Ahmed Esmail Shalan

List of Publications by Year in Descending Order

85 papers	1,752 citations	25 h-index	38 g-index
88 ext. papers	2,573 ext. citations	4.8 avg, IF	6.16 L-index

#	Paper	IF	Citations
85	A versatile nanocomposite made of Cd/Cu, chlorophyll and PVA matrix utilized for photocatalytic degradation of the hazardous chemicals and pathogens for wastewater treatment. *Journal of Molecular Structure*, **2022**, 1256, 132456	3.4	1
84	Magnetic graphene oxide-lignin nanobiocomposite: a novel, eco-friendly and stable nanostructure suitable for hyperthermia in cancer therapy.. *RSC Advances*, **2022**, 12, 3593-3601	3.7	2
83	Review: the latest advances in biomedical applications of chitosan hydrogel as a powerful natural structure with eye-catching biological properties. *Journal of Materials Science*, **2022**, 57, 3855-3891	4.3	4
82	Improved mixed-dimensional 3D/2D perovskite layer with formamidinium bromide salt for highly efficient and stable perovskite solar cells. *Chemical Engineering Journal*, **2022**, 428, 131185	14.7	22
81	Nanocomposites Materials and Their Applications: Current and Future Trends. *Engineering Materials* , **2022**, 3-14	0.4	
80	Green Nanocomposites: Magical Solution for Environmental Pollution Problems. *Engineering Materials*, **2022**, 389-417	0.4	0
79	Graphene and Its Nanocomposites Derivatives: Synthesis, Properties, and Their Applications in Water Treatment, Gas Sensor, and Solar Cell Fields. *Engineering Materials*, **2022**, 95-128	0.4	0
78	Major Trends and Mechanistic Insights for the Development of TiO2-Based Nanocomposites for Visible-Light-Driven Photocatalytic Hydrogen Production. *Engineering Materials*, **2022**, 771-794	0.4	
77	Polymer Nanocomposites for Energy Storage Applications. *Engineering Materials*, **2022**, 697-724	0.4	
76	Advanced Neutron and Synchrotron Characterization Techniques for Nanocomposite Perovskite Materials Toward Solar Cells Applications. *Engineering Materials*, **2022**, 613-661	0.4	
75	Recent Progress in Graphene- and Related Carbon-Nanomaterial-based Electrochemical Biosensors for Early Disease Detection.. *ACS Biomaterials Science and Engineering*, **2022**,	5.5	4
74	One-pot green synthesis of antimicrobial chitosan derivative nanocomposites to control foodborne pathogens.. *RSC Advances*, **2021**, 12, 1095-1104	3.7	5
73	Investigations aimed at producing 33% efficient perovskite-silicon tandem solar cells through device simulations.. *RSC Advances*, **2021**, 11, 37366-37374	3.7	3
72	Enhanced the photocatalytic degradation of titanium dioxide nanoparticles synthesized by different plant extracts for wastewater treatment. *Journal of Molecular Structure*, **2021**, 1250, 131912	3.4	7
71	Green synthesis of molybdenum-based nanoparticles and their applications in energy conversion and storage: A review. *International Journal of Hydrogen Energy*, **2021**,	6.7	2
70	Biogenic synthesis and cytotoxic effects of silver nanoparticles mediated by white rot fungi. *Heliyon*, **2021**, 7, e06470	3.6	15
69	Semiconductors as Effective Electrodes for Dye Sensitized Solar Cell Applications. *Topics in Current Chemistry*, **2021**, 379, 20	7.2	13

68	Effective Combination of rGO and CuO Nanomaterials through Poly(p-phenylenediamine) Texture: Utilizing It as an Excellent Supercapacitor. *Energy & Fuels*, **2021**, 35, 10869-10877	4.1	15
67	Effect of 2D perovskite layer and multivalent defect on the performance of 3D/2D bilayered perovskite solar cells through computational simulation studies. *Solar Energy*, **2021**, 223, 193-201	6.8	9
66	Effect of pH and zeta potential of Pickering stabilizing magnetite nanoparticles on the features of magnetized polystyrene microspheres. *Polymer Engineering and Science*, **2021**, 61, 234-244	2.3	9
65	Effect of rosemary extract on the microstructure, phase evolution, and magnetic behavior of cobalt ferrite nanoparticles and its application on anti-cancer drug delivery. *Ceramics International*, **2021**, 47, 9409-9417	5.1	18
64	Moisture-Resistant FAPbI Perovskite Solar Cell with 22.25 % Power Conversion Efficiency through Pentafluorobenzyl Phosphonic Acid Passivation. *ChemSusChem*, **2021**, 14, 1176-1183	8.3	52
63	Innovative bactericidal adsorbents containing modified xanthan gum/montmorillonite nanocomposites for wastewater treatment. *International Journal of Biological Macromolecules*, **2021**, 167, 1113-1125	7.9	53
62	Hybrid perovskite photovoltaic devices: Architecture and fabrication methods based on solution-processed metal oxide transport layers **2021**, 291-313		3
61	Advanced materials and technologies for supercapacitors used in energy conversion and storage: a review. *Environmental Chemistry Letters*, **2021**, 19, 375-439	13.3	100
60	Preparation and characterization of calcium oxide nanoparticles from marine molluscan shell waste as nutrient source for plant growth. *Journal of Nanostructure in Chemistry*, **2021**, 11, 409-422	7.6	9
59	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. *New Journal of Chemistry*, **2021**, 45, 9212-9220	3.6	17
58	Metal oxide electron transport materials for perovskite solar cells: a review. *Environmental Chemistry Letters*, **2021**, 19, 2185-2207	13.3	38
57	Synthesis and characterization of a new ZIF-67@MgAlO nanocomposite and its adsorption behaviour.. *RSC Advances*, **2021**, 11, 13245-13255	3.7	4
56	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.. *RSC Advances*, **2021**, 11, 17914-17923	3.7	18
55	The controlled synthesis and DFT investigation of novel (0D)-(3D) ZnS/SiO heterostructures for photocatalytic applications.. *RSC Advances*, **2021**, 11, 22352-22364	3.7	7
54	Synthesis, characterization and antimicrobial activity applications of grafted copolymer alginate--poly(-vinyl imidazole).. *RSC Advances*, **2021**, 11, 11541-11548	3.7	20
53	Cobalt metal-organic framework-based ZIF-67 for the trace determination of herbicide molinate by ion mobility spectrometry: investigation of different morphologies.. *RSC Advances*, **2021**, 11, 2643-2655	3.7	6
52	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.. *RSC Advances*, **2021**, 11, 5139-5148	3.7	15
51	Graphene assisted crystallization and charge extraction for efficient and stable perovskite solar cells free of a hole-transport layer.. *RSC Advances*, **2021**, 11, 4417-4424	3.7	19

50	Efficient and Stable Perovskite Solar Cells Enabled by Dicarboxylic Acid-Supported Perovskite Crystallization. *Journal of Physical Chemistry Letters*, **2021**, 12, 997-1004	6.4	36
49	Hybrid Bionanocomposite Containing Magnesium Hydroxide Nanoparticles Embedded in a Carboxymethyl Cellulose Hydrogel Plus Silk Fibroin as a Scaffold for Wound Dressing Applications. *ACS Applied Materials & Interfaces*, **2021**, 13, 33840-33849	9.5	18
48	Bismuth-based heterojunction nanocomposites for photocatalysis and heavy metal detection applications. *Nano Structures Nano Objects*, **2021**, 27, 100762	5.6	30
47	Magnetic Copper Ferrite Nanoparticles Functionalized by Aromatic Polyamide Chains for Hyperthermia Applications. *Langmuir*, **2021**, 37, 8847-8854	4	14
46	Engineering of Electron Affinity and Interfacial Charge Transfer of Graphene for Self-Powered Nonenzymatic Biosensor Applications. *ACS Applied Materials & Interfaces*, **2021**, 13, 40731-40741	9.5	7
45	Silver-Doped Cadmium Selenide/Graphene Oxide-Filled Cellulose Acetate Nanocomposites for Photocatalytic Degradation of Malachite Green toward Wastewater Treatment. *ACS Omega*, **2021**, 6, 23129-23138	3.9	8
44	CdSe Quantum Dot Nanoparticles: Synthesis and Application in the Development of Molecularly Imprinted Polymer-Based Dual Optical Sensors. *Industrial & Engineering Chemistry Research*, **2021**, 60, 12328-12342	3.9	2
43	Composition engineering of operationally stable CsPbI2Br perovskite solar cells with a record efficiency over 17%. *Nano Energy*, **2021**, 87, 106157	17.1	35
42	Pectin-cellulose hydrogel, silk fibroin and magnesium hydroxide nanoparticles hybrid nanocomposites for biomedical applications. *International Journal of Biological Macromolecules*, **2021**, 192, 7-15	7.9	7
41	High-performance perovskite solar cells using the graphene quantum dot□odified SnO2/ZnO photoelectrode. *Materials Today Energy*, **2021**, 22, 100853	7	11
40	Advances in thermochromic and thermoelectric materials **2021**, 153-186		2
39	Highly porous copper-supported magnetic nanocatalysts: made of volcanic pumice textured by cellulose and applied for the reduction of nitrobenzene derivatives.. *RSC Advances*, **2021**, 11, 25284-25295	3.7	10
38	Convenient conversion of hazardous nitrobenzene derivatives to aniline analogues by Ag nanoparticles, stabilized on a naturally magnetic pumice/chitosan substrate.. *RSC Advances*, **2020**, 10, 43670-43681	3.7	24
37	Facile route to synthesize FeO@acacia-SOH nanocomposite as a heterogeneous magnetic system for catalytic applications.. *RSC Advances*, **2020**, 10, 40055-40067	3.7	32
36	Challenges and approaches towards upscaling the assembly of hybrid perovskite solar cells. *Materials Advances*, **2020**, 1, 292-309	3.3	22
35	Advances in nanotechnology and antibacterial properties of biodegradable food packaging materials.. *RSC Advances*, **2020**, 10, 20467-20484	3.7	50
34	High cytotoxic activity of ZnO@leucovorin nanocomposite based materials against an MCF-7 cell model. *Analytical Methods*, **2020**, 12, 2176-2184	3.2	16
33	Acceleration of ammonium phosphate hydrolysis using TiO2 microspheres as a catalyst for hydrogen production. *Nanoscale Advances*, **2020**, 2, 2080-2086	5.1	6

32	Statistical optimization of photo-induced biofabrication of silver nanoparticles using the cell extract of : insight on characterization and antioxidant potentiality.. *RSC Advances*, **2020**, 10, 44232-44246	3.7	6
31	Thermoelectric Energy Harvesters: A Review of Recent Developments in Materials and Devices for Different Potential Applications. *Topics in Current Chemistry*, **2020**, 378, 48	7.2	22
30	Dopant-free hole-transporting polymers for efficient, stable, and hysteresis-less perovskite solar cells. *Sustainable Materials and Technologies*, **2020**, 26, e00226	5.3	8
29	Improvement of the interfacial contact between zinc oxide and a mixed cation perovskite using carbon nanotubes for ambient-air-processed perovskite solar cells. *New Journal of Chemistry*, **2020**, 44, 19802-19811	3.6	19
28	Ultrasound-assisted diversion of nitrobenzene derivatives to their aniline equivalents through a heterogeneous magnetic Ag/Fe3O4-IT nanocomposite catalyst. *New Journal of Chemistry*, **2020**, 44, 19827-19835	3.6	30
27	TiO2 Nanotubes: An Advanced Electron Transport Material for Enhancing the Efficiency and Stability of Perovskite Solar Cells. *Industrial & Engineering Chemistry Research*, **2020**, 59, 18549-18557	3.9	19
26	Polymer Amplification to Improve Performance and Stability toward Semitransparent Perovskite Solar Cells Fabrication. *Energy Technology*, **2020**, 8, 1900728	3.5	8
25	Achieving exceedingly constructional characterization of magnesia-yttria (MgO-Y2O3) nanocomposite obtained via oxalate precursor strategy. *Measurement: Journal of the International Measurement Confederation*, **2020**, 150, 106888	4.6	9
24	Lead-Free Perovskites: Metals Substitution towards Environmentally Benign Solar Cell Fabrication. *ChemSusChem*, **2019**, 12, 4116-4139	8.3	25
23	Recent progress concerning inorganic hole transport layers for efficient perovskite solar cells. *Applied Physics A: Materials Science and Processing*, **2019**, 125, 1	2.6	26
22	Tin-zinc-oxide nanocomposites (SZO) as promising electron transport layers for efficient and stable perovskite solar cells. *Nanoscale Advances*, **2019**, 1, 2654-2662	5.1	28
21	Photocatalytic performance of TiO2@SiO2 nanocomposites for the treatment of different organic dyes. *Journal of Materials Science: Materials in Electronics*, **2019**, 30, 9623-9633	2.1	22
20	An overview of nanomaterials for industrial wastewater treatment. *Korean Journal of Chemical Engineering*, **2019**, 36, 1209-1225	2.8	79
19	Facile approach to prepare ZnO@SiO2 nanomaterials for photocatalytic degradation of some organic pollutant models. *Journal of Materials Science: Materials in Electronics*, **2019**, 30, 14291-14299	2.1	35
18	Coated silver nanoparticles: synthesis, cytotoxicity, and optical properties.. *RSC Advances*, **2019**, 9, 20118-20136	3.7	65
17	A graphene gold nanocomposite-based 5-FU drug and the enhancement of the MCF-7 cell line treatment.. *RSC Advances*, **2019**, 9, 31021-31029	3.7	30
16	Copper-Substituted Lead Perovskite Materials Constructed with Different Halides for Working (CHNH)CuX-Based Perovskite Solar Cells from Experimental and Theoretical View. *ACS Applied Materials & Interfaces*, **2018**, 10, 11699-11707	9.5	107
15	Structural, magnetic properties, and induction heating behavior studies of cobalt ferrite nanopowders synthesized using modified co-precipitation method. *Particulate Science and Technology*, **2018**, 36, 172-177	2	9

14	Efficacious realization of Ba0.5Sr0.5TixM1−xO3 (M = Mn2+, Co2+) perovskite nanostructures through oxalate precursor strategy. *Journal of Materials Science: Materials in Electronics*, **2018**, 29, 14582-14588	2.1	6
13	Pathways Towards High-Stable, Low-Cost and Efficient Perovskite Solar Cells **2018**,		1
12	Pollutant degradation of different organic dyes using the photocatalytic activity of ZnO@ZnS nanocomposite materials. *Journal of Environmental Chemical Engineering*, **2018**, 6, 3981-3990	6.8	47
11	Solid-state dye-sensitized solar cells based on Zn Sn O nanocomposite photoanodes.. *RSC Advances*, **2018**, 8, 24059-24067	3.7	18
10	Optimization of a compact layer of TiO2via atomic-layer deposition for high-performance perovskite solar cells. *Sustainable Energy and Fuels*, **2017**, 1, 1533-1540	5.8	53
9	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	2.1	9
8	Versatile plasmonic-effects at the interface of inverted perovskite solar cells. *Nanoscale*, **2017**, 9, 1229-1236	7.7	42
7	Cobalt Oxide (CoO) as an Efficient Hole-Extracting Layer for High-Performance Inverted Planar Perovskite Solar Cells. *ACS Applied Materials & Interfaces*, **2016**, 8, 33592-33600	9.5	94
6	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	6.8	54
5	Plasmonic enhancement of low cost mesoporous Fe2O3-TiO2 loaded with palladium, platinum or silver for dye sensitized solar cells (DSSCs). *Applied Surface Science*, **2015**, 359, 315-322	6.7	27
4	Concordantly fabricated heterojunction ZnO□TiO2 nanocomposite electrodes via a co-precipitation method for efficient stable quasi-solid-state dye-sensitized solar cells. *RSC Advances*, **2015**, 5, 103095-103104	3.7	28
3	Tailoring green formulation: Printing and upscaling of inverted organic solar cells **2013**,		1
2	Neodymium and Praseodymium Doped Perovskite Materials for Highly Stable CuInS 2 -Hole-Transport Layer-Based Perovskite Solar Cells. *Energy Technology*,2100936	3.5	0
1	Computational Modelling of Two Terminal CIGS/Perovskite Tandem Solar Cells with Power Conversion Efficiency of 23.1 %. *European Journal of Inorganic Chemistry*,	2.3	3