

Ahmed Esmail Shalan

List of Publications by Year in descending order

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83
papers

3,547
citations

125106

35
h-index

175968

55
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88
all docs

88
docs citations

88
times ranked

3269
citing authors

#	ARTICLE	IF	CITATIONS
1	Synthesis and characterization of cellulose, β -cyclodextrin, silk fibroin-based hydrogel containing copper-doped cobalt ferrite nanospheres and exploration of its biocompatibility. <i>Journal of Nanostructure in Chemistry</i> , 2023, 13, 103-113.	5.3	10
2	Improved mixed-dimensional 3D/2D perovskite layer with formamidine bromide salt for highly efficient and stable perovskite solar cells. <i>Chemical Engineering Journal</i> , 2022, 428, 131185.	6.6	63
3	Enhanced the photocatalytic degradation of titanium dioxide nanoparticles synthesized by different plant extracts for wastewater treatment. <i>Journal of Molecular Structure</i> , 2022, 1250, 131912.	1.8	19
4	Green synthesis of molybdenum-based nanoparticles and their applications in energy conversion and storage: A review. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 31014-31057.	3.8	18
5	A versatile nanocomposite made of Cd/Cu, chlorophyll and PVA matrix utilized for photocatalytic degradation of the hazardous chemicals and pathogens for wastewater treatment. <i>Journal of Molecular Structure</i> , 2022, 1256, 132456.	1.8	10
6	Magnetic graphene oxide-lignin nanobiocomposite: a novel, eco-friendly and stable nanostructure suitable for hyperthermia in cancer therapy. <i>RSC Advances</i> , 2022, 12, 3593-3601.	1.7	21
7	Review: the latest advances in biomedical applications of chitosan hydrogel as a powerful natural structure with eye-catching biological properties. <i>Journal of Materials Science</i> , 2022, 57, 3855-3891.	1.7	34
8	Nanocomposites Materials and Their Applications: Current and Future Trends. <i>Engineering Materials</i> , 2022, , 3-14.	0.3	1
9	Green Nanocomposites: Magical Solution for Environmental Pollution Problems. <i>Engineering Materials</i> , 2022, , 389-417.	0.3	3
10	Graphene and Its Nanocomposites Derivatives: Synthesis, Properties, and Their Applications in Water Treatment, Gas Sensor, and Solar Cell Fields. <i>Engineering Materials</i> , 2022, , 95-128.	0.3	5
11	Major Trends and Mechanistic Insights for the Development of TiO ₂ -Based Nanocomposites for Visible-Light-Driven Photocatalytic Hydrogen Production. <i>Engineering Materials</i> , 2022, , 771-794.	0.3	2
12	Recent Progress in Graphene- and Related Carbon-Nanomaterial-based Electrochemical Biosensors for Early Disease Detection. <i>ACS Biomaterials Science and Engineering</i> , 2022, 8, 964-1000.	2.6	37
13	Correction to "Silver-Doped Cadmium Selenide/Graphene Oxide-Filled Cellulose Acetate Nanocomposites for Photocatalytic Degradation of Malachite Green toward Wastewater Treatment". <i>ACS Omega</i> , 2022, 7, 18190-18191.	1.6	0
14	Effect of pH and zeta potential of Pickering stabilizing magnetite nanoparticles on the features of magnetized polystyrene microspheres. <i>Polymer Engineering and Science</i> , 2021, 61, 234-244.	1.5	14
15	Effect of rosemary extract on the microstructure, phase evolution, and magnetic behavior of cobalt ferrite nanoparticles and its application on anti-cancer drug delivery. <i>Ceramics International</i> , 2021, 47, 9409-9417.	2.3	49
16	Moisture-Resistant FAPbI ₃ Perovskite Solar Cell with 22.25% Power Conversion Efficiency through Pentafluorobenzyl Phosphonic Acid Passivation. <i>ChemSusChem</i> , 2021, 14, 1176-1183.	3.6	101
17	Innovative bactericidal adsorbents containing modified xanthan gum/montmorillonite nanocomposites for wastewater treatment. <i>International Journal of Biological Macromolecules</i> , 2021, 167, 1113-1125.	3.6	102
18	Hybrid perovskite photovoltaic devices: Architecture and fabrication methods based on solution-processed metal oxide transport layers. , 2021, , 291-313.		5

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19	Advanced materials and technologies for supercapacitors used in energy conversion and storage: a review. <i>Environmental Chemistry Letters</i> , 2021, 19, 375-439.	8.3	255
20	Preparation and characterization of calcium oxide nanoparticles from marine molluscan shell waste as nutrient source for plant growth. <i>Journal of Nanostructure in Chemistry</i> , 2021, 11, 409-422.	5.3	25
21	Electrospun nanofibrous membranes of cellulose acetate containing hydroxyapatite co-doped with Ag/Fe: morphological features, antibacterial activity and degradation of methylene blue in aqueous solution. <i>New Journal of Chemistry</i> , 2021, 45, 9212-9220.	1.4	24
22	Metal oxide electron transport materials for perovskite solar cells: a review. <i>Environmental Chemistry Letters</i> , 2021, 19, 2185-2207.	8.3	98
23	Synthesis and characterization of a new ZIF-67@MgAl ₂ O ₄ nanocomposite and its adsorption behaviour. <i>RSC Advances</i> , 2021, 11, 13245-13255.	1.7	22
24	Investigation of the biological activity, mechanical properties and wound healing application of a novel scaffold based on lignin-agarose hydrogel and silk fibroin embedded zinc chromite nanoparticles. <i>RSC Advances</i> , 2021, 11, 17914-17923.	1.7	68
25	The controlled synthesis and DFT investigation of novel (0D)@3D ZnS/SiO ₂ heterostructures for photocatalytic applications. <i>RSC Advances</i> , 2021, 11, 22352-22364.	1.7	19
26	Synthesis, characterization and antimicrobial activity applications of grafted copolymer alginate-g-poly(N-vinyl imidazole). <i>RSC Advances</i> , 2021, 11, 11541-11548.	1.7	37
27	Cobalt metal-organic framework-based ZIF-67 for the trace determination of herbicide molinate by ion mobility spectrometry: investigation of different morphologies. <i>RSC Advances</i> , 2021, 11, 2643-2655.	1.7	26
28	Microwave-assisted preparation of a silver nanoparticles/N-doped carbon dots nanocomposite and its application for catalytic reduction of rhodamine B, methyl red and 4-nitrophenol dyes. <i>RSC Advances</i> , 2021, 11, 5139-5148.	1.7	34
29	Graphene assisted crystallization and charge extraction for efficient and stable perovskite solar cells free of a hole-transport layer. <i>RSC Advances</i> , 2021, 11, 4417-4424.	1.7	34
30	Efficient and Stable Perovskite Solar Cells Enabled by Dicarboxylic Acid-Supported Perovskite Crystallization. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 997-1004.	2.1	69
31	Biogenic synthesis and cytotoxic effects of silver nanoparticles mediated by white rot fungi. <i>Heliyon</i> , 2021, 7, e06470.	1.4	23
32	Semiconductors as Effective Electrodes for Dye Sensitized Solar Cell Applications. <i>Topics in Current Chemistry</i> , 2021, 379, 20.	3.0	30
33	Computational Modelling of Two Terminal CIGS/Perovskite Tandem Solar Cells with Power Conversion Efficiency of 23.1%. <i>European Journal of Inorganic Chemistry</i> , 2021, 2021, 4959-4969.	1.0	37
34	Effective Combination of rGO and CuO Nanomaterials through Poly(p-phenylenediamine) Texture: Utilizing It as an Excellent Supercapacitor. <i>Energy & Fuels</i> , 2021, 35, 10869-10877.	2.5	49
35	Effect of 2D perovskite layer and multivalent defect on the performance of 3D/2D bilayered perovskite solar cells through computational simulation studies. <i>Solar Energy</i> , 2021, 223, 193-201.	2.9	48
36	Hybrid Bionanocomposite Containing Magnesium Hydroxide Nanoparticles Embedded in a Carboxymethyl Cellulose Hydrogel Plus Silk Fibroin as a Scaffold for Wound Dressing Applications. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 33840-33849.	4.0	77

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37	Bismuth-based heterojunction nanocomposites for photocatalysis and heavy metal detection applications. <i>Nano Structures Nano Objects</i> , 2021, 27, 100762.	1.9	64
38	Magnetic Copper Ferrite Nanoparticles Functionalized by Aromatic Polyamide Chains for Hyperthermia Applications. <i>Langmuir</i> , 2021, 37, 8847-8854.	1.6	38
39	Engineering of Electron Affinity and Interfacial Charge Transfer of Graphene for Self-Powered Nonenzymatic Biosensor Applications. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 40731-40741.	4.0	26
40	Silver-Doped Cadmium Selenide/Graphene Oxide-Filled Cellulose Acetate Nanocomposites for Photocatalytic Degradation of Malachite Green toward Wastewater Treatment. <i>ACS Omega</i> , 2021, 6, 23129-23138.	1.6	28
41	Composition engineering of operationally stable CsPbI ₂ Br perovskite solar cells with a record efficiency over 17%. <i>Nano Energy</i> , 2021, 87, 106157.	8.2	115
42	Pectin-cellulose hydrogel, silk fibroin and magnesium hydroxide nanoparticles hybrid nanocomposites for biomedical applications. <i>International Journal of Biological Macromolecules</i> , 2021, 192, 7-15.	3.6	44
43	High-performance perovskite solar cells using the graphene quantum dot-modified SnO ₂ /ZnO photoelectrode. <i>Materials Today Energy</i> , 2021, 22, 100853.	2.5	37
44	Advances in thermochromic and thermoelectric materials. , 2021, , 153-186.		4
45	Highly porous copper-supported magnetic nanocatalysts: made of volcanic pumice textured by cellulose and applied for the reduction of nitrobenzene derivatives. <i>RSC Advances</i> , 2021, 11, 25284-25295.	1.7	21
46	Copper sulfide nanostructures: easy synthesis, photocatalytic and doxorubicin anticancer drug delivery applications. <i>New Journal of Chemistry</i> , 2021, 45, 22344-22353.	1.4	5
47	Investigations aimed at producing 33% efficient perovskite-silicon tandem solar cells through device simulations. <i>RSC Advances</i> , 2021, 11, 37366-37374.	1.7	34
48	One-pot green synthesis of antimicrobial chitosan derivative nanocomposites to control foodborne pathogens. <i>RSC Advances</i> , 2021, 12, 1095-1104.	1.7	20
49	Polymer Amplification to Improve Performance and Stability toward Semitransparent Perovskite Solar Cells Fabrication. <i>Energy Technology</i> , 2020, 8, 1900728.	1.8	14
50	Achieving exceedingly constructional characterization of magnesia-yttria (MgO-Y ₂ O ₃) nanocomposite obtained via oxalate precursor strategy. <i>Measurement: Journal of the International Measurement Confederation</i> , 2020, 150, 106888.	2.5	10
51	Thermoelectric Energy Harvesters: A Review of Recent Developments in Materials and Devices for Different Potential Applications. <i>Topics in Current Chemistry</i> , 2020, 378, 48.	3.0	52
52	Dopant-free hole-transporting polymers for efficient, stable, and hysteresis-less perovskite solar cells. <i>Sustainable Materials and Technologies</i> , 2020, 26, e00226.	1.7	17
53	Improvement of the interfacial contact between zinc oxide and a mixed cation perovskite using carbon nanotubes for ambient-air-processed perovskite solar cells. <i>New Journal of Chemistry</i> , 2020, 44, 19802-19811.	1.4	43
54	Ultrasound-assisted diversion of nitrobenzene derivatives to their aniline equivalents through a heterogeneous magnetic Ag/Fe ₃ O ₄ -IT nanocomposite catalyst. <i>New Journal of Chemistry</i> , 2020, 44, 19827-19835.	1.4	45

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55	TiO ₂ Nanotubes: An Advanced Electron Transport Material for Enhancing the Efficiency and Stability of Perovskite Solar Cells. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 18549-18557.	1.8	25
56	Convenient conversion of hazardous nitrobenzene derivatives to aniline analogues by Ag nanoparticles, stabilized on a naturally magnetic pumice/chitosan substrate. <i>RSC Advances</i> , 2020, 10, 43670-43681.	1.7	36
57	Facile route to synthesize Fe ₃ O ₄ @acacia-SO ₃ H nanocomposite as a heterogeneous magnetic system for catalytic applications. <i>RSC Advances</i> , 2020, 10, 40055-40067.	1.7	53
58	Challenges and approaches towards upscaling the assembly of hybrid perovskite solar cells. <i>Materials Advances</i> , 2020, 1, 292-309.	2.6	35
59	Advances in nanotechnology and antibacterial properties of biodegradable food packaging materials. <i>RSC Advances</i> , 2020, 10, 20467-20484.	1.7	89
60	High cytotoxic activity of ZnO@leucovorin nanocomposite based materials against an MCF-7 cell model. <i>Analytical Methods</i> , 2020, 12, 2176-2184.	1.3	18
61	Acceleration of ammonium phosphate hydrolysis using TiO ₂ microspheres as a catalyst for hydrogen production. <i>Nanoscale Advances</i> , 2020, 2, 2080-2086.	2.2	10
62	Statistical optimization of photo-induced biofabrication of silver nanoparticles using the cell extract of <i>Oscillatoria limnetica</i> : insight on characterization and antioxidant potentiality. <i>RSC Advances</i> , 2020, 10, 44232-44246.	1.7	12
63	An overview of nanomaterials for industrial wastewater treatment. <i>Korean Journal of Chemical Engineering</i> , 2019, 36, 1209-1225.	1.2	138
64	Coated silver nanoparticles: synthesis, cytotoxicity, and optical properties. <i>RSC Advances</i> , 2019, 9, 20118-20136.	1.7	120
65	Lead-Free Perovskites: Metals Substitution towards Environmentally Benign Solar Cell Fabrication. <i>ChemSusChem</i> , 2019, 12, 4116-4139.	3.6	36
66	Recent progress concerning inorganic hole transport layers for efficient perovskite solar cells. <i>Applied Physics A: Materials Science and Processing</i> , 2019, 125, 1.	1.1	48
67	Tin-zinc-oxide nanocomposites (SZO) as promising electron transport layers for efficient and stable perovskite solar cells. <i>Nanoscale Advances</i> , 2019, 1, 2654-2662.	2.2	37
68	Photocatalytic performance of TiO ₂ @SiO ₂ nanocomposites for the treatment of different organic dyes. <i>Journal of Materials Science: Materials in Electronics</i> , 2019, 30, 9623-9633.	1.1	37
69	A graphene gold nanocomposite-based 5-FU drug and the enhancement of the MCF-7 cell line treatment. <i>RSC Advances</i> , 2019, 9, 31021-31029.	1.7	40
70	Copper-Substituted Lead Perovskite Materials Constructed with Different Halides for Working (CH ₃ NH ₃) ₂ CuX ₄ -Based Perovskite Solar Cells from Experimental and Theoretical View. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 11699-11707.	4.0	171
71	Structural, magnetic properties, and induction heating behavior studies of cobalt ferrite nanopowders synthesized using modified co-precipitation method. <i>Particulate Science and Technology</i> , 2018, 36, 172-177.	1.1	12
72	Pollutant degradation of different organic dyes using the photocatalytic activity of ZnO@ZnS nanocomposite materials. <i>Journal of Environmental Chemical Engineering</i> , 2018, 6, 3981-3990.	3.3	65

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73	Solid-state dye-sensitized solar cells based on Zn _{1-x} Sn _x O nanocomposite photoanodes. RSC Advances, 2018, 8, 24059-24067.	1.7	26
74	Efficacious realization of Ba _{0.5} Sr _{0.5} Ti _x M _{1-x} O ₃ (M = Mn ²⁺ , Co ²⁺) perovskite nanostructures through oxalate precursor strategy. Journal of Materials Science: Materials in Electronics, 2018, 29, 14582-14588.	1.1	8
75	Optimization of a compact layer of TiO ₂ via atomic-layer deposition for high-performance perovskite solar cells. Sustainable Energy and Fuels, 2017, 1, 1533-1540.	2.5	59
76	Easily attainable new approach to mass yield ferrocenyl Schiff base and different metal complexes of ferrocenyl Schiff base through convenient ultrasonication-solvothermal method. Journal of Physical Organic Chemistry, 2017, 30, e3639.	0.9	12
77	Versatile plasmonic-effects at the interface of inverted perovskite solar cells. Nanoscale, 2017, 9, 1229-1236.	2.8	50
78	Cobalt Oxide (CoO _x) as an Efficient Hole-Extracting Layer for High-Performance Inverted Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 33592-33600.	4.0	122
79	Nanostructured ZnO photocatalysts prepared via surfactant assisted Co-Precipitation method achieving enhanced photocatalytic activity for the degradation of methylene blue dyes. Journal of Environmental Chemical Engineering, 2016, 4, 3177-3184.	3.3	71
80	Plasmonic enhancement of low cost mesoporous Fe ₂ O ₃ -TiO ₂ loaded with palladium, platinum or silver for dye sensitized solar cells (DSSCs). Applied Surface Science, 2015, 359, 315-322.	3.1	29
81	Concordantly fabricated heterojunction ZnO-TiO ₂ nanocomposite electrodes via a co-precipitation method for efficient stable quasi-solid-state dye-sensitized solar cells. RSC Advances, 2015, 5, 103095-103104.	1.7	33
82	Tailoring green formulation: Printing and upscaling of inverted organic solar cells. , 2013, , .		2
83	Pathways Towards High-Stable, Low-Cost and Efficient Perovskite Solar Cells. , 0, , .		3