

# Mahmoud A Ahmed

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2893740/publications.pdf>

Version: 2024-02-01

89  
papers

3,340  
citations

136885

32  
h-index

155592

55  
g-index

89  
all docs

89  
docs citations

89  
times ranked

2835  
citing authors

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 1  | Influence of Varying the Stage Aspect Ratio on the Performance of Multi-Stage Savonius Wind Rotors. Journal of Energy Resources Technology, Transactions of the ASME, 2022, 144, .  | 1.4 | 4         |
| 2  | Enhancing the performance of direct methanol fuel cells via a new anode design for carbon dioxide bubbles removal. Energy Conversion and Management, 2022, 251, 114958.   | 4.4 | 14        |
| 3  | A new standalone single effect thermal vapor compression desalination plant with nano-filtration pretreatment. Energy Conversion and Management, 2022, 252, 115095.   | 4.4 | 6         |
| 4  | Performance of Two-Dimensional Functionally Graded Anode Supported Solid-Oxide Fuel Cells. Journal of Energy Resources Technology, Transactions of the ASME, 2022, 144, .   | 1.4 | 2         |
| 5  | Performance assessment of a dual-axis solar tracker for concentrator photovoltaic systems. International Journal of Energy Research, 2022, 46, 13424-13440.   | 2.2 | 6         |
| 6  | Effect of anode channel shape and wettability on CO <sub>2</sub> bubble evolution in direct methanol fuel cells. Physics of Fluids, 2022, 34, .   | 1.6 | 3         |
| 7  | Performance assessment of a novel integrated concentrator photovoltaic system with encapsulated phase change materials. Energy Conversion and Management, 2022, 266, 115854.  | 4.4 | 19        |
| 8  | Carbon Dioxide Bubbles Removal by Capillary Actuation in the Anode Channel of Direct Methanol Fuel Cells. Journal of Energy Resources Technology, Transactions of the ASME, 2021, 143, .  | 1.4 | 5         |
| 9  | Performance evaluation of a novel vertical axis wind turbine using twisted blades in multi-stage Savonius rotors. Energy Conversion and Management, 2021, 235, 114013.  | 4.4 | 38        |
| 10 | Assessing and Comparing the Characteristics of CI Engine Powered by Biodiesel-Diesel and Biodiesel-Kerosene Blends. Arabian Journal for Science and Engineering, 2021, 46, 11771-11782.   | 1.7 | 8         |
| 11 | Energy/exergy analysis of solar driven mechanical vapor compression desalination system with nano-filtration pretreatment. Desalination, 2021, 509, 115078.   | 4.0 | 30        |
| 12 | Effect of guidewire insertion in fractional flow reserve procedure for real geometry using computational fluid dynamics. BioMedical Engineering OnLine, 2021, 20, 95.   | 1.3 | 8         |
| 13 | Performance and thermal stresses in functionally graded anode-supported honeycomb solid-oxide fuel cells. International Journal of Hydrogen Energy, 2021, 46, 33010-33027.  | 3.8 | 13        |
| 14 | Experimental study of the performance of concentrator photovoltaic/thermoelectric generator system integrated with a new <scp>3D</scp> printed microchannel heat sink. International Journal of Energy Research, 2021, 45, 7741-7763. | 2.2 | 13        |
| 15 | Performance evaluation of concentrator photovoltaic systems integrated with combined passive cooling techniques. Solar Energy, 2021, 228, 447-463.  | 2.9 | 19        |
| 16 | Predicting the onset of consequent stenotic regions in carotid arteries using computational fluid dynamics. Physics of Fluids, 2021, 33, .  | 1.6 | 21        |
| 17 | Enhancing the Impact of Biodiesel Blend on Combustion, Emissions, and Performance of DI Diesel Engine. Arabian Journal for Science and Engineering, 2020, 45, 1109-1123.  | 1.7 | 6         |
| 18 | Influence of varying the Ethylene-Vinyl Acetate layer thicknesses on the performance of a polycrystalline silicon solar cell integrated with a microchannel heat sink. Solar Energy, 2020, 195, 592-609.                              | 2.9 | 17        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 19 | Comparative study of combustion, performance, and emissions of a diesel engine fuelled with biodiesel blend with metallic and organic nano-particles. <i>International Journal of Global Warming</i> , 2020, 22, 133. | 0.2 | 0         |
| 20 | Thermal management of concentrator photovoltaic systems using nano-enhanced phase change materials-based heat sink. <i>International Journal of Energy Research</i> , 2020, 44, 7713-7733.                            | 2.2 | 14        |
| 21 | Analysis of the effect of guidewire position on stenosis diagnosis using computational fluid dynamics. <i>Computers in Biology and Medicine</i> , 2020, 121, 103777.  | 3.9 | 8         |
| 22 | Performance enhancement of twisted-bladed Savonius vertical axis wind turbines. <i>Energy Conversion and Management</i> , 2020, 209, 112673.  | 4.4 | 67        |
| 23 | Performance evaluation of concentrator photovoltaic systems integrated with a new jet impingement-microchannel heat sink and heat spreader. <i>Solar Energy</i> , 2020, 199, 852-863.                                 | 2.9 | 53        |
| 24 | Assessment of wind turbine transient overvoltages when struck by lightning: experimental and analytical study. <i>IET Renewable Power Generation</i> , 2019, 13, 1360-1368.   | 1.7 | 18        |
| 25 | Performance enhancement of direct methanol fuel cell using multi-zone narrow flow fields. <i>International Journal of Energy Research</i> , 2019, 43, 8257.   | 2.2 | 3         |
| 26 | Effect of injection pressure and ambient density on spray characteristics of diesel and biodiesel surrogate fuels. <i>Fuel</i> , 2019, 254, 115674.   | 3.4 | 38        |
| 27 | Influence of partial solar energy storage and solar concentration ratio on the productivity of integrated solar still/humidification-dehumidification desalination systems. <i>Desalination</i> , 2019, 467, 29-42.   | 4.0 | 27        |
| 28 | Performance evaluation of a new design of concentrator photovoltaic and solar thermoelectric generator hybrid system. <i>Energy Conversion and Management</i> , 2019, 195, 1382-1401.                                 | 4.4 | 54        |
| 29 | The effect of microwave drying pretreatment on dry torrefaction of agricultural biomasses. <i>Bioresource Technology</i> , 2019, 286, 121400.   | 4.8 | 38        |
| 30 | Effects of photo-generated gas bubbles on the performance of tandem photoelectrochemical reactors for hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 10286-10300.                   | 3.8 | 22        |
| 31 | Thermal management of concentrator photovoltaic systems using new configurations of phase change material heat sinks. <i>Solar Energy</i> , 2019, 183, 632-652.   | 2.9 | 75        |
| 32 | Thermal management of concentrator photovoltaic systems using two-phase flow boiling in double-layer microchannel heat sinks. <i>Applied Energy</i> , 2019, 241, 404-419.   | 5.1 | 77        |
| 33 | Thermal management of electronic devices and concentrator photovoltaic systems using phase change material heat sinks: Experimental investigations. <i>Renewable Energy</i> , 2019, 141, 322-339.                     | 4.3 | 63        |
| 34 | Effect of compression ratio on performance, combustion and emissions characteristics of compression ignition engine fueled with jojoba methyl ester. <i>Renewable Energy</i> , 2019, 141, 632-645.                    | 4.3 | 35        |
| 35 | Performance assessment study of photo-electro-chemical water-splitting reactor designs for hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 9237-9247.                                | 3.8 | 32        |
| 36 | Using multi-path spiral flow fields to enhance under-rib mass transport in direct methanol fuel cells. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 30663-30681.                                       | 3.8 | 19        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 37 | A review on photoelectrochemical hydrogen production systems: Challenges and future directions. International Journal of Hydrogen Energy, 2019, 44, 2474-2507.  | 3.8 | 169       |
| 38 | Enhancing the performance of concentrator photovoltaic systems using Nanoparticle-phase change material heat sinks. Energy Conversion and Management, 2019, 179, 229-242.   | 4.4 | 98        |
| 39 | Enhancing under-rib mass transport in proton exchange membrane fuel cells using new serpentine flow field designs. International Journal of Hydrogen Energy, 2019, 44, 30644-30662.                                       | 3.8 | 27        |
| 40 | Influence of design and operating conditions on the performance of tandem photoelectrochemical reactors. International Journal of Hydrogen Energy, 2018, 43, 1285-1302.   | 3.8 | 7         |
| 41 | Numerical simulation of condensate removal from gas channels of PEM fuel cells using corrugated walls. International Journal of Energy Research, 2018, 42, 1664-1676.   | 2.2 | 15        |
| 42 | Cooling concentrator photovoltaic systems using various configurations of phase-change material heat sinks. Energy Conversion and Management, 2018, 158, 298-314.   | 4.4 | 129       |
| 43 | Enhancing the performance of a solar driven hybrid solar still/humidification-dehumidification desalination system integrated with solar concentrator and photovoltaic panels. Desalination, 2018, 430, 165-179.          | 4.0 | 57        |
| 44 | Enhancement of concentrator photovoltaic cooling using phase change material by adding bulk over regular configuration. , 2018, , .   |     | 0         |
| 45 | Performance study of solid oxide fuel cell with various flow field designs: numerical study. International Journal of Hydrogen Energy, 2018, 43, 20931-20946.   | 3.8 | 47        |
| 46 | Cooling of Concentrator Photovoltaic Cells Using Mini-Scale Jet Impingement Heat Sinks. , 2018, , .   |     | 0         |
| 47 | Performance analysis of a new concentrator photovoltaic system integrated with phase change material and water jacket. Solar Energy, 2018, 173, 1158-1172.  | 2.9 | 43        |
| 48 | Thermal management of concentrator photovoltaic systems using microchannel heat sink with nanofluids. Solar Energy, 2018, 171, 229-246.   | 2.9 | 58        |
| 49 | Uniform cooling for concentrator photovoltaic cells and electronic chips by forced convective boiling in 3D-printed monolithic double-layer microchannel heat sink. Energy Conversion and Management, 2018, 166, 356-371. | 4.4 | 69        |
| 50 | Comparative Study of Active and Passive Cooling Techniques for Concentrated Photovoltaic Systems. , 2018, , 475-505.  |     | 12        |
| 51 | Experimental investigation of humidification-dehumidification desalination system with corrugated packing in the humidifier. Desalination, 2017, 410, 19-29.  | 4.0 | 80        |
| 52 | Efficient fuel utilization by enhancing the under-rib mass transport using new serpentine flow field designs of direct methanol fuel cells. Energy Conversion and Management, 2017, 144, 88-103.                          | 4.4 | 43        |
| 53 | Performance study and analysis of an inclined concentrated photovoltaic-phase change material system. Solar Energy, 2017, 150, 229-245.   | 2.9 | 114       |
| 54 | An Investigation of a Novel Structure Polycrystalline Silicon Solar Cell for Concentrated Solar Power. , 2017, , .  |     | 0         |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 55 | The influence of microchannel heat sink configurations on the performance of low concentrator photovoltaic systems. <i>Applied Energy</i> , 2017, 206, 594-611.   | 5.1 | 107       |
| 56 | Performance evaluation of new modified low-concentrator polycrystalline silicon photovoltaic/thermal systems. <i>Energy Conversion and Management</i> , 2017, 149, 593-607.   | 4.4 | 57        |
| 57 | Analysis of a New Hybrid Water-Phase Change Material Heat Sink for Low Concentrated Photovoltaic Systems. , 2017, , .   |     | 4         |
| 58 | Performance enhancement of the concentrated photovoltaic using different phase change material configurations. <i>Energy Procedia</i> , 2017, 141, 61-65.   | 1.8 | 10        |
| 59 | Investigations of solid oxide fuel cells with functionally graded electrodes for high performance and safe thermal stress. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 15887-15902.   | 3.8 | 28        |
| 60 | DESIGN OF A NOVEL PHOTOELECTROCHEMICAL REACTOR FOR HYDROGEN PRODUCTION. , 2017, , .   |     | 1         |
| 61 | Analysis and simulation of concentrating photovoltaic systems with a microchannel heat sink. <i>Solar Energy</i> , 2016, 136, 35-48.  | 2.9 | 73        |
| 62 | Performance of Concentrated Photovoltaic Cells Using Various Microchannel Heat Sink Designs. , 2016, , .  |     | 2         |
| 63 | Cooling of Concentrated Photovoltaic System Using Various Configurations of Phase-Change Material Heat Sink. , 2016, , .  |     | 4         |
| 64 | Performance Enhancement of Concentrated Photovoltaic System Using Phase-Change Material. , 2016, , .  |     | 6         |
| 65 | Performance enhancement of concentrated photovoltaic systems using a microchannel heat sink with nanofluids. <i>Energy Conversion and Management</i> , 2016, 119, 289-303.  | 4.4 | 171       |
| 66 | Simulation of transport phenomena in a photo-electrochemical reactor for solar hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 8020-8031.  | 3.8 | 26        |
| 67 | Laminar forced convection of a nanofluid in a microchannel: Effect of flow inertia and external forces on heat transfer and fluid flow characteristics. <i>Applied Thermal Engineering</i> , 2015, 78, 326-338.                                 | 3.0 | 52        |
| 68 | Numerical Simulation of Natural Convection of a Nanofluid in an Inclined Heated Enclosure Using Two-Phase Lattice Boltzmann Method: Accurate Effects of Thermophoresis and Brownian Forces. <i>Nanoscale Research Letters</i> , 2015, 10, 1006. | 3.1 | 29        |
| 69 | The value of integrating Scan-to-BIM and Scan-vs-BIM techniques for construction monitoring using laser scanning and BIM: The case of cylindrical MEP components. <i>Automation in Construction</i> , 2015, 49, 201-213.                        | 4.8 | 352       |
| 70 | The onset of liquid entrainment from a stratified two-phase region through small branches. <i>Acta Mechanica</i> , 2014, 225, 3023-3039.  | 1.1 | 1         |
| 71 | Natural convection in a differentially-heated square enclosure filled with a nanofluid: Significance of the thermophoresis force and slip/drift velocity. <i>International Communications in Heat and Mass Transfer</i> , 2014, 58, 1-11.       | 2.9 | 26        |
| 72 | Influence of spinning cup and disk atomizer configurations on droplet size and velocity characteristics. <i>Chemical Engineering Science</i> , 2014, 107, 149-157.  | 1.9 | 54        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 73 | Two-dimensional modeling of viscous liquid jet breakup. <i>Acta Mechanica</i> , 2013, 224, 499-512.   | 1.1 | 8         |
| 74 | Characteristics of Mean Droplet Size Produced by Spinning Disk Atomizers. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2012, 134, .   | 0.8 | 32        |
| 75 | Using digital photogrammetry for pipe-works progress tracking1This paper is one of a selection of papers in this Special Issue on Construction Engineering and Management.. <i>Canadian Journal of Civil Engineering</i> , 2012, 39, 1062-1071. | 0.7 | 18        |
| 76 | New High Voltage Gain Dual-boost DC-DC Converter for Photovoltaic Power Systems. <i>Electric Power Components and Systems</i> , 2012, 40, 711-728.  | 1.0 | 50        |
| 77 | A review on methanol crossover in direct methanol fuel cells: challenges and achievements. <i>International Journal of Energy Research</i> , 2011, 35, 1213-1228.   | 2.2 | 217       |
| 78 | A Theoretical Model for the Formation of Functional Micro- and Nano-Particles from Combustion of Emulsion Droplets. <i>Drying Technology</i> , 2011, 29, 1025-1036.   | 1.7 | 8         |
| 79 | A One-Dimensional Model of Viscous Liquid Jets Breakup. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2011, 133, .   | 0.8 | 12        |
| 80 | Characteristics of heat transfer and fluid flow in a channel with single-row plates array oblique to flow direction for photovoltaic/thermal system. <i>Energy</i> , 2010, 35, 3524-3534.   | 4.5 | 24        |
| 81 | Modeling of Solution Droplet Evaporation and Particle Evolution in Droplet-to-Particle Spray Methods. <i>Drying Technology</i> , 2009, 27, 3-13.  | 1.7 | 42        |
| 82 | Influence of Breakup Regimes on the Droplet Size Produced by Splash-Plate Nozzles. <i>AIAA Journal</i> , 2009, 47, 516-522.   | 1.5 | 10        |
| 83 | Break-Up Length and Spreading Angle of Liquid Sheets Formed by Splash Plate Nozzles. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2009, 131, .  | 0.8 | 23        |
| 84 | Influence of Wall Inclination Angles on the Onset of Gas Entrainment During Single and Dual Discharges From a Reservoir. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2008, 130, .  | 0.8 | 1         |
| 85 | Characteristics of liquid sheets formed by splash plate nozzles. <i>Experiments in Fluids</i> , 2007, 44, 125-136.  | 1.1 | 24        |
| 86 | Theoretical Analysis of the Onset of Gas Entrainment from a Stratified Two-Phase Region Through Two Side-Oriented Branches Mounted on a Vertical Wall. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2006, 128, 131-141.     | 0.8 | 6         |
| 87 | The onset of gas pull-through during dual discharge from a stratified two-phase region: Theoretical analysis. <i>Physics of Fluids</i> , 2004, 16, 3385-3392.   | 1.6 | 6         |
| 88 | Theoretical Analysis of the Onset of Gas Entrainment from a Stratified Region through a Single Side-Oriented Branch at Moderate Froude Numbers. <i>Canadian Journal of Chemical Engineering</i> , 2004, 82, 1175-1182.                          | 0.9 | 2         |
| 89 | Modeling of the Onset of Gas Entrainment Through a Finite-Side Branch. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2003, 125, 902-909.   | 0.8 | 11        |