Arunachala Kannan

List of Publications by Year
in descending order

94 papers	6,374 citations	41 h-index (71102)	78 g-index (66911)
97 all docs	97 docs citations	97 times ranked	7038 citing authors

#	Article	IF	Citations
1	Bilayered nano-hetero-structured n/n junction thin-film electrodes, WO3/Yb-Mo-BiVO4, for efficient photoelectrochemical water splitting. Journal of Applied Electrochemistry, 2022, 52, 535-558.	2.9	4
2	An overview of proton exchange membranes for fuel cells: Materials and manufacturing. International Journal of Hydrogen Energy, 2022, 47, 19086-19131.	7.1	92
3	Transition metal phthalocyanine-modified shungite-based cathode catalysts for alkaline membrane fuel cell. International Journal of Hydrogen Energy, 2021, 46, 4365-4377.	7.1	36
4	Design and performance of an off-grid solar combisystem using phase change materials. International Journal of Heat and Mass Transfer, 2021, 164, 120574.	4.8	4
5	Facile synthesis of Al-stabilized lithium garnets by a solution-combustion technique for all solid-state batteries. Materials Advances, 2021, 2, 5181-5188.	5.4	10
6	NH2-MIL-125(Ti) doped CdS/Graphene composite as electro and photo catalyst in basic medium under light irradiation. Environmental Research, 2021, 200, 111719.	7.5	10
7	Enhancing interfacial charge transfer in a WO₃/BiVO₄ photoanode heterojunction through gallium and tungsten co-doping and a sulfur modified Bi₂O₃ interfacial layer. Journal of Materials Chemistry A, 2021, 9, 16137-16149.	10.3	22
8	Biomimetic flow fields for proton exchange membrane fuel cells: A review of design trends. Energy, 2020, 190, 116435.	8.8	92
9	Photoelectrochemical water splitting using lithium doped bismuth vanadate photoanode with near-complete bulk charge separation. Journal of Power Sources, 2020, 448, 227418.	7.8	26
10	Effects of yttrium, ytterbium with tungsten co-doping on the light absorption and charge transport properties of bismuth vanadate photoanodes to achieve superior photoelectrochemical water splitting. Sustainable Energy and Fuels, 2020, 4, 1496-1506.	4.9	15
11	Is the H2 economy realizable in the foreseeable future? Part III: H2 usage technologies, applications, and challenges and opportunities. International Journal of Hydrogen Energy, 2020, 45, 28217-28239.	7.1	139
12	Oxygen reduction reaction on nanostructured Pt-based electrocatalysts: A review. International Journal of Hydrogen Energy, 2020, 45, 31775-31797.	7.1	127
13	Highly Conductive Garnet-Type Electrolytes: Access to Li_{6.5}La₃Zr_{1.5}Ta_{0.5}O₁₂ Prepared by Molten Salt and Solid-State Methods. ACS Applied Materials & Interfaces, 2020, 12, 48580-48590.	8.0	24
14	Highly Porous MIL-100(Fe) for the Hydrogen Evolution Reaction (HER) in Acidic and Basic Media. ACS Omega, 2020, 5, 18941-18949.	3.5	62
15	PMMA-TiO2 Fibers for the Photocatalytic Degradation of Water Pollutants. Nanomaterials, 2020, 10, 1279.	4.1	20
16	Role of Alkali Metal in BiVO₄ Crystal Structure for Enhancing Charge Separation and Diffusion Length for Photoelectrochemical Water Splitting. ACS Applied Materials & Interfaces, 2020, 12, 52808-52818.	8.0	28
17	MOF-Derived CuPt/NC Electrocatalyst for Oxygen Reduction Reaction. Catalysts, 2020, 10, 799.	3.5	24
18	Is the H2 economy realizable in the foreseeable future? Part II: H2 storage, transportation, and distribution. International Journal of Hydrogen Energy, 2020, 45, 20693-20708.	7.1	129

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19	Pulse-reverse electrodeposition of Ptâ€"Co bimetallic catalysts for oxygen reduction reaction in acidic medium. International Journal of Hydrogen Energy, 2020, 45, 7025-7035.	7.1	9
20	Scalable Alignment and Selective Deposition of Nanoparticles for Multifunctional Sensor Applications. Nano Letters, 2020, 20, 3199-3206.	9.1	25
21	Is the H2 economy realizable in the foreseeable future? Part I: H2 production methods. International Journal of Hydrogen Energy, 2020, 45, 13777-13788.	7.1	186
22	Photoelectrochemical Solar Water Splitting: The Role of the Carbon Nanomaterials in Bismuth Vanadate Composite Photoanodes toward Efficient Charge Separation and Transport. Langmuir, 2019, 35, 14492-14504.	3.5	28
23	Enhanced Photoelectrochemical Water Splitting with Er- and W-Codoped Bismuth Vanadate with WO₃ Heterojunction-Based Two-Dimensional Photoelectrode. ACS Applied Materials & Interfaces, 2019, 11, 19029-19039.	8.0	56
24	Effect of Thermally Induced Oxygen Vacancy of Î±-MnO₂ Nanorods toward Oxygen Reduction Reaction. Inorganic Chemistry, 2019, 58, 5335-5344.	4.0	65
25	Off-grid solar thermal water heating system using phase-change materials: design, integration and real environment investigation. Applied Energy, 2019, 240, 73-83.	10.1	34
26	Stoichiometric and non-stoichiometric tungsten doping effect in bismuth vanadate based photoactive material for photoelectrochemical water splitting. Electrochimica Acta, 2019, 299, 262-272.	5.2	15
27	High performance catalysts based on Fe/N co-doped carbide-derived carbon and carbon nanotube composites for oxygen reduction reaction in acid media. International Journal of Hydrogen Energy, 2019, 44, 12636-12648.	7.1	38
28	Maximization of quadruple phase boundary for alkaline membrane fuel cell using non-stoichiometric Î±-MnO2 as cathode catalyst. International Journal of Hydrogen Energy, 2019, 44, 1166-1173.	7.1	17
29	Recent developments in phase change materials for energy storage applications: A review. International Journal of Heat and Mass Transfer, 2019, 129, 491-523.	4.8	939
30	Gas diffusion layer development using design of experiments for the optimization of a proton exchange membrane fuel cell performance. Energy, 2018, 151, 689-695.	8.8	37
31	Pt Co@NCNTs cathode catalyst using ZIF-67 for proton exchange membrane fuel cell. International Journal of Hydrogen Energy, 2018, 43, 3520-3526.	7.1	38
32	Plugâ€In Hybrid Vehicle and Secondâ€Life Applications of Lithiumâ€Ion Batteries at Elevated Temperature. Batteries and Supercaps, 2018, 1, 75-82.	4.7	15
33	Fatty acids based eutectic phase change system for thermal energy storage applications. Applied Thermal Engineering, 2018, 142, 466-475.	6.0	83
34	Poly-acrylonitrile-based gel-polymer electrolytes for sodium-ion batteries. Ionics, 2017, 23, 2817-2822.	2.4	44
35	Can Li-Ion batteries be the panacea for automotive applications?. Renewable and Sustainable Energy Reviews, 2017, 68, 685-692.	16.4	203
36	Cobaltâ€"Nitrogen Coâ€doped Carbon Nanotube Cathode Catalyst for Alkaline Membrane Fuel Cells. ChemElectroChem, 2016, 3, 1455-1465.	3.4	66

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37	Prospects and problems of concentrating solar power technologies for power generation in the desert regions. Renewable and Sustainable Energy Reviews, 2016, 53, 1106-1131.	16.4	156
38	Highly active nitrogen-doped nanocarbon electrocatalysts for alkaline direct methanol fuel cell. Journal of Power Sources, 2015, 281, 94-102.	7.8	58
39	Nano-electrocatalyst materials for low temperature fuel cells: A review. Chinese Journal of Catalysis, 2015, 36, 458-472.	14.0	58
40	Hybrid Microgrid Model Based on Solar Photovoltaic Battery Fuel Cell System for Intermittent Load Applications. IEEE Transactions on Energy Conversion, 2015, 30, 359-366.	5.2	133
41	Corrosion resistance of Hastelloys in molten metal-chloride heat-transfer fluids for concentrating solar power applications. Solar Energy, 2014, 103, 62-69.	6.1	131
42	Cross-linked glucose oxidase clusters for biofuel cell anode catalysts. Biofabrication, 2013, 5, 035009.	7.1	17
43	Binary Ptâ€"Pd and ternary Ptâ€"Pdâ€"Ru nanoelectrocatalysts for direct methanol fuel cells. International Journal of Hydrogen Energy, 2013, 38, 2900-2907.	7.1	58
44	Nature inspired flow field designs for proton exchange membrane fuel cell. International Journal of Hydrogen Energy, 2013, 38, 3717-3726.	7.1	120
45	Effect of diffusion layers fabricated with different fiber diameters on the performance of low temperature proton exchange membrane fuel cells. Journal of Power Sources, 2013, 221, 134-140.	7.8	11
46	Development and Characterization of Gas Diffusion Layer Fabricated Using Carbon Slurry with Ammonium Lauryl Sulfate for Proton Exchange Member Fuel Cells. Journal of the Chinese Chemical Society, 2012, 59, 1357-1364.	1.4	3
47	Influence of Cell Fabrication Procedure on the Performance of the Dye Sensitized Solar Cell. Journal of Nanoscience and Nanotechnology, 2012, 12, 1829-1834.	0.9	1
48	Convergence criteria establishment for 3D simulation of proton exchange membrane fuel cell. International Journal of Hydrogen Energy, 2012, 37, 2482-2489.	7.1	46
49	Non-platinum cathode catalysts for alkaline membrane fuel cells. International Journal of Hydrogen Energy, 2012, 37, 4406-4412.	7.1	186
50	Characterization techniques for gas diffusion layers for proton exchange membrane fuel cells â€" A review. Journal of Power Sources, 2012, 213, 317-337.	7.8	118
51	Comparison of Pt/MWCNTs nanocatalysts synthesis processes for proton exchange membrane fuel cells. International Journal of Hydrogen Energy, 2011, 36, 10877-10883.	7.1	16
52	Protein hot spots at bio-nano interfaces. Materials Today, 2011, 14, 360-365.	14.2	10
53	CO adsorption in PdxCoyXz (X = Au, Mo, Ni) tertiary alloy nanocatalysts for PEM fuel cells-a theoretical analysis. International Journal of Energy Research, 2011, 35, 594-600.	4.5	3
54	Development of gas diffusion layer using water based carbon slurry for proton exchange membrane fuel cells. Electrochimica Acta, 2011, 56, 1591-1596.	5.2	7

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55	Development of gas diffusion electrodes for low relative humidity proton exchange membrane fuel cells. International Journal of Hydrogen Energy, 2011, 36, 2213-2220.	7.1	23
56	Study of Carbon Nanotube-Supported Platinum Nanocatalyst Fabricated with Sodium Formate Reducing Agent in Ethylene Glycol Suspension. ISRN Nanotechnology, 2011, 2011, 1-6.	1.3	9
57	Effect of carbon paper substrate of the gas diffusion layer on the performance of proton exchange membrane fuel cell. Electrochimica Acta, 2010, 55, 2746-2751.	5.2	39
58	Synthesis and characterization of carbon nanotubes supported platinum nanocatalyst for proton exchange membrane fuel cells. Journal of Power Sources, 2010, 195, 466-470.	7.8	60
59	Development and Evaluation of Gas Diffusion Layer Using Paraffin Wax Carbon for Proton Exchange Membrane Fuel Cells. Fuel Cells, 2010, 10, 563-566.	2.4	8
60	Gas Diffusion Layers for Proton Exchange Membrane Fuel Cells Using <i>In situ</i> Modified Carbon Papers with Multiâ€walled Carbon Nanotubes Nanoforest. Fuel Cells, 2010, 10, 369-374.	2.4	9
61	Synthesis of Pt nanocatalyst with micelle-encapsulated multi-walled carbon nanotubes as support for proton exchange membrane fuel cells. Electrochimica Acta, 2010, 55, 6496-6500.	5.2	18
62	Development of Durable Platinum Nanocatalyst on Carbon Nanotubes for Proton Exchange Membrane Fuel Cells. Journal of the Electrochemical Society, 2010, 157, B846.	2.9	13
63	Synthesis and characterization of platinum nanoparticles on in situ grown carbon nanotubes based carbon paper for proton exchange membrane fuel cell cathode. Journal of Power Sources, 2009, 188, 51-56.	7.8	45
64	Development of carbon nanotubes based gas diffusion layers by in situ chemical vapor deposition process for proton exchange membrane fuel cells. Journal of Power Sources, 2009, 192, 297-303.	7.8	58
65	Preparation and evaluation of electrodeposited platinum nanoparticles on in situ carbon nanotubes grown carbon paper for proton exchange membrane fuel cells. International Journal of Hydrogen Energy, 2009, 34, 3838-3844.	7.1	60
66	Surface modification of gas diffusion layers by inorganic nanomaterials for performance enhancement of proton exchange membrane fuel cells at low RH conditions. International Journal of Hydrogen Energy, 2009, 34, 6377-6383.	7.1	35
67	Carbon supported nano-sized Ptâ€“Pd and Ptâ€“Co electrocatalysts for proton exchange membrane fuel cells. International Journal of Hydrogen Energy, 2009, 34, 9450-9460.	7.1	112
68	Proton-conducting membranes with high selectivity from cross-linked poly(vinyl alcohol) and poly(vinyl pyrrolidone) for direct methanol fuel cell applications. Journal of Power Sources, 2009, 186, 22-28.	7.8	83
69	Membrane electrode assembly with doped polyaniline interlayer for proton exchange membrane fuel cells under low relative humidity conditions. Journal of Power Sources, 2009, 193, 447-453.	7.8	38
70	Gas diffusion layer for proton exchange membrane fuel cellsâ€”A review. Journal of Power Sources, 2009, 194, 146-160.	7.8	427
71	Bio-Batteries and Bio-Fuel Cells: Leveraging on Electronic Charge Transfer Proteins. Journal of Nanoscience and Nanotechnology, 2009, 9, 1665-1678.	0.9	46
72	<I>A Special Section on</I>: Bio-Solar and Bio-Fuel Cells. Journal of Nanoscience and Nanotechnology, 2009, 9, 1663-1664.	0.9	0

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73	Functionally graded nano-porous gas diffusion layer for proton exchange membrane fuel cells under low relative humidity conditions. Electrochimica Acta, 2008, 53, 2416-2422.	5.2	61
74	Wire rod coating process of gas diffusion layers fabrication for proton exchange membrane fuel cells. Journal of Power Sources, 2008, 178, 231-237.	7.8	23
75	Nanostructured Gas Diffusion and Catalyst Layers for Proton Exchange Membrane Fuel Cells. Electrochemical and Solid-State Letters, 2007, 10, B47.	2.2	40
76	Semi-interpenetrating network based on cross-linked poly(vinyl alcohol) and poly(styrene sulfonic) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 164, 449-456.	7.8	75
77	Carbon nano-chain and carbon nano-fibers based gas diffusion layers for proton exchange membrane fuel cells. Journal of Power Sources, 2007, 167, 330-335.	7.8	49
78	Cross-linked poly(vinyl alcohol) and poly(styrene sulfonic acid-co-maleic anhydride)-based semi-interpenetrating network as proton-conducting membranes for direct methanol fuel cells. Journal of Power Sources, 2007, 171, 340-347.	7.8	83
79	Gas diffusion layer using a new type of graphitized nano-carbon PUREBLACKÂ® for proton exchange membrane fuel cells. Electrochemistry Communications, 2006, 8, 887-891.	4.7	38
80	Low temperature synthesis and electrochemical behavior of LiV3O8 cathode. Journal of Power Sources, 2006, 159, 1405-1408.	7.8	42
81	Stability of the dry proton conductor CsHSO4 in hydrogen atmosphere. Materials Research Bulletin, 2003, 38, 691-698.	5.2	16
82	Synthesis and electrochemical evaluation of high capacity nanostructured VO2 cathodes. Solid State Ionics, 2003, 159, 265-271.	2.7	65
83	High Capacity Surface-Modified LiCoO[sub 2] Cathodes for Lithium-Ion Batteries. Electrochemical and Solid-State Letters, 2003, 6, A16.	2.2	146
84	Structural Stability of Li[sub 1â˘x]Ni[sub 0.85]Co[sub 0.15]O[sub 2] and Li[sub 1â˘x]Ni[sub 0.85]Co[sub 0.12]Al[sub 0.03]O[sub 2] Cathodes at Elevated Temperatures. Journal of the Electrochemical Society, 2003, 150, A349.	2.9	34
85	Synthesis and Electrochemical Properties of High Capacity V[sub 2]O[sub 5-Î´] Cathodes. Journal of the Electrochemical Society, 2003, 150, A990.	2.9	9
86	Surface/Chemically Modified LiMn[sub 2]O[sub 4] Cathodes for Lithium-Ion Batteries. Electrochemical and Solid-State Letters, 2002, 5, A167.	2.2	141
87	Characterization of the Bismuth-Modified Manganese Dioxide Cathodes in Rechargeable Alkaline Cells. Journal of the Electrochemical Society, 2002, 149, A483.	2.9	49
88	Ptâ€"M (M=Fe, Co, Ni and Cu) electrocatalysts synthesized by an aqueous route for proton exchange membrane fuel cells. Electrochemistry Communications, 2002, 4, 898-903.	4.7	260
89	Comparison of the chemical stability of the high energy density cathodes of lithium-ion batteries. Electrochemistry Communications, 2001, 3, 624-627.	4.7	162
90	Effect of counter cations on electrocatalytic activity of oxide pyrochlores towards oxygen reduction/evolution in alkaline medium: an electrochemical and spectroscopic study. Journal of Power Sources, 1991, 35, 163-173.	7.8	39

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91	Rechargeable iron/air cells employing bifunctional oxygen electrodes of oxide pyrochlores. Journal of Power Sources, 1991, 35, 113-121.	7.8	18
92	Oxide-based bifunctional oxygen electrode for rechargeable metal/air batteries. Journal of Power Sources, 1989, 25, 141-150.	7.8	28
93	Fractional-factorial design of a porous-carbon fuel-cell electrode. Journal of Applied Electrochemistry, 1988, 18, 149-153.	2.9	11
94	Editorial: Research and Reports in Chemistry. Research and Reports in Chemistry, 0, Volume 1, 7-8.	0.0	0