatalytic properties. <i>International Journal of Environmental Analytical Chemistry</i> , 2022, 102, 434-442.	3.3	70
14	Photocatalysis and perovskite oxide-based materials: a remedy for a clean and sustainable future. <i>RSC Advances</i> , 2022, 12, 7009-7039.	3.6	63
15	Role of fullerene to improve the WO ₃ performance for photocatalytic applications and hydrogen evolution. <i>International Journal of Energy Research</i> , 2018, 42, 4783-4789.	4.5	62
16	Material and method selection for efficient solid oxide fuel cell anode: Recent advancements and reviews. <i>International Journal of Energy Research</i> , 2019, 43, 2423-2446.	4.5	62
17	Role of cerium-doping in CoFe ₂ O ₄ electrodes for high performance supercapacitors. <i>Journal of Energy Storage</i> , 2020, 29, 101452.	8.1	58
18	A Comprehensive Study on Methods and Materials for Photocatalytic Water Splitting and Hydrogen Production as a Renewable Energy Resource. <i>Journal of Inorganic and Organometallic Polymers and Materials</i> , 2020, 30, 3837-3861.	3.7	56

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19	Highly visible light responsive metal loaded N/TiO ₂ nanoparticles for photocatalytic conversion of CO ₂ into methane. <i>Ceramics International</i> , 2017, 43, 6771-6777.	4.8	51
20	An Optimal Au Grating Structure for Light Absorption in Amorphous Silicon Thin Film Solar Cell. <i>Plasmonics</i> , 2019, 14, 147-154.	3.4	44
21	Laser ablation synthesis of silver nanoparticles in water and dependence on laser nature. <i>Optical and Quantum Electronics</i> , 2019, 51, 1.	3.3	44
22	Evaluation of BaZr _{0.8} X _{0.2} (X= Y, Gd, Sm) proton conducting electrolytes sintered at low temperature for IT-SOFC synthesized by a cost effective combustion method. <i>Journal of Alloys and Compounds</i> , 2020, 815, 152389.	5.5	43
23	Theoretical investigation of structural, magnetic and elastic properties of half Heusler LiCrZ (Z = P, Tj). <i>ETQq1 1 0.784314 rgBJ</i> , 2021, 41, 10784314.	2.7	41
24	Role of Nanotechnology in Photocatalysis. , 2022, , 578-589.		40
25	Aquatic Biodegradation of Methylene Blue by Copper Oxide Nanoparticles Synthesized from <i>Azadirachta indica</i> Leaves Extract. <i>Journal of Inorganic and Organometallic Polymers and Materials</i> , 2018, 28, 2455-2462.	3.7	39
26	Cogent synergic effect of TiS ₂ /g-C ₃ N ₄ composite with enhanced electrochemical performance for supercapacitor. <i>Ceramics International</i> , 2020, 46, 27601-27607.	4.8	39
27	Semiconductor nanomaterials for the detoxification of dyes in real wastewater under visible-light photocatalysis. <i>International Journal of Environmental Analytical Chemistry</i> , 2021, 101, 1735-1749.	3.3	37
28	Investigation of in-vitro antibacterial and seed germination properties of green synthesized pure and nickel doped ZnO nanoparticles. <i>Physica B: Condensed Matter</i> , 2021, 601, 412563.	2.7	36
29	Novel <i>Citrus aurantifolia</i> leaves based biosynthesis of copper oxide nanoparticles for environmental and wastewater purification as an efficient photocatalyst and antibacterial agent. <i>Optik</i> , 2020, 219, 165138.	2.9	35
30	Enhanced photocatalytic hydrogen energy production of g-C ₃ N ₄ /WO ₃ composites under visible light irradiation. <i>International Journal of Energy Research</i> , 2018, 42, 4667-4673.	4.5	34
31	Activated carbon doped WO ₃ for photocatalytic degradation of rhodamine-B. <i>Applied Nanoscience (Switzerland)</i> , 2020, 10, 869-877.	3.1	34
32	Photocatalytic degradation and hydrogen evolution using bismuth tungstate based nanocomposites under visible light irradiation. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 22833-22847.	7.1	32
33	A review on sources of heavy metals, their toxicity and removal technique using physico-chemical processes from wastewater. <i>Environmental Science and Pollution Research</i> , 2022, 29, 16772-16781.	5.3	32
34	Effect of magnesium doping on band gap and optical properties of SrZrO ₃ perovskite: A first-principles study. <i>Optik</i> , 2019, 191, 132-138.	2.9	31
35	First-principles computation of magnesium doped CaZrO ₃ perovskite: A study of phase transformation, bandgap engineering and optical response for optoelectronic applications. <i>Solid State Communications</i> , 2020, 313, 113907.	1.9	29
36	Electrochemical evaluation of mixed ionic electronic perovskite cathode LaNi _{1-x} CoxO _{3-δ} for IT-SOFC synthesized by high temperature decomposition. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 10448-10456.	7.1	29

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37	Investigation of Photocatalytic and Seed Germination Effects of TiO ₂ Nanoparticles Synthesized by Melia azedarach L. Leaf Extract. Journal of Inorganic and Organometallic Polymers and Materials, 2019, 29, 2133-2144.	3.7	28
38	A review of the interfacial properties of 2-D materials for energy storage and sensor applications. Chinese Journal of Physics, 2020, 66, 246-257.	3.9	28
39	First-principles investigation of structural, electronic, optical and thermal properties of Zinc doped SrTiO ₃ . Optik, 2020, 201, 163481.	2.9	26
40	Effect of external pressure on the structural stability, electronic structure, band gap engineering and optical properties of LiNbO ₃ : An ab-initio calculation. Materials Today Communications, 2020, 23, 100919.	1.9	25
41	Photocatalytic nanomaterials for degradation of organic pollutants and heavy metals. , 2020, , 119-138.		23
42	Highly efficient and visible light-driven nickel-doped vanadium oxide photocatalyst for degradation of Rhodamine B Dye. Applied Nanoscience (Switzerland), 2020, 10, 2365-2374.	3.1	23
43	Photocatalytic performance of hybrid WO ₃ /TiO ₂ nanomaterials for the degradation of methylene blue under visible light irradiation. International Journal of Environmental Analytical Chemistry, 0, , 1-13.	3.3	21
44	Nanomaterials for photocatalysis. , 2020, , 65-76.		19
45	Novel graphene-based transparent electrodes for perovskite solar cells. International Journal of Energy Research, 2018, 42, 4866-4874.	4.5	18
46	Gallium vacancies role in hydrogen storage of single-crystalline GaN hexagonal micro-sheets. International Journal of Hydrogen Energy, 2020, 45, 4731-4742.	7.1	18
47	Synthesis, characterization and antibacterial activity of NiO NPs against pathogen. Inorganic Chemistry Communication, 2020, 122, 108300.	3.9	18
48	Visible light responsive photocatalytic hydrogen evolution using MoS ₂ incorporated ZnO. Applied Nanoscience (Switzerland), 2020, 10, 3925-3931.	3.1	18
49	Structural, electronic, magnetic and thermoelectric properties of full heusler alloys Co ₂ YZ (Z = S, Tj ETQq1 1 0.784314 rgBT /Overlock 2.7 18	2.7	18
50	Antibacterial Behavior of Laser-Ablated Copper Nanoparticles. Acta Metallurgica Sinica (English) Tj ETQq0 0 0 rgBT /Overlock 2.9 17 Tf 50 22	2.9	17
51	Dependence of the structural optical and thermo-physical properties of gold nano-particles synthesized by laser ablation method on the nature of laser. Optik, 2017, 134, 140-148.	2.9	17
52	Surface-Enhanced Raman Scattering (SERS) on 1D Nano-gratings. Plasmonics, 2020, 15, 1053-1059.	3.4	17
53	Fabrication of direct Z-scheme MoO ₃ /Ni-MoS ₂ photocatalyst for synergistically enhanced H ₂ production. International Journal of Hydrogen Energy, 2021, 46, 39822-39829.	7.1	17
54	Laser nature dependence on enhancement of optical and thermal properties of copper oxide nanofluids. Applied Surface Science, 2019, 483, 187-193.	6.1	16

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55	Facile hydrothermal synthesis of highly efficient and visible light-driven Ni-doped V ₂ O ₅ photocatalyst for degradation of Rhodamine B dye. <i>Journal of Materials Science: Materials in Electronics</i> , 2020, 31, 12913-12925.	2.2	16
56	Interfacial coupling effect of Ag ₂ O nanorods over MoS ₂ microflowers for improved photocatalytic activity. <i>Ceramics International</i> , 2020, 46, 6856-6859.	4.8	15
57	Study the effect of magnesium doping concentration on structural and optoelectronic response of NaCa _{1-x} Mg _x F ₃ fluoro-perovskite: First-principles computation. <i>Optik</i> , 2020, 218, 164990.	2.9	15
58	Effect of anomalous behavior of Be-doping on structural stability, bandgap and optical properties in comparison with Mg-doped BaZrO ₃ perovskite: insights from DFT calculations. <i>Optical and Quantum Electronics</i> , 2020, 52, 1.	3.3	15
59	Evaluation of densification effects on the properties of 8Åmol % yttria stabilized zirconia electrolyte synthesized by cost effective coprecipitation route. <i>Ceramics International</i> , 2021, 47, 2857-2863.	4.8	15
60	Structural stability of SrZrO ₃ perovskite and improvement in electronic and optical properties by Ca and Ba doping for optoelectronic applications: a DFT approach. <i>Philosophical Magazine</i> , 2019, 99, 3133-3145.	1.6	14
61	Mixed solvent based surface modification of CuS nanostructures for an excellent photocatalytic application. <i>Inorganic Chemistry Communication</i> , 2020, 121, 108205.	3.9	14
62	Novel, facile and first time synthesis of zinc oxide nanoparticles using leaves extract of <i>Citrus reticulata</i> for photocatalytic and antibacterial activity. <i>Optik</i> , 2021, 243, 167495.	2.9	14
63	NiO and Ag-Cd co-doped NiO nanoparticles: study of photocatalytic degradation of rhodamine B dye for wastewater treatment. <i>International Journal of Environmental Science and Technology</i> , 2023, 20, 2021-2036.	3.5	14
64	Synergistic Effect of Functionalized Nanokaolin Decorated MWCNTs on the Performance of Cellulose Acetate (CA) Membranes Spectacular. <i>Nanomaterials</i> , 2016, 6, 79.	4.1	12
65	Fabrication of novel perovskite oxide $Ba_{1-x}Mn_xO_3$ electrode for supercapacitors. <i>International Journal of Energy Research</i> , 2021, 45, 4145-4154.	4.5	12
66	Influence of Er doping on the structural, optical and luminescence properties of pulsed laser deposited Er: BaZrO ₃ thin films. <i>Ceramics International</i> , 2017, 43, 12162-12166.	4.8	11
67	Fabrication of novel hybrid composite La _{2-x} CoxCuO ₄ electrode for high performance supercapacitors. <i>International Journal of Energy Research</i> , 2019, 43, 2361-2368.	4.5	10
68	Electrochemical study of Mo-doped Co ₃ O ₄ nanostructures synthesized by sol-gel method. <i>Journal of Materials Science: Materials in Electronics</i> , 2021, 32, 3512-3521.	2.2	10
69	Nanotechnology: An Innovative Way for Wastewater Treatment and Purification. <i>Nanotechnology in the Life Sciences</i> , 2019, , 95-131.	0.6	9
70	Cubic to pseudo-cubic tetragonal phase transformation with lithium and beryllium doping in CaTiO ₃ and its impact on electronic and optical properties: a DFT approach. <i>Bulletin of Materials Science</i> , 2020, 43, 1.	1.7	9
71	First principle computation of half metallicity and mechanical properties of a new series of half Heusler alloys KMnZ (Z = B, Si, Ge, As) for spintronics. <i>Indian Journal of Physics</i> , 2022, 96, 115-126.	1.8	9
72	Hydrothermal synthesis of an efficient and visible light responsive pure and strontium doped zinc oxide nano-hexagonal photocatalysts for photodegradation of Rhodamine B dye. <i>Applied Nanoscience (Switzerland)</i> , 2021, 11, 1045-1056.	3.1	9

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73	Electrochemical Investigations of BaCe _{0.7-x} Sm _x Zr _{0.2} Y _{0.1} O _{3-δ} Sintered at a Low Sintering Temperature as a Perovskite Electrolyte for IT-SOFCs. Sustainability, 2021, 13, 12595.	3.2	9
74	Idiosyncratic cellulose acetate nanocomposite membranes: synthesis and performance control study for desalination. Environmental Technology (United Kingdom), 2021, 42, 1336-1352.	2.2	8
75	Evaluation of BaCo _{0.4} Fe _{0.4} Zr _{0.2} Ni _x O _{3-δ} perovskite cathode using nickel as a sintering aid for IT-SOFC. RSC Advances, 2021, 11, 14475-14483.		
76	Surface plasmon based 1D-grating device for efficient sensing using noble metals. Optical and Quantum Electronics, 2020, 52, 1.	3.3	7
77	Influence of Low Sintering Temperature on BaCe _{0.2} Zr _{0.6} Y _{0.2} O _{3-δ} IT-SOFC Perovskite Electrolyte Synthesized by Co-Precipitation Method. Materials, 2022, 15, 3585.	2.9	7
78	Structural and Magnetic Behavior of MoS ₂ on Doping of Transition Metals: a DFT Study. Journal of Superconductivity and Novel Magnetism, 2021, 34, 3441-3453.	1.8	6
79	Synthesis methods of nanostructures. , 2020, , 45-56.		5
80	Role of Nano-Photocatalysts in Detoxification of Toxic Heavy Metals. Current Analytical Chemistry, 2021, 17, 126-137.	1.2	5
81	Novel Cr and Sn co-doped Co ₃ O ₄ polygon-based electrode material for supercapacitor application. Journal of Materials Science: Materials in Electronics, 2021, 32, 11467-11477.	2.2	5
82	Phase stability, band gap engineering and optical response of Li-, Be- and Mg-doped SrZrO ₃ perovskite: Theoretical perspective with GGA-PBE. European Physical Journal Plus, 2021, 136, 1.	2.6	5
83	Plant-Mediated Green Synthesis of Zinc Oxide Nanoparticles Using Peel Extract of <i>Citrus reticulata</i> for Boosting Seed Germination of <i>Brassica nigra</i> Seeds. Journal of Nanoscience and Nanotechnology, 2021, 21, 3573-3579.	0.9	5
84	Removal of Organic Colorants Using Nano Copper Antimony Oxychloride Synthesized by Non-solvated System. Journal of Inorganic and Organometallic Polymers and Materials, 2019, 29, 893-900.	3.7	4
85	Nanomaterials for Photocatalytic Applications. , 2019, , .		3
86	History and fundamentals of nanoscience and nanotechnology. , 2020, , 1-25.		3
87	Stimulated band structure by external isotropic static pressure and its impact on optoelectronic properties of PbZrO ₃ : An ab-initio calculation. Optik, 2021, 241, 167024.	2.9	3
88	Influence of Sintering Temperature on the Structural, Morphological, and Electrochemical Properties of NiO-YSZ Anode Synthesized by the Autocombustion Route. Metals, 2022, 12, 219.	2.3	3
89	Spectroscopic and Structural Dynamics of MoS ₂ Thin Films. Journal of Nano Research, 2019, 58, 74-79.	0.8	2
90	Commissioning and evaluation of a radiochromic EBT3 film dosimetry system. Journal of Radiotherapy in Practice, 2019, 18, 55-62.	0.5	2

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91	Hydrogen Production Through Water Splitting Using Nanomaterials Under Solar Energy. , 2020, , 132-135.		2
92	Photonic and optoelectronic properties of layered semiconductors. Applied Nanoscience (Switzerland), 2020, 10, 3933-3938.	3.1	2
93	Recent advances in the development of photocatalysis and future perspectives. , 2020, , 221-223.		2
94	Nanostructure materials and their classification by dimensionality. , 2020, , 27-44.		2
95	Investigations on synergistic and antioxidant actions of medicinal plant based biosynthesis of Zinc Oxide Nanoparticles against E.coli and K. pneumonia bacteria. Combinatorial Chemistry and High Throughput Screening, 2021, 24, .	1.1	2
96	Energetic metallic ion implantation in polymers via cost-effective laser-driven ion source. Applied Physics B: Lasers and Optics, 2017, 123, 1.	2.2	1
97	Selection of gamma analysis acceptance criteria in IMRT QA using Gafchromic EBT3 film dosimetry. Journal of Radiotherapy in Practice, 2019, 18, 127-131.	0.5	1
98	Carbonaceous nanomaterials as photocatalysts. , 2020, , 97-117.		1
99	Photocatalytic nanomaterials for the removal of pharmaceuticals. , 2020, , 191-202.		1
100	Mechanistic investigation of Mg ²⁺ -ion-induced ZnO nanorods for enhanced photocatalytic performance. Applied Nanoscience (Switzerland), 2021, 11, 1917-1927.	3.1	0
101	Facile and Novel Synthesis of Spiky Gold Nanoparticles as an Efficient Antimicrobial Agent against Pseudomonas Aeruginosa. Combinatorial Chemistry and High Throughput Screening, 2021, 24, .	1.1	0
102	Role of Nanomaterials in the Detoxification of Harmful Dyes. , 2022, , 373-386.		0