

Muhammad Usman

List of Publications by Year in descending order

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Version: 2024-02-01

62
papers

2,737
citations

147801

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189892

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63
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63
docs citations

63
times ranked

2119
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Catalytic Methanation of CO and CO ₂ in Coke Oven Gas over Ni ²⁺ /Co/ZrO ₂ -CeO ₂ . <i>Industrial & Engineering Chemistry Research</i> , 2013, 52, 2247-2256. | 3.7 | 170 |
| 2 | CO ₂ towards fuels: A review of catalytic conversion of carbon dioxide to hydrocarbons. <i>Journal of Environmental Chemical Engineering</i> , 2021, 9, 104756. | 6.7 | 147 |
| 3 | A highly active and stable Co ₄ Ni ₃ -Al ₂ O ₃ catalyst for CO and CO ₂ methanation to produce synthetic natural gas (SNG). <i>Chemical Engineering Journal</i> , 2015, 262, 1090-1098. | 12.7 | 118 |
| 4 | Nanocomposites of cobalt benzene tricarboxylic acid MOF with rGO: An efficient and robust electrocatalyst for oxygen evolution reaction (OER). <i>Renewable Energy</i> , 2020, 156, 1040-1054. | 8.9 | 108 |
| 5 | Hematite and Magnetite Nanostructures for Green and Sustainable Energy Harnessing and Environmental Pollution Control: A Review. <i>Chemical Research in Toxicology</i> , 2020, 33, 1292-1311. | 3.3 | 102 |
| 6 | Advanced Catalysts for Photoelectrochemical Water Splitting. <i>ACS Applied Energy Materials</i> , 2021, 4, 12007-12031. | 5.1 | 94 |
| 7 | A Review of Supercapacitors: Materials Design, Modification, and Applications. <i>Energies</i> , 2021, 14, 7779. | 3.1 | 94 |
| 8 | Production of Gasoline and Diesel from Coal Tar via Its Catalytic Hydrogenation in Serial Fixed Beds. <i>Energy & Fuels</i> , 2012, 26, 3604-3611. | 5.1 | 88 |
| 9 | Perovskite-type lanthanum ferrite based photocatalysts: Preparation, properties, and applications. <i>Journal of Energy Chemistry</i> , 2022, 66, 314-338. | 12.9 | 88 |
| 10 | Single-Step Conversion of H ₂ -Deficient Syngas into High Yield of Tetramethylbenzene. <i>ACS Catalysis</i> , 2019, 9, 2203-2212. | 11.2 | 79 |
| 11 | Facile and efficient nitrogen modified porous carbon derived from sugarcane bagasse for CO ₂ capture: Experimental and DFT investigation of nitrogen atoms on carbon frameworks. <i>Chemical Engineering Journal</i> , 2020, 382, 122964. | 12.7 | 75 |
| 12 | A High-Performance Asymmetric Supercapacitor Based on Tungsten Oxide Nanoplates and Highly Reduced Graphene Oxide Electrodes. <i>Chemistry - A European Journal</i> , 2021, 27, 6973-6984. | 3.3 | 75 |
| 13 | Adsorptive removal of Cd ²⁺ from aqueous solutions by a highly stable covalent triazine-based framework. <i>New Journal of Chemistry</i> , 2018, 42, 10234-10242. | 2.8 | 66 |
| 14 | Electrochemical Reduction of CO ₂ : A Review of Cobalt Based Catalysts for Carbon Dioxide Conversion to Fuels. <i>Nanomaterials</i> , 2021, 11, 2029. | 4.1 | 60 |
| 15 | Prospects for a green methanol thermo-catalytic process from CO ₂ by using MOFs based materials: A mini-review. <i>Journal of CO₂ Utilization</i> , 2021, 43, 101361. | 6.8 | 59 |
| 16 | A review of metal-organic frameworks/graphitic carbon nitride composites for solar-driven green H ₂ production, CO ₂ reduction, and water purification. <i>Journal of Environmental Chemical Engineering</i> , 2022, 10, 107548. | 6.7 | 59 |
| 17 | Bismuth-Graphene Nanohybrids: Synthesis, Reaction Mechanisms, and Photocatalytic Applications – A Review. <i>Energies</i> , 2021, 14, 2281. | 3.1 | 51 |
| 18 | Highly Efficient Permeation and Separation of Gases with Metal-Organic Frameworks Confined in Polymeric Nanochannels. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 49992-50001. | 8.0 | 49 |

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|----|--|------|-----------|
| 19 | The influence of straight pore blockage on the selectivity of methanol to aromatics in nanosized Zn/ZSM-5: an atomic Cs-corrected STEM analysis study. <i>RSC Advances</i> , 2016, 6, 74797-74801. | 3.6 | 48 |
| 20 | Trends and Prospects in UiO-66 Metal-Organic Framework for CO ₂ Capture, Separation, and Conversion. <i>Chemical Record</i> , 2021, 21, 1771-1791. | 5.8 | 48 |
| 21 | Allyl functionalized UiO-66 metal-organic framework as a catalyst for the synthesis of cyclic carbonates by CO ₂ cycloaddition. <i>Journal of Industrial and Engineering Chemistry</i> , 2020, 89, 104-110. | 5.8 | 47 |
| 22 | Nanoclay-mediated photocatalytic activity enhancement of copper oxide nanoparticles for enhanced methyl orange photodegradation. <i>Journal of Materials Science: Materials in Electronics</i> , 2020, 31, 8971-8985. | 2.2 | 47 |
| 23 | 12-Tungstophosphoric acid niched in Zr-based metal-organic framework: a stable and efficient catalyst for Friedel-Crafts acylation. <i>Science China Chemistry</i> , 2018, 61, 402-411. | 8.2 | 46 |
| 24 | Complexing agents for metal removal using ultrafiltration membranes: a review. <i>Environmental Chemistry Letters</i> , 2019, 17, 1195-1208. | 16.2 | 45 |
| 25 | Reactive oxygen species: New insights into photocatalytic pollutant degradation over g-C ₃ N ₄ /ZnSe nanocomposite. <i>Applied Surface Science</i> , 2020, 532, 147418. | 6.1 | 44 |
| 26 | Progress in layered cathode and anode nanoarchitectures for charge storage devices: Challenges and future perspective. <i>Energy Storage Materials</i> , 2021, 35, 443-469. | 18.0 | 42 |
| 27 | Preparation, Functionalization, Modification, and Applications of Nanostructured Gold: A Critical Review. <i>Energies</i> , 2021, 14, 1278. | 3.1 | 42 |
| 28 | Advanced Strategies in Metal-Organic Frameworks for CO ₂ Capture and Separation. <i>Chemical Record</i> , 2022, 22, . | 5.8 | 42 |
| 29 | Novel MoP/HY catalyst for the selective conversion of naphthalene to tetralin. <i>Journal of Industrial and Engineering Chemistry</i> , 2015, 23, 21-26. | 5.8 | 40 |
| 30 | Potential Applications of Nickel-Based Metal-Organic Frameworks and their Derivatives. <i>Chemical Record</i> , 2022, 22, . | 5.8 | 38 |
| 31 | Advanced cathode materials and efficient electrolytes for rechargeable batteries: practical challenges and future perspectives. <i>Journal of Materials Chemistry A</i> , 2019, 7, 10159-10173. | 10.3 | 37 |
| 32 | Investigation of the photocatalytic potential enhancement of silica monolith decorated tin oxide nanoparticles through experimental and theoretical studies. <i>New Journal of Chemistry</i> , 2020, 44, 13330-13343. | 2.8 | 35 |
| 33 | Defect-engineering a metal-organic framework for CO ₂ fixation in the synthesis of bioactive oxazolidinones. <i>Inorganic Chemistry Frontiers</i> , 2020, 7, 3571-3577. | 6.0 | 33 |
| 34 | Highly selective and stable hydrogenation of heavy aromatic-naphthalene over transition metal phosphides. <i>Science China Chemistry</i> , 2015, 58, 738-746. | 8.2 | 31 |
| 35 | High gas permselectivity in ZIF-302/polyimide self-consistent mixed-matrix membrane. <i>Journal of Applied Polymer Science</i> , 2020, 137, 48513. | 2.6 | 31 |
| 36 | Simultaneous operation of dibenzothiophene hydrodesulfurization and methanol reforming reactions over Pd promoted alumina based catalysts. <i>Journal of Fuel Chemistry and Technology</i> , 2012, 40, 714-720. | 2.0 | 30 |

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|----|--|------|-----------|
| 37 | CoFe ₂ O ₄ decorated g-C ₃ N ₄ nanosheets: New insights into superoxide anion mediated photomineralization of methylene blue. <i>Journal of Environmental Chemical Engineering</i> , 2020, 8, 104556. | 6.7 | 30 |
| 38 | A Review on SAPO-34 Zeolite Materials for CO ₂ Capture and Conversion. <i>Chemical Record</i> , 2022, 22, e202200039. | 5.8 | 30 |
| 39 | Exploring the environmental and potential therapeutic applications of <i>Myrtus communis</i> L. assisted synthesized zinc oxide (ZnO) and iron doped zinc oxide (Fe-ZnO) nanoparticles. <i>Journal of Saudi Chemical Society</i> , 2021, 25, 101278. | 5.2 | 27 |
| 40 | Structural Characteristics and Environmental Applications of Covalent Organic Frameworks. <i>Energies</i> , 2021, 14, 2267. | 3.1 | 24 |
| 41 | Cross-linked, porous imidazolium-based poly(ionic liquid)s for CO ₂ capture and utilisation. <i>New Journal of Chemistry</i> , 2021, 45, 16452-16460. | 2.8 | 23 |
| 42 | Recent Progress of SAPO-34 Zeolite Membranes for CO ₂ Separation: A Review. <i>Membranes</i> , 2022, 12, 507. | 3.0 | 23 |
| 43 | Catalytic hydrorefining of tar to liquid fuel over multi-metals (W-Mo-Ni) catalysts. <i>Journal of Renewable and Sustainable Energy</i> , 2013, 5, . | 2.0 | 22 |
| 44 | Significantly improved photocatalytic activity of the SnO ₂ /BiFeO ₃ heterojunction for pollutant degradation and mechanism. <i>Ceramics International</i> , 2022, 48, 14789-14798. | 4.8 | 21 |
| 45 | Equilibrium analysis of methylbenzene intermediates for a methanol-to-olefins process. <i>Catalysis Science and Technology</i> , 2016, 6, 1297-1301. | 4.1 | 19 |
| 46 | Effect of alkene co-feed on the MTO reactions over SAPO-34. <i>Chemical Engineering Journal</i> , 2017, 316, 187-195. | 12.7 | 19 |
| 47 | Assessment of sulfonated homo and co-polyimides incorporated polysulfone ultrafiltration blend membranes for effective removal of heavy metals and proteins. <i>Scientific Reports</i> , 2020, 10, 7049. | 3.3 | 19 |
| 48 | Poly aromatic hydrocarbon (naphthalene) conversion into value added chemical (tetralin): Activity and stability of MoP/AC catalyst. <i>Journal of Environmental Chemical Engineering</i> , 2018, 6, 4525-4530. | 6.7 | 18 |
| 49 | Propene Adsorption-Chemisorption Behaviors on H-SAPO-34 Zeolite Catalysts at Different Temperatures. <i>Catalysts</i> , 2019, 9, 919. | 3.5 | 18 |
| 50 | Effect of Fineness and Heat Treatment on the Pozzolanic Activity of Natural Volcanic Ash for Its Utilization as Supplementary Cementitious Materials. <i>Crystals</i> , 2022, 12, 302. | 2.2 | 18 |
| 51 | Simulation and Modelling of Hydrogen Production from Waste Plastics: Technoeconomic Analysis. <i>Polymers</i> , 2022, 14, 2056. | 4.5 | 18 |
| 52 | A Review of Preparation Methods for Heterogeneous Catalysts. <i>Mini-Reviews in Organic Chemistry</i> , 2022, 19, 92-110. | 1.3 | 16 |
| 53 | Design of parallel cyclones based on stability analysis. <i>AIChE Journal</i> , 2016, 62, 4251-4258. | 3.6 | 14 |
| 54 | Simultaneous increase in CO ₂ permeability and selectivity by BIT-72 and modified BIT-72 based mixed matrix membranes. <i>Chemical Engineering Research and Design</i> , 2022, 178, 136-147. | 5.6 | 13 |

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|----|---|-----|-----------|
| 55 | Chalcopyrite UiO-67 metal-organic framework composite for CO ₂ fixation as cyclic carbonates. Journal of Environmental Chemical Engineering, 2022, 10, 108061. | 6.7 | 12 |
| 56 | ZIF-95 as a filler for enhanced gas separation performance of polysulfone membrane. RSC Advances, 2021, 11, 34319-34328. | 3.6 | 11 |
| 57 | Study on the Hydrotreating Catalysts Containing Phosphorus of Coal Tar to Clean Fuels. Advanced Materials Research, 2012, 531, 263-267. | 0.3 | 8 |
| 58 | Pd-promoted heteropolyacid on mesoporous zirconia as a stable and bifunctional catalyst for oxidation of thiophenes. Fuel, 2022, 310, 122462. | 6.4 | 7 |
| 59 | Study on the hydrotreatment of C ₉ aromatics over supported multi-metal catalysts on γ -Al ₂ O ₃ . Journal of Renewable and Sustainable Energy, 2014, 6, 033132. | 2.0 | 6 |
| 60 | Ruthenium Nanoparticles Intercalated in Montmorillonite (nano-Ru@MMT) Is Highly Efficient Catalyst for the Selective Hydrogenation of 2-Furaldehyde in Benign Aqueous Medium. Catalysts, 2021, 11, 66. | 3.5 | 6 |
| 61 | Production of Hydrogen from Low Rank Coal Using Process Integration Framework between Syngas Production Processes: Techno-Economic Analysis. Chemical Engineering and Processing: Process Intensification, 2021, 169, 108639. | 3.6 | 6 |
| 62 | Note: Molecular diffusivity in a small pore zeolite measured by a variable pressure (piezometric) uptake method. Review of Scientific Instruments, 2016, 87, 036101. | 1.3 | 1 |