Muhammad I Asghar

List of Publications by Year
in descending order

60 papers	2,237 citations	236612 25 h-index	223531 46 g-index
61 all docs	61 docs citations	61 times ranked	2330 citing authors

#	ARTICLE	IF	CITATIONS
1	Device stability of perovskite solar cells â€“ A review. Renewable and Sustainable Energy Reviews, 2017, 77, 131-146.	8.2	345
2	Review of stability for advanced dye solar cells. Energy and Environmental Science, 2010, 3, 418.	15.6	260
3	Review of materials and manufacturing options for large area flexible dye solar cells. Renewable and Sustainable Energy Reviews, 2011, 15, 3717-3732.	8.2	185
4	A review on solid oxide fuel cell durability: Latest progress, mechanisms, and study tools. Renewable and Sustainable Energy Reviews, 2022, 161, 112339.	8.2	116
5	Electrochemical mechanisms of an advanced low-temperature fuel cell with a SrTiO₃ electrolyte. Journal of Materials Chemistry A, 2019, 7, 9638-9645.	5.2	90
6	Application of a Triple-Conducting Heterostructure Electrolyte of Ba_{0.5}Sr_{0.5}Co_{0.1}Fe_{0.7}Zr_{0.1}Y_{0.1}O_{3âˆ’Î´} and Ca_{0.04}Ce_{0.80}Sm_{0.16}O_{2âˆ’Î´} in a High-Performance Low-Temperature Solid Oxide Fuel Cell. ACS Applied Materials & Interfaces, 2020, 12, 35071-35080.	4.0	84
7	Promoted electrocatalytic activity and ionic transport simultaneously in dual functional Ba0.5Sr0.5Fe0.8Sb0.2O3-Î´-Sm0.2Ce0.8O2-Î´ heterostructure. Applied Catalysis B: Environmental, 2021, 298, 120503.	10.8	78
8	Wide bandgap oxides for low-temperature single-layered nanocomposite fuel cell. Nano Energy, 2018, 53, 391-397.	8.2	55
9	Semiconductor Fe-doped SrTiO3-Î´ perovskite electrolyte for low-temperature solid oxide fuel cell (LT-SOFC) operating below 520ÂÂ°C. International Journal of Hydrogen Energy, 2020, 45, 14470-14479.	3.8	52
10	Effect of electrolyte bleaching on the stability and performance of dye solar cells. Physical Chemistry Chemical Physics, 2014, 16, 6092.	1.3	50
11	In situ image processing method to investigate performance and stability of dye solar cells. Solar Energy, 2012, 86, 331-338.	2.9	47
12	Rediscovering a Key Interface in Dye-Sensitized Solar Cells: Guanidinium and Iodine Competition for Binding Sites at the Dye/Electrolyte Surface. Journal of the American Chemical Society, 2014, 136, 7286-7294.	6.6	43
13	Charge Transport and Photocurrent Generation Characteristics in Dye Solar Cells Containing Thermally Degraded N719 Dye Molecules. Journal of Physical Chemistry C, 2011, 115, 15598-15606.	1.5	39
14	Mechanism for Major Improvement in SOFC Electrolyte Conductivity When Using Lithium Compounds as Anode. ACS Applied Energy Materials, 2020, 3, 4134-4138.	2.5	39
15	Advanced low-temperature ceramic nanocomposite fuel cells using ultra high ionic conductivity electrolytes synthesized through freeze-dried method and solid-route. Materials Today Energy, 2017, 5, 338-346.	2.5	38
16	A carbon gel catalyst layer for the roll-to-roll production of dye solar cells. Carbon, 2011, 49, 528-532.	5.4	36
17	Novel Perovskite Semiconductor Based on Co/Fe-Codoped LBZY (La_{0.5}Ba_{0.5}) Tj ETQq1 1 0.784314 rgBT /Ov Electrolyte in Ceramic Fuel Cells. ACS Applied Energy Materials, 2021, 4, 5798-5808.	2.5	36
18	Stabilization of metal counter electrodes for dye solar cells. Journal of Electroanalytical Chemistry, 2011, 653, 93-99.	1.9	32

#	Article	IF	Citations
19	Do Counter Electrodes on Metal Substrates Work with Cobalt Complex Based Electrolyte in Dye Sensitized Solar Cells?. Journal of the Electrochemical Society, 2013, 160, H132-H137.	1.3	32
20	An efficient Sm and Ge co-doped ceria nanocomposite electrolyte for low temperature solid oxide fuel cells. Ceramics International, 2018, 44, 170-174.	2.3	32
21	Semiconductor Nb-Doped SrTiO_{3âˆ'Î´} Perovskite Electrolyte for a Ceramic Fuel Cell. ACS Applied Energy Materials, 2021, 4, 365-375.	2.5	30
22	High conductive (LiNaK) 2 CO 3 Ce 0.85 Sm 0.15 O 2 electrolyte compositions for IT-SOFC applications. International Journal of Hydrogen Energy, 2017, 42, 20904-20909.	3.8	29
23	Interface engineering of bi-layer semiconductor SrCoSnO3-Î´-CeO2-Î´ heterojunction electrolyte for boosting the electrochemical performance of low-temperature ceramic fuel cell. International Journal of Hydrogen Energy, 2021, 46, 33969-33977.	3.8	28
24	Tailoring triple charge conduction in BaCo0.2Fe0.1Ce0.2Tm0.1Zr0.3Y0.1O3âˆ'Î´ semiconductor electrolyte for boosting solid oxide fuel cell performance. Renewable Energy, 2021, 172, 336-349.	4.3	26
25	Low temperature ceramic fuel cells employing lithium compounds: A review. Journal of Power Sources, 2021, 503, 230070.	4.0	26
26	Non-doped CeO2-carbonate nanocomposite electrolyte for low temperature solid oxide fuel cells. Ceramics International, 2020, 46, 29290-29296.	2.3	23
27	Demonstrating the potential of iron-doped strontium titanate electrolyte with high-performance for low temperature ceramic fuel cells. Renewable Energy, 2022, 196, 901-911.	4.3	22
28	Modeling boron diffusion gettering of iron in silicon solar cells. Applied Physics Letters, 2008, 92, 021902.	1.5	21
29	Electrochemical Properties of a Dual-Ion Semiconductor-Ionic Co_{0.2}Zn_{0.8}O-Sm_{0.20}Ce_{0.80}O_{2âˆ'Î´} Composite for a High-Performance Low-Temperature Solid Oxide Fuel Cell. ACS Applied Energy Materials, 2021, 4, 194-207.	2.5	21
30	Effect of molecular filtering and electrolyte composition on the spatial variation in performance of dye solar cells. Journal of Electroanalytical Chemistry, 2012, 664, 63-72.	1.9	19
31	Influence of sintering temperature on ceramic fuel cell electrolyte conductivity with lithium-compound electrode. Ceramics International, 2020, 46, 17545-17552.	2.3	19
32	Remarkable ionic conductivity and catalytic activity in ceramic nanocomposite fuel cells. International Journal of Hydrogen Energy, 2018, 43, 12892-12899.	3.8	18
33	The effect of dodecylammonium chloride on the film morphology, crystallinity, and performance of lead-free Bi-based solution-processed photovoltaics devices. Solar Energy, 2020, 207, 1356-1363.	2.9	18
34	Improving catalyst stability in nano-structured solar and fuel cells. Catalysis Today, 2016, 259, 259-265.	2.2	17
35	Low-temperature solid oxide fuel cells based on Tm-doped SrCeO2-Î´ semiconductor electrolytes. Materials Today Energy, 2021, 20, 100661.	2.5	17
36	As-grown iron precipitates and gettering in multicrystalline silicon. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 159-160, 248-252.	1.7	16

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37	Tri-doped ceria (M0.2Ce0.8O2-Î´, M= Sm0.1, Ca0.05, Gd0.05) electrolyte for hydrogen and ethanol-based fuel cells. Journal of Alloys and Compounds, 2019, 773, 548-554.	2.8	15
38	Coking resistant Niâ€“La0.8Sr0.2FeO3 composite anode improves the stability of syngas-fueled SOFC. International Journal of Hydrogen Energy, 2021, 46, 9809-9817.	3.8	15
39	Photovoltaic properties of dye sensitised solar cells using TiO 2 nanotube arrays for photoanodes: Role of hydrochloric acid treatment. Applied Surface Science, 2015, 355, 256-261.	3.1	14
40	A hybrid lithium-ion battery model for system-level analyses. International Journal of Energy Research, 2016, 40, 1576-1592.	2.2	14
41	Gettering of iron in silicon by boron implantation. Journal of Materials Science: Materials in Electronics, 2008, 19, 41-45.	1.1	13
42	High performance ceramic nanocomposite fuel cells utilizing LiNiCuZn-oxide anode based on slurry method. International Journal of Hydrogen Energy, 2018, 43, 12797-12802.	3.8	13
43	Novel LaFe2O4 spinel structure with a large oxygen reduction response towards protonic ceramic fuel cell cathode. Journal of Rare Earths, 2023, 41, 413-421.	2.5	13
44	Comparison of Plastic Based Counter Electrodes for Dye Sensitized Solar Cells. Journal of the Electrochemical Society, 2012, 159, H656-H661.	1.3	12
45	Intriguing Photochemistry of the Additives in the Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2016, 120, 27768-27781.	1.5	10
46	Investigation of LiNiCuZn-oxide electrodes prepared by different methods: Synthesis, characterization and properties for ceramic carbonate composite fuel cells. International Journal of Hydrogen Energy, 2016, 41, 7609-7613.	3.8	9
47	Investigation of factors affecting the performance of a single-layer nanocomposite fuel cell. Catalysis Today, 2021, 364, 104-110.	2.2	9
48	Advanced LT-SOFC Based on Reconstruction of the Energy Band Structure of the LiNi_{0.8}Co_{0.15}Al_{0.05}O₂â€“Sm_{0.2}Ce_{0.8}O_{2-Î´} Heterostructure for Fast Ionic Transport. ACS Applied Energy Materials, 2021, 4, 8922-8932.	2.5	9
49	Comparative analysis of ceramic-carbonate nanocomposite fuel cells using composite GDC/NLC electrolyte with different perovskite structured cathode materials. Frontiers of Chemical Science and Engineering, 2018, 12, 162-173.	2.3	9
50	Analysis of dye degradation products and assessment of the dye purity in dye-sensitized solar cells. Rapid Communications in Mass Spectrometry, 2015, 29, 2245-2251.	0.7	8
51	Intriguing electrochemistry in low-temperature single layer ceramic fuel cells based on CuFe2O4. International Journal of Hydrogen Energy, 2020, 45, 24083-24092.	3.8	8
52	Nanocrystalline Surface Layer of WO3 for Enhanced Proton Transport during Fuel Cell Operation. Crystals, 2021, 11, 1595.	1.0	7
53	Gettering in silicon-on-insulator wafers with polysilicon layer. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 159-160, 259-263.	1.7	6
54	Competitive iron gettering between internal gettering sites and boron implantation in CZ-silicon. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 159-160, 224-227.	1.7	6

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55	Experimental study of iron redistribution between bulk defects and boron doped layer in silicon wafers. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 2430-2436.	0.8	2
56	Microscopic techniques for analysis of ceramic fuel cells. Wiley Interdisciplinary Reviews: Energy and Environment, 2018, 7, e299.	1.9	2
57	Systematic Analysis on the Effect of Sintering Temperature for Optimized Performance of Li0.15Ni0.45Zn0.4O2-Gd0.2Ce0.8O2-Li2CO3-Na2CO3-K2CO3 Based 3D Printed Single-Layer Ceramic Fuel Cell. Nanomaterials, 2021, 11, 2180.	1.9	2
58	Effect of Oxygen in Low Temperature Boron and Phosphorus Diffusion Gettering of Iron in Czochralski-Grown Silicon. Solid State Phenomena, 0, 156-158, 395-400.	0.3	1
59	Effect of internal gettering of iron on electrical characteristics of devices. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 159-160, 269-273.	1.7	0
60	Systematic Analysis on the Effect of Sintering Temperature for Optimized Performance of LiNiZnO-GdCeO-LiCO-NaCO-KCO Based 3D Printed Single-Layer Ceramic Fuel Cell. Nanomaterials, 2021, 11, .	1.9	0