

# Mohd Shahbudin Masdar

## List of Publications by Citations

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73  
papers

1,831  
citations

25  
h-index

41  
g-index

80  
ext. papers

2,240  
ext. citations

5.5  
avg, IF

5.33  
L-index

#	Paper	IF	Citations
73	Review: Direct ethanol fuel cells. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 9438-9453	6.7	400
72	Critical challenges in the system development of direct alcohol fuel cells as portable power supplies: An overview. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 3031-3054	6.7	82
71	Overview biohydrogen technologies and application in fuel cell technology. <i>Renewable and Sustainable Energy Reviews</i> , <b>2016</b> , 66, 137-162	16.2	81
70	High power direct methanol fuel cell with a porous carbon nanofiber anode layer. <i>Applied Energy</i> , <b>2014</b> , 113, 946-954	10.7	75
69	Overview on Direct Formic Acid Fuel Cells (DFAFCs) as an Energy Sources. <i>APCBEE Procedia</i> , <b>2012</b> , 3, 33-39		67
68	An overview of fuel management in direct methanol fuel cells. <i>Renewable and Sustainable Energy Reviews</i> , <b>2013</b> , 24, 557-565	16.2	56
67	Mass transfer and performance of membrane-less micro fuel cell: A review. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 1039-1055	6.7	51
66	Modeling and simulation of a direct ethanol fuel cell: An overview. <i>Journal of Power Sources</i> , <b>2014</b> , 262, 401-406	8.9	47
65	Clean hydrogen generation and storage strategies via CO <sub>2</sub> utilization into chemicals and fuels: A review. <i>International Journal of Energy Research</i> , <b>2019</b> , 43, 5128-5150	4.5	45
64	Silica-related membranes in fuel cell applications: An overview. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 16068-16084	6.7	44
63	Biohydrogen production from palm oil mill effluent (POME) by two stage anaerobic sequencing batch reactor (ASBR) system for better utilization of carbon sources in POME. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 3395-3406	6.7	42
62	Performance and stability of single and 6-cell stack passive direct methanol fuel cell (DMFC) for long-term operation. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 9230-9242	6.7	42
61	Enhanced Proton Conductivity and Methanol Permeability Reduction via Sodium Alginate Electrolyte-Sulfonated Graphene Oxide Bio-membrane. <i>Nanoscale Research Letters</i> , <b>2018</b> , 13, 82	5	41
60	A parametric study of the direct formic acid fuel cell (DFAFC) performance and fuel crossover. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 10267-10274	6.7	37
59	Investigation of MEA degradation in a passive direct methanol fuel cell under different modes of operation. <i>Applied Energy</i> , <b>2014</b> , 135, 364-372	10.7	34
58	Improvement of water management in a vapor feed direct methanol fuel cell. <i>Journal of Power Sources</i> , <b>2010</b> , 195, 8028-8035	8.9	32
57	New composite membrane poly(vinyl alcohol)/graphene oxide for direct ethanol proton exchange membrane fuel cell. <i>Journal of Applied Polymer Science</i> , <b>2019</b> , 136, 46928	2.9	32

56	Reaction analysis of a direct methanol fuel cell employing a porous carbon plate operated at high methanol concentrations. <i>Journal of Power Sources</i> , <b>2009</b> , 186, 45-51	8.9	30
55	Improved performance of sulfonated polyimide composite membranes with rice husk ash as a bio-filler for application in direct methanol fuel cells. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 1857-1866	6.7	29
54	Durability and performance of direct glycerol fuel cell with palladium-aurum/vapor grown carbon nanofiber support. <i>Energy Conversion and Management</i> , <b>2019</b> , 188, 120-130	10.6	28
53	Enhanced mechanical flexibility and performance of sodium alginate polymer electrolyte bio-membrane for application in direct methanol fuel cell. <i>Journal of Applied Polymer Science</i> , <b>2018</b> , 135, 46666	2.9	28
52	Review of high-performance biocathode using stainless steel and carbon-based materials in Microbial Fuel Cell for electricity and water treatment. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 30772-30787	6.7	28
51	Permeation properties of polymeric membranes for biohydrogen purification. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 4474-4488	6.7	26
50	Development of a conceptual design model of a direct ethanol fuel cell (DEFC). <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 11943-11948	6.7	26
49	Removal of hydrogen sulfide from a biogas mimic by using impregnated activated carbon adsorbent. <i>PLoS ONE</i> , <b>2019</b> , 14, e0211713	3.7	25
48	Parametric study on direct ethanol fuel cell (DEFC) performance and fuel crossover. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 8566-8574	6.7	25
47	Applications of graphene nano-sheets as anode diffusion layers in passive direct methanol fuel cells (DMFC). <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 9252-9261	6.7	24
46	Mass spectroscopy for the anode gas layer in a semi-passive DMFC using porous carbon plate Part I: Relationship between the gas composition and the current density. <i>Journal of Power Sources</i> , <b>2009</b> , 194, 610-617	8.9	24
45	Optimization of a porous carbon nanofiber layer for the membrane electrode assembly in DMFC. <i>Energy Conversion and Management</i> , <b>2015</b> , 101, 525-531	10.6	20
44	Mass spectroscopy for the anode gas layer in a semi-passive direct methanol fuel cell using porous carbon plate. <i>Journal of Power Sources</i> , <b>2009</b> , 194, 618-624	8.9	20
43	Elimination of toxic products formation in vapor-feed passive DMFC operated by absolute methanol using air cathode filter. <i>Chemical Engineering Journal</i> , <b>2014</b> , 240, 38-44	14.7	19
42	The conceptual design of a PEMFC system via simulation. <i>Chemical Engineering Journal</i> , <b>2004</b> , 103, 99-111	14.7	19
41	A novel bio-cellulose membrane and modified adsorption approach in CO <sub>2</sub> /H <sub>2</sub> separation technique for PEM fuel cell applications. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 27630-27640	6.7	17
40	e-Waste Management Scenarios in Malaysia. <i>Journal of Waste Management</i> , <b>2014</b> , 2014, 1-7		16
39	Optimization of oil palm empty fruit bunches value chain in Peninsular Malaysia. <i>Food and Bioproducts Processing</i> , <b>2020</b> , 119, 179-194	4.9	16

38	Electrochemical kinetic and mass transfer model for direct ethanol alkaline fuel cell (DEAFC). <i>Journal of Power Sources</i> , <b>2016</b> , 320, 111-119	8.9	15
37	Impregnated carbon <sup>II</sup> nic liquid as innovative adsorbent for H <sub>2</sub> /CO <sub>2</sub> separation from biohydrogen. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 3414-3424	6.7	14
36	An overview of power electronics applications in fuel cell systems: DC and AC converters. <i>Scientific World Journal, The</i> , <b>2014</b> , 2014, 103709	2.2	13
35	Enhancing methanol oxidation with a TiO <sub>2</sub> -modified semiconductor as a photo-catalyst. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 8986-8996	6.7	12
34	Amine <sup>II</sup> ixed oxide hybrid materials for carbon dioxide adsorption from CO <sub>2</sub> /H <sub>2</sub> mixture. <i>Materials Research Express</i> , <b>2018</b> , 5, 055501	1.7	11
33	Mass and heat transport in direct methanol fuel cells. <i>Journal of Power Sources</i> , <b>2011</b> , 196, 9847-9855	8.9	11
32	Enhanced performance of a novel anodic PdAu/VGCF catalyst for electro-oxidation in a glycerol fuel cell. <i>Nanoscale Research Letters</i> , <b>2017</b> , 12, 605	5	10
31	Carbon nanoflake hybrid for biohydrogen CO <sub>2</sub> capture: Breakthrough adsorption test. <i>International Journal of Energy Research</i> , <b>2020</b> , 44, 3148-3159	4.5	9
30	Potential Utilisation of Dark-Fermented Palm Oil Mill Effluent in Continuous Production of Biomethane by Self-Granulated Mixed Culture. <i>Scientific Reports</i> , <b>2020</b> , 10, 9167	4.9	8
29	Modification of Activated Carbon from Biomass Nypa and Amine Functional Groups as Carbon Dioxide Adsorbent. <i>Journal of Physical Science</i> , <b>2017</b> , 28, 227-240	2	8
28	Enhanced hydrogen selectivity from catalytic decomposition of formic acid over FeZnIr nanocatalyst at room temperature. <i>Research on Chemical Intermediates</i> , <b>2018</b> , 44, 6787-6802	2.8	8
27	Review on bipolar plates for low-temperature polymer electrolyte membrane water electrolyzer. <i>International Journal of Energy Research</i> , <b>2021</b> , 45, 20583	4.5	8
26	Investigating design parameter effects on the methanol flux in the passive storage of a direct methanol fuel cell. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 11931-11942	6.7	6
25	Improving the electrocatalytic activity for formic acid oxidation of bimetallic Ir <sub>2</sub> Zn nanoparticles decorated on graphene nanoplatelets. <i>Materials Research Express</i> , <b>2020</b> , 7, 015095	1.7	6
24	Modelling and optimisation of oil palm biomass value chains and the environment <sup>II</sup> ood <sup>II</sup> nergy <sup>II</sup> water nexus in peninsular Malaysia. <i>Biomass and Bioenergy</i> , <b>2021</b> , 144, 105912	5.3	6
23	Three-dimensional CFD modeling of a direct formic acid fuel cell. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 30627-30635	6.7	5
22	Enhanced Performance of Polymer Electrolyte Membranes via Modification with Ionic Liquids for Fuel Cell Applications. <i>Membranes</i> , <b>2021</b> , 11,	3.8	5
21	Mathematical modelling and simulation on the adsorption of Hydrogen Sulfide (H <sub>2</sub> S) gas. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2017</b> , 206, 012069	0.4	4

20	Ionic liquid-impregnated activated carbon for biohydrogen purification in an adsorption unit. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2017</b> , 206, 012071	0.4	4
19	Aryl Diazonium Modification for Improved Graphite Fiber Brush in Microbial Fuel Cell <b>2018</b> , 47, 3017-3023		4
18	Optimization of the controllable crystal size of iron/zeolite nanocomposites using a BoxBehnken design and their catalytic activity. <i>Applied Nanoscience (Switzerland)</i> , <b>2019</b> , 9, 209-224	3.3	4
17	Structural mechanism investigation on methanol crossover and stability of a passive direct methanol fuel cell performance via modified micro-porous layer. <i>International Journal of Energy Research</i> , <b>2021</b> , 45, 12928-12943	4.5	4
16	POLYSULFONE COMPOSED OF POLYANILINE NANOPARTICLES AS NANOCOMPOSITE PROTON EXCHANGE MEMBRANE IN MICROBIAL FUEL CELL. <i>American Journal of Biochemistry and Biotechnology</i> , <b>2012</b> , 8, 311-319	0.4	3
15	Simulation of PEMFC Stack for Portable Power Generator Application. <i>Jurnal Kejuruteraan</i> , <b>2018</b> , SI1, 1-10	0	3
14	EFFECTS OF FUEL CONCENTRATIONS, CATALYST LOADINGS AND ACTIVATION ON THE PERFORMANCE OF DIRECT FORMIC ACID FUEL CELL (DFAFC) STACK. <i>Malaysian Journal of Analytical Sciences</i> , <b>2016</b> , 20, 877-884	1	3
13	High photoelectrochemical performance of a p-type reduced graphene oxide-copper oxide/Cu foil (rGO-CuO/Cu) photoelectrode prepared by a one-pot hydrothermal method. <i>International Journal of Energy Research</i> , <b>2021</b> , 45, 13865-13877	4.5	3
12	Ionic Liquid in Phosphoric Acid-Doped Polybenzimidazole (PA-PBI) as Electrolyte Membranes for PEM Fuel Cells: A Review. <i>Membranes</i> , <b>2021</b> , 11,	3.8	3
11	Synthesis, Characterisation and Catalytic Activity of NiO supported Al <sub>2</sub> O <sub>3</sub> for CO <sub>2</sub> Hydrogenation to Carboxylic Acids: Influence of Catalyst Structure. <i>IOP Conference Series: Earth and Environmental Science</i> , <b>2019</b> , 268, 012079	0.3	2
10	PREPARATION OF MEMBRANE ELECTRODE ASSEMBLY FOR HIGH PERFORMANCE OF FORMIC ACID FUEL CELL. <i>Malaysian Journal of Analytical Sciences</i> , <b>2016</b> , 20, 678-686	1	2
9	Application of Response Surface Methodology for Preparation of ZnAC <sub>2</sub> /CAC Adsorbents for Hydrogen Sulfide (H <sub>2</sub> S) Capture. <i>Catalysts</i> , <b>2021</b> , 11, 545	4	2
8	Effect of Reactant Flow Rate and Operation modes on Direct Formic Acid Fuel Cell (DFAFC) Performance. <i>Indian Journal of Science and Technology</i> , <b>2016</b> , 9,	1	2
7	Effect of impregnated activated carbon on carbon dioxide adsorption performance for biohydrogen purification. <i>Materials Research Express</i> , <b>2019</b> , 6, 015510	1.7	2
6	How Ready is Renewable Energy? A Review on Renewable Energy and Fuel Cell Teaching in Schools <b>2017</b> ,		1
5	Performance and water transport behaviour in Polymer Electrolyte Membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , <b>2022</b> ,	6.7	1
4	How Ready is Renewable Energy? A Review Paper on Educational Materials and Reports Available for the Teaching of Hydrogen Fuel Cells in Schools. <i>Advances in Science, Technology and Engineering Systems</i> , <b>2021</b> , 6, 1-11	0.3	1
3	N-Doped porous carbon nanoflakes : Excellent adsorbent for low pressure CO <sub>2</sub> capture. <i>IOP Conference Series: Earth and Environmental Science</i> , <b>2019</b> , 268, 012093	0.3	0

- 2 UKM Chem-E-Car History, Implementation and Achievement. *Procedia, Social and Behavioral Sciences*, **2012**, 60, 468-471 ○
- 1 Facile Preparation of Carbon Nitride-ZnO Hybrid Adsorbent for CO<sub>2</sub> Capture: The Significant Role of Amine Source to Metal Oxide Ratio. *Catalysts*, **2021**, 11, 1253 4 ○