

# Asif Ali Tahir

## List of Publications by Year in descending order

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110  
papers

5,992  
citations

76294

40  
h-index

74108

75  
g-index

114  
all docs

114  
docs citations

114  
times ranked

7543  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Water-Stable Porphyrin-Based Metal-Organic Framework Active for Visible-Light Photocatalysis. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 7440-7444.	7.2	680
2	Nanostructured $\text{Fe}_2\text{O}_3$ Thin Films for Photoelectrochemical Hydrogen Generation. <i>Chemistry of Materials</i> , 2009, 21, 3763-3772.	3.2	317
3	Enhanced photoelectrochemical performance of Z-scheme g-C <sub>3</sub> N <sub>4</sub> /BiVO <sub>4</sub> photocatalyst. <i>Applied Catalysis B: Environmental</i> , 2018, 234, 296-310.	10.8	301
4	Kinetics of light-driven oxygen evolution at $\text{Fe}_2\text{O}_3$ electrodes. <i>Faraday Discussions</i> , 2012, 155, 309-322.	1.6	278
5	Kinetics and mechanism of light-driven oxygen evolution at thin film $\text{Fe}_2\text{O}_3$ electrodes. <i>Chemical Communications</i> , 2012, 48, 2027.	2.2	207
6	Photoelectrochemical and Photoresponsive Properties of Bi <sub>2</sub> S <sub>3</sub> Nanotube and Nanoparticle Thin Films. <i>Chemistry of Materials</i> , 2010, 22, 5084-5092.	3.2	205
7	Photoelectrochemical water splitting at nanostructured ZnFe <sub>2</sub> O <sub>4</sub> electrodes. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2010, 216, 119-125.	2.0	164
8	Nano-enhanced Phase Change Material for thermal management of BICPV. <i>Applied Energy</i> , 2017, 208, 719-733.	5.1	164
9	New Insights into Water Splitting at Mesoporous $\text{Fe}_2\text{O}_3$ Films: A Study by Modulated Transmittance and Impedance Spectroscopies. <i>Journal of the American Chemical Society</i> , 2012, 134, 1228-1234.	6.6	162
10	Performance enhancement of a Building-Integrated Concentrating Photovoltaic system using phase change material. <i>Solar Energy Materials and Solar Cells</i> , 2016, 149, 29-39.	3.0	158
11	Nanostructured $\text{Fe}_2\text{O}_3$ Electrodes for Solar Driven Water Splitting: Effect of Doping Agents on Preparation and Performance. <i>Journal of Physical Chemistry C</i> , 2009, 113, 4768-4778.	1.5	147
12	Structural and electronic properties of oxygen defective and Se-doped p-type BiVO <sub>4</sub> (001) thin film for the applications of photocatalysis. <i>Applied Catalysis B: Environmental</i> , 2018, 224, 895-903.	10.8	104
13	New Insights into Se/BiVO <sub>4</sub> Heterostructure for Photoelectrochemical Water Splitting: A Combined Experimental and DFT Study. <i>Journal of Physical Chemistry C</i> , 2017, 121, 6218-6228.	1.5	96
14	The Pseudocapacitive Nature of CoFe <sub>2</sub> O <sub>4</sub> Thin Films. <i>Electrochimica Acta</i> , 2017, 246, 870-878.	2.6	96
15	Molecular and Electronic Structure Elucidation of Polypyrrole Gas Sensors. <i>Journal of Physical Chemistry C</i> , 2015, 119, 15994-16003.	1.5	94
16	A Review of Supercapacitors: Materials Design, Modification, and Applications. <i>Energies</i> , 2021, 14, 7779.	1.6	94
17	Polypyrrole/TiO <sub>2</sub> composites for the application of photocatalysis. <i>Sensors and Actuators B: Chemical</i> , 2017, 241, 1161-1169.	4.0	92
18	Porous ZnO/Carbon nanocomposites derived from metal organic frameworks for highly efficient photocatalytic applications: A correlational study. <i>Carbon</i> , 2019, 146, 348-363.	5.4	89

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19	Perovskite-type lanthanum ferrite based photocatalysts: Preparation, properties, and applications. <i>Journal of Energy Chemistry</i> , 2022, 66, 314-338.	7.1	88
20	Unbiased Spontaneous Solar Fuel Production using Stable LaFeO <sub>3</sub> Photoelectrode. <i>Scientific Reports</i> , 2018, 8, 3501.	1.6	61
21	Kinetic and thermodynamic evaluation of effective combined promoters for CO <sub>2</sub> hydrate formation. <i>Journal of Natural Gas Science and Engineering</i> , 2020, 78, 103313.	2.1	61
22	Phytochemical, spectroscopic and density functional theory study of Diospyrin, and non-bonding interactions of Diospyrin with atmospheric gases. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2015, 141, 71-79.	2.0	60
23	Electrochemical Reduction of CO <sub>2</sub> : A Review of Cobalt Based Catalysts for Carbon Dioxide Conversion to Fuels. <i>Nanomaterials</i> , 2021, 11, 2029.	1.9	60
24	The Application of Graphene and Its Derivatives to Energy Conversion, Storage, and Environmental and Biosensing Devices. <i>Chemical Record</i> , 2016, 16, 1591-1634.	2.9	58
25	Experimental and DFT Studies of Au Deposition Over WO <sub>3</sub> /g-C <sub>3</sub> N <sub>4</sub> Z-Scheme Heterojunction. <i>Nano-Micro Letters</i> , 2020, 12, 7.	14.4	57
26	Density functional theory and phytochemical study of 8-hydroxyisodiospyrin. <i>Journal of Molecular Structure</i> , 2015, 1095, 69-78.	1.8	53
27	Photoelectrochemical solar water splitting: From basic principles to advanced devices. , 2018, 2, BDJOC3.		53
28	Plasmon Assisted Highly Efficient Visible Light Catalytic CO <sub>2</sub> Reduction Over the Noble Metal Decorated Sr-Incorporated g-C <sub>3</sub> N <sub>4</sub> . <i>Nano-Micro Letters</i> , 2021, 13, 209.	14.4	53
29	Electronic properties of $\hat{I}^2$ -TaON and its surfaces for solar water splitting. <i>Applied Catalysis B: Environmental</i> , 2018, 229, 24-31.	10.8	52
30	Bismuth-Graphene Nanohybrids: Synthesis, Reaction Mechanisms, and Photocatalytic Applicationsâ€™A Review. <i>Energies</i> , 2021, 14, 2281.	1.6	51
31	Reduced graphene oxide (rGO) aerogel: Efficient adsorbent for the elimination of antimony (III) and (V) from wastewater. <i>Journal of Hazardous Materials</i> , 2021, 420, 126554.	6.5	51
32	Fabrication of nanostructured $\hat{I}^{\pm}$ -Fe <sub>2</sub> O <sub>3</sub> electrodes using ferrocene for solar hydrogen generation. <i>Materials Letters</i> , 2009, 63, 523-526.	1.3	50
33	ZnFe <sub>2</sub> O <sub>4</sub> thin films from a single source precursor by aerosol assisted chemical vapour deposition. <i>Thin Solid Films</i> , 2010, 518, 3664-3668.	0.8	49
34	Fabrication of Bi <sub>2</sub> WO <sub>6</sub> photoelectrodes with enhanced photoelectrochemical and photocatalytic performance. <i>Solar Energy Materials and Solar Cells</i> , 2019, 195, 134-141.	3.0	49
35	Synthesis of Isostructural Cage Complexes of Copper with Cobalt and Nickel for Deposition of Mixed Ceramic Oxide Materials. <i>Inorganic Chemistry</i> , 2006, 45, 10457-10466.	1.9	48
36	Combined experimental and theoretical study of poly(aniline-co-pyrrole) oligomer. <i>Polymer</i> , 2015, 72, 30-39.	1.8	46

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37	Photooxidation of water by NiTiO <sub>3</sub> deposited from single source precursor [Ni <sub>2</sub> Ti <sub>2</sub> (OEt) <sub>2</sub> (1/4-OEt) <sub>6</sub> (acac) <sub>4</sub> ] by AACVD. Dalton Transactions, 2009, , 3674.	1.6	45
38	Silver(i) complexes of 9-anthracenecarboxylic acid and imidazoles: synthesis, structure and antimicrobial activity. Dalton Transactions, 2012, 41, 6516.	1.6	45
39	Fe <sup>3+</sup> @ ZnO/polyester based solar photocatalytic membrane reactor for abatement of RB5 dye. Journal of Cleaner Production, 2020, 246, 119010.	4.6	44
40	Heterobimetallic Molecular Cages for the Deposition of Cu/Ti and Cu/Zn Mixed-Metal Oxides. Inorganic Chemistry, 2007, 46, 4120-4127.	1.9	42
41	Preparation, Functionalization, Modification, and Applications of Nanostructured Gold: A Critical Review. Energies, 2021, 14, 1278.	1.6	42
42	A hysteresis-free perovskite transistor with exceptional stability through molecular cross-linking and amine-based surface passivation. Nanoscale, 2020, 12, 7641-7650.	2.8	40
43	A new route to control texture of materials: Nanostructured ZnFe <sub>2</sub> O <sub>4</sub> photoelectrodes. International Journal of Hydrogen Energy, 2013, 38, 4315-4323.	3.8	39
44	Efficient photocatalysis through conductive polymer coated FTO counter electrode in platinum free dye sensitized solar cells. Electrochimica Acta, 2019, 320, 134544.	2.6	39
45	Au surface plasmon resonance promoted charge transfer in Z-scheme system enables exceptional photocatalytic hydrogen evolution. Applied Catalysis B: Environmental, 2022, 310, 121322.	10.8	37
46	Enhanced Photoactivity and Hydrogen Generation of LaFeO <sub>3</sub> Photocathode by Plasmonic Silver Nanoparticle Incorporation. ACS Applied Energy Materials, 2018, 1, 3449-3456.	2.5	36
47	Temperature regulation of concentrating photovoltaic window using argon gas and polymer dispersed liquid crystal films. Renewable Energy, 2021, 164, 96-108.	4.3	36
48	Soft-template synthesis of high surface area mesoporous titanium dioxide for dye-sensitized solar cells. International Journal of Energy Research, 2019, 43, 523-534.	2.2	35
49	Plasmonic nickel nanoparticles decorated on to LaFeO <sub>3</sub> photocathode for enhanced solar hydrogen generation. International Journal of Hydrogen Energy, 2019, 44, 578-586.	3.8	33
50	Superior photoelectrocatalytic performance of ternary structural BiVO <sub>4</sub> /GQD/g-C <sub>3</sub> N <sub>4</sub> heterojunction. Journal of Colloid and Interface Science, 2021, 586, 785-796.	5.0	32
51	Synthesis and Structural Characterization of a New Heterobimetallic Coordination Complex of Barium and Cobalt for Use as a Precursor for Chemical Vapor Deposition. Inorganic Chemistry, 2005, 44, 9207-9212.	1.9	31
52	Synthesis and characterization of silver diethyldithiocarbamate cluster for the deposition of acanthite (Ag <sub>2</sub> S) thin films for photoelectrochemical applications. Thin Solid Films, 2013, 536, 124-129.	0.8	30
53	A system based on zinc porphyrin dyes for dye-sensitized solar cells: Combined experimental and DFT-TDDFT study. Polyhedron, 2015, 100, 313-320.	1.0	29
54	An Overview of the Recent Progress in Polymeric Carbon Nitride Based Photocatalysis. Chemical Record, 2021, 21, 1811-1844.	2.9	29

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55	Effect of MXene Loaded on g-C <sub>3</sub> N <sub>4</sub> Photocatalyst for the Photocatalytic Degradation of Methylene Blue. <i>Energies</i> , 2022, 15, 955.	1.6	29
56	Enhancement of Photoelectrochemical Performance of AACVD-produced TiO <sub>2</sub> Electrodes by Microwave Irradiation while Preserving the Nanostructure. <i>Chemical Vapor Deposition</i> , 2012, 18, 107-111.	1.4	28
57	Donor-acceptor polymer for the design of All-Solid-State dye-sensitized solar cells. <i>Journal of Alloys and Compounds</i> , 2017, 696, 914-922.	2.8	28
58	Role of Hafnium Doping on Wetting Transition Tuning the Wettability Properties of ZnO and Doped Thin Films: Self-Cleaning Coating for Solar Application. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 25540-25552.	4.0	28
59	Photoelectrochemical properties of texture-controlled nanostructured Fe <sub>2</sub> O <sub>3</sub> thin films prepared by AACVD. <i>Physica Status Solidi - Rapid Research Letters</i> , 2014, 8, 976-981.	1.2	26
60	Building energy analysis using EC and PDLC based smart switchable window in Oman. <i>Solar Energy</i> , 2022, 237, 301-312.	2.9	26
61	Structural Characteristics and Environmental Applications of Covalent Organic Frameworks. <i>Energies</i> , 2021, 14, 2267.	1.6	24
62	Penetrating arrow injuries of the maxillofacial region. <i>British Journal of Oral and Maxillofacial Surgery</i> , 2005, 43, 329-332.	0.4	23
63	Deposition and characterization of ZnO thin films from a novel hexanuclear zinc precursor. <i>Inorganica Chimica Acta</i> , 2008, 361, 188-194.	1.2	23
64	Copper-cobalt heterobimetallic ceramic oxide thin film deposition: Synthesis, characterization and application of precursor. <i>Inorganic Chemistry Communication</i> , 2008, 11, 1159-1161.	1.8	22
65	Bandgap Engineering in Novel Fluorite-type Rare Earth High-Entropy Oxides (RE <sub>4</sub> HEOs) with Computational and Experimental Validation for Photocatalytic Water Splitting Applications. <i>Advanced Sustainable Systems</i> , 2022, 6, .	2.7	22
66	Density Functional Theory Study of Selenium-Substituted Low-Bandgap Donor-Acceptor-Donor Polymer. <i>Journal of Physical Chemistry C</i> , 2016, 120, 27200-27211.	1.5	21
67	Understanding the Semi-Switchable Thermo-chromic Behavior of Mixed Halide Hybrid Perovskite Nanorods. <i>Journal of Physical Chemistry C</i> , 2021, 125, 18058-18070.	1.5	21
68	ZnO-SnO <sub>2</sub> composite anodes in extremely thin absorber layer (ETA) solar cells. <i>Journal of Electroanalytical Chemistry</i> , 2010, 646, 124-132.	1.9	18
69	Single Step Growth and Characterization of Zinc Oxide, Tin Oxide, and Composite (Zn <sub>x</sub> Sn <sub>1-x</sub> O <sub>y</sub> ) Nanoplate and Nanocolumn Electrodes. <i>Journal of the American Ceramic Society</i> , 2011, 94, 3540-3546.	1.9	18
70	Deposition of iron titanate/titania ceramic composite thin films from a single molecular precursor. <i>Inorganica Chimica Acta</i> , 2011, 376, 189-194.	1.2	18
71	Cobalt titanate-cobalt oxide composite thin films deposited from heterobimetallic precursor. <i>Applied Organometallic Chemistry</i> , 2012, 26, 493-498.	1.7	18
72	New tetrahedral, square-pyramidal, trigonal-bipyramidal and octahedral organotin(IV) 4-ethoxycarbonylpiperazine-1-carbodithioates: Synthesis, structural properties and biological applications. <i>Journal of Organometallic Chemistry</i> , 2010, 695, 1526-1532.	0.8	17

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73	Enhancing the performance of BICPV systems using phase change materials. AIP Conference Proceedings, 2015, , .	0.3	17
74	Fabrication of Ni <sup>2+</sup> incorporated ZnO photoanode for efficient overall water splitting. Applied Surface Science, 2019, 490, 302-308.	3.1	17
75	Redetermination of bis(2,4-pentanedionato)palladium(II). Acta Crystallographica Section E: Structure Reports Online, 2005, 61, m2181-m2183.	0.2	16
76	Heterobimetallic copper–barium complexes for deposition of composite oxide thin films. New Journal of Chemistry, 2009, 33, 1535.	1.4	16
77	Fabrication of NiO photoelectrodes by aerosol-assisted chemical vapour deposition (AACVD). Physica Status Solidi - Rapid Research Letters, 2014, 8, 982-986.	1.2	16
78	Single source heterobimetallic precursors for the deposition of Cu–Ti mixed metal oxide thin films. Dalton Transactions, 2008, , 1224.	1.6	15
79	Hexanuclear copper–nickel and copper–cobalt complexes for thin film deposition of ceramic oxide composites. New Journal of Chemistry, 2012, 36, 911.	1.4	14
80	Superior visible-light assisted water splitting performance by Fe incorporated ZnO photoanodes. Materials Research Bulletin, 2020, 122, 110627.	2.7	14
81	Isostructural copper–zinc mixed metal complexes for single source deposition of Cu–ZnO composite thin films. Dalton Transactions, 2011, 40, 7889.	1.6	13
82	RF Sputtered Nb-Doped MoS <sub>2</sub> Thin Film for Effective Detection of NO <sub>2</sub> Gas Molecules: Theoretical and Experimental Studies. ACS Omega, 2022, 7, 10492-10501.	1.6	13
83	Chemically vaporized cobalt incorporated wurtzite as photoanodes for efficient photoelectrochemical water splitting. Materials Science in Semiconductor Processing, 2019, 101, 223-229.	1.9	12
84	Photoelectrochemical Water Splitting Using a Concentrated Solar Flux-Assisted LaFeO <sub>3</sub> Photocathode. ACS Applied Energy Materials, 2020, 3, 9002-9009.	2.5	12
85	Electronic Tuning of Zinc Oxide by Direct Fabrication of Chromium (Cr) incorporated photoanodes for Visible-light driven Water Splitting Applications. Scientific Reports, 2020, 10, 9707.	1.6	12
86	Nanostructured ZnO Thin Films for Optical, Electrical, and Photoelectrochemical Applications from a New Zn Complex. Industrial & Engineering Chemistry Research, 2012, 51, 16361-16368.	1.8	11
87	Computational investigations into the structural and electronic properties of Cd <sub>n</sub> Te <sub>n</sub> (n = 1–17) quantum dots. RSC Advances, 2019, 9, 5091-5099.	1.7	11
88	Synergistic Effect of Paraffin-Incorporated In <sub>2</sub> O <sub>3</sub> /ZnO Multifold Smart Glazing Composite for the Self-Cleaning and Energy-Saving Built Environment. ACS Sustainable Chemistry and Engineering, 2022, 10, 6609-6621.	3.2	11
89	Copper(II) Oligomeric Derivatives for Deposition of Copper Thin Films. European Journal of Inorganic Chemistry, 2009, 2009, 1043-1050.	1.0	10
90	Highly Efficient Nanostructured Bi <sub>2</sub> WO <sub>6</sub> Thin Film Electrodes for Photoelectrochemical and Environment Remediation. Nanomaterials, 2019, 9, 755.	1.9	10

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91	Smart glazing thermal comfort improvement through near-infrared shielding paraffin incorporated SnO <sub>2</sub> -Al <sub>2</sub> O <sub>3</sub> composite. Construction and Building Materials, 2022, 331, 127319.	3.2	10
92	Performance improvement of a desiccant based cooling system by mitigation of non-uniform illumination on the coupled low concentrating photovoltaic thermal units. Energy Conversion and Management, 2022, 257, 115438.	4.4	9
93	Reinforcement Learning for Energy-Storage Systems in Grid-Connected Microgrids: An Investigation of Online vs. Offline Implementation. Energies, 2021, 14, 5688.	1.6	8
94	Effects of AACVD and Electrodeposited ZnO Seed Layer on the Growth and Alignment of ZnO Nanorods by Chemical Bath Deposition. Nanoscience and Nanotechnology Letters, 2011, 3, 674-678.	0.4	7
95	Development of Morphologically engineered Flower-like Hafnium-Doped ZnO with Experimental and DFT Validation for Low-Temperature and Ultrasensitive Detection of NO <sub>x</sub> Gas. Industrial & Engineering Chemistry Research, 2022, 61, 5885-5897.	1.8	7
96	Dioxobis(pentane-2,4-dionato)(tetrahydrofuran)uranium(VI). Acta Crystallographica Section E: Structure Reports Online, 2006, 62, m1780-m1781.	0.2	6
97	Fluoro Substituted Monomeric and Uni-Dimensional Polymeric Organotin(IV) Esters of vitro Inhibitory Studies. Journal of Inorganic and Organometallic Polymers and Materials, 2012, 22, 699-708.	1.9	6
98	Performance Improvement of a CPV System: Experimental Investigation into Passive Cooling with Phase Change Materials. Energies, 2021, 14, 3550.	1.6	5
99	Temperature-controlled Deposition of Copper(I) Oxide and Metallic Copper Nanostructures from Single-source Molecular Precursor. Australian Journal of Chemistry, 2014, 67, 757.	0.5	4
100	Bis(¼-acetylacetonato-Fe <sup>2+</sup> )bis[(acetylacetonato-Fe <sup>2+</sup> )aquanickel(II)] hemihydrate. Acta Crystallographica Section E: Structure Reports Online, 2007, 63, m272-m274.	0.2	2
101	Bis(cinnamato-Fe <sup>2+</sup> )bis[2-(dimethylamino)ethanol-Fe <sup>2+</sup> ,O]copper(II). Acta Crystallographica Section E: Structure Reports Online, 2007, 63, m1243-m1245.	0.2	2
102	Multinuclear (Sn/Pd) complexes with disodium 2,2-((dithiocarboxyazanediyl)diacetate hydrate; Synthesis, characterization and biological activities. Journal of Coordination Chemistry, 2017, 70, 4070-4092.	0.8	2
103	A poly(styrene-co-acrylonitrile) gel electrolyte for dye-sensitized solar cells with improved photoelectrochemical performance. New Journal of Chemistry, 2020, 44, 20212-20221.	1.4	2
104	Fabrication of Mn-Zn photoanodes for photoelectrochemical water splitting applications. Journal of Materials Science: Materials in Electronics, 2021, 32, 20946-20954.	1.1	2
105	Improved Photoelectrochemical Performance of Chemically Grown Pristine Hematite Thin Films. Journal of Electronic Materials, 2022, 51, 652-669.	1.0	2
106	Superior photoelectrochemical performance by antimony-doped ZnO thin films by AACVD approach. Bulletin of Materials Science, 2022, 45, 1.	0.8	2
107	WTa <sub>37</sub> O <sub>95.487</sub> Nanocatalyst for Pollutant Degradation. Journal of Physical Chemistry C, 2021, 125, 27148-27158.	1.5	2
108	Bis(acetato-O)bis[2-(dimethylamino)ethanol-Fe <sup>2+</sup> ,O]cobalt(II). Acta Crystallographica Section E: Structure Reports Online, 2006, 62, m1974-m1976.	0.2	1

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109	Chloro[2-(N,N-dimethylamino)ethanol-Î²N][2-(N,N-dimethylamino)ethanolato-Î²2 N,O]palladium(II). Acta Crystallographica Section E: Structure Reports Online, 2007, 63, m728-m730.	0.2	0
110	Impact of dopant ratio on the energy harvesting activity of polyaniline modified counter electrodes for Pt-free dye-sensitized solar cells. Electrochemical Science Advances, 0, , .	1.2	0