

King Khalid University College of Engineering/Chemical Engineering Department Publication Details

- M.K. Al Mesfer, M. Danish, M. Shah, Synthesis, evaluation, and kinetic assessment of Co-based catalyst for enhanced methane decomposition reaction for hydrogen production, International Journal of Chemical Kinetics, October 2021.
- M. K. Al Mesfer, M. Danish, M. Shah, Synthesis and optimization of hydrotalcite derived Ni-Fe-Cu based catalysts for catalytic methane decomposition process using the design of experiment approach, Journal of Taiwan Institute of Chemical Engineers, 2021.
- M. K. Al Mesfer, M. Danish, B.A. Alwan, N.S. Awwad, CO₂ sorption from a mixture of N₂/CO₂ using an activated carbon and silica gel: equilibrium, breakthrough, column efficiency and mass transfer zone, Global Nest Journal, 23, 2, 1-12, 2021.
- M.K. Al Mesfer, Optimizing the sodium hydroxide conversion using regression analysis in CSTR, Applied Sciences, 11, 15, 6789, 2021.
- J. Mallick, M.K. Al Mesfer, V.P. Singh, I.I. Falqi, C.K. Singh, N.B. Kahla, Evaluating the NDVI-rainfall relationship in Bisha watershed, Saudi Arabia using non-stationary modeling technique, Atmosphere, 12, 5, 1-12, 2021.
- Javed Mallick, Vijay P Singh, Mohammed K Almesfer, Swapna Talukdar, Majed Alsubhi, Mohd Ahmed, Roohul Abad Khan, Spatio-temporal analysis and simulation of land cover changes and their impacts on land surface temperature in urban agglomeration of Bisha Watershed, Saudi Arabia, Geocarto International, Sep. 2021.
- M. Danish, V. Parthasarthy, M.K. Al Mesfer, Evaluating CO₂ capture performance by adsorption using synthesized and commercial activated carbon, Separation Science and Technology, October 2021
- I.H. Ali, M.I. Khan, A.M. Alraih, M.K. Al Mesfer, A. Elkhaleefa, S.M. Dmour, M. Rehan, Adsorption and corrosion inhibition of oil extracted from moringa peregrine leaves for carbon steel in acidic media: experimental and computational studies, International Journal of Electrochemical Science, 16, 8, 2021.
- J. Mallick, S. Talukdar, M. Alsubin, M.K. Al Mesfer, Shahfahad, T.H. Hoang, A. Rahman, Integration of statistical models and ensemble machine learning algorithms (MLAs) for developing the novel hybrid groundwater potentiality models: a case study of semi-arid water shed in Saudi Arabia, Geocarto International, 1-35, 2021.
- I. Albaik, R. Al-Dadah, S. Mahmood, M.K. Al Mesfer, M.A. Ismail, A comparison between packed bed and coated tube for adsorption system using aluminium fumarate: numerical study, Thermal Science and Engineering Progress, 22, 100859, 2021.
- M. Danish, V. Parthasarthy, M.K. Al Mesfer, CO₂ capture using activated carbon synthesized from date stone: breakthrough, equilibrium, and mass transfer zone, Carbon Letters, 2021.
- J. Mallick, A. Kumar, M.K. Al Mesfer, M. Alsubin, C.K. Singh, M. Ahmed, R.A. Khan, An index-based approach to assess groundwater quality for drinking and irrigation in Asir region of Saudi Arabia, Arabian Journal of Geosciences, 14, 3, 1-17, 2021.
- A. Amari, M.K. Al Mesfer, N.S. Alsaiari, M. Danish, A.M. Alshahrani, M.A. Tahooon, F.B. Rebah, International Journal of Electrochemical Science, 16, 210235, 2021.
- M. Danish, V. Parthasarthy, M.K. Al Mesfer, Comparative study of CO₂ capture by adsorption in sustainable date pits-derived porous activated carbon and molecular

- sieve, International Journal of Environmental Research and Public Health, 18,16, 8497, 2021.
- M. Danish, V. Parthasarthy, M.K.Al Mesfer, CO₂ capture by low-cost date pits-based activated carbon and silica gel, Materials, 14, 14, 3885, 2021.
 - M. Danish, M.K. Al Mesfer, K.B.Anvari, M.Hasan, A.Amari, B.Azeem, Predicting conduction heat flux through macrolayer in nucleate pool boiling, Energies, 14, 13, 3893, 2021.
 - J. Mallick, C.K. Singh, M.K. Al Mesfer, V.P.Singh, M. Alsobaini, Groundwater quality studies in the Kingdom of Saudi Arabia: Prevalent research and management dimensions, Water, 13,9, 1266, 2021.
 - Khadijah Mohammedsaleh Katubi, Abdelfattah Amari, Hamed N. Harhara, Moutaz M. Eldirderi, Mohamed A. Tahoon, Faouzi Ben Rebah, Aloe vera as Promising Material for Water Treatment: A Review, Processes 2021, 9, 782. <https://doi.org/10.3390/pr9050782>, MDPI.
 - Ahmed Amine Azzaz, Salah Jellali, Nasser Ben Harharah Hamed, Atef El Jery, Lotfi Khezami, Aymen Amine Assadi, Abdeltif Amrane, Photocatalytic Treatment of Wastewater Containing Simultaneous Organic and Inorganic Pollution: Competition and Operating Parameters Effects, , Catalysts 2021, 11, 855. MDPI.
 - Norah Salem Alsaiari, Abdelfattah Amari, Khadijah Mohammed saleh, Katubi, Fatimah Mohammed Alzahrani, Hamed N. Harharah, Faouzi Ben Rebah, Mohamed A. Tahoon, The Biocatalytic Degradation of Organic Dyes Using Laccase Immobilized Magnetic Nanoparticles, , Applied Sciences, Sep. 4 th , 2021, 11, 8216.
 - Kraiem, J. Madiouli, J. Sghaier and I. Shigidi (Feb 2021). Significance of Bed Shrinkage on Heat and Mass Transfer during the Transport Phenomenon of Humid Air. Arabian Journal of Science and Engineering. Feb 2021. <https://doi.org/10.1007/s13369-021-05444-7>.
 - Abubakr Elkhaleefa, Ismat Ali, Eid Brima, Ihab Shigidi, Elhag A. and Babiker Karama (2021) Evaluation of adsorption efficiency on the removal of lead (II) ions from Aqueous solutions using Azadirachta Indica leaves as an adsorbent. Processes 2021, 9(3), 539. <https://doi.org/10.3390/pr90305599>
 - Haitham Osman, Ihab Shigidi and Abubakr Elkhaleefa, Ismat H. Ali and Eid I. Brima Ni(II) Removal using Date Seeds Powder Biosorbent Process Parameters Classification and RSM Modelling. Journal of the Air & Waste Management Association. <https://doi.org/10.1080/10962247.2021.1990160>.
 - M.I. Khan, M.K. Almesfer, A. Alkhalefee, I. Shigidi, M.Z. Shamim, I.H. Ali, M.Rehan. Conductive Polymers and their Nanocomposites as Adsorbents in Environmental Applications, Polymers, 31, (21), 3810. <https://doi.org/10.3390/polym13213810>.
 - Hamayoun Mahmood, Ahmad Shakeel, Ammar Abdullah, Muhammad Ilyas Khan and Muhammad Moniruzzaman, A Comparative Study on Suitability of Model-Free and Model-Fitting Kinetic Methods to Non-Isothermal Degradation of Lignocellulosic Materials, Polymers, 2021, 13, 2504.
 - Abdellatif, M. A., El Baroudy, A. A., **Arshad, M.**, Mahmoud, E. K., Saleh, A. M., Moghanm, F. S., ... & Shokr, M. S. (2021). A GIS-Based Approach for the Quantitative Assessment of Soil Quality and Sustainable Agriculture. Sustainability, 13(23), 13438.
 - Farahat, E.A. Mahmoud, W.F. Awad, H.E.A. Farrag, H.F. **Arshad, M.** Eid, E.M. Fahmy, G.M (2021).Prediction Models for Evaluating the Uptake of Heavy Metals

by the Invasive Grass Vossia cuspidata (Roxb.) Griff. in the River Nile, Egypt: A Biomonitoring Approach. *Sustainability*, 13: <https://doi.org/10.3390/su131910558>.

- Salah, Dina, Farahat S. Moghanm, **Muhammad Arshad**, Abdulaziz A. Alanazi, Salman Latif, Maie I. El-Gammal, Elmahdy M. Shimaa, and Salah Elsayed. Polymer-Peptide Modified Gold Nanorods to Improve Cell Conjugation and Cell Labelling for Stem Cells Photoacoustic Imaging. *Diagnostics* 11, no. 7 (2021): 1196.
- **Muhammad Arshad**, Khaled M. Khedher, Ebrahem M. Eid, Yusuf A. Aina (2021). Evaluation of the urban heat island over Abha-Khamis Mushait tourist resort due to rapid urbanisation in Asir, Saudi Arabia. *Urban Climate*, Volume 36, 1-14.
- Mohan N, Elavarasan P, Natarajan V, Review selection criteria of microbial fuel cell types and applications (2021) 16(5), 193-203
- P Elavarasan, S Rengadurai, SB Riswan Ali, S Ramesh, N Varagunapandiyan, MR Ezhilarasi, Sreedevi Upadhyayula, Optimizing Process Parameters For Ionic Liquid Catalyzed Tert-Butylation Of Phenol Using Response Surface Methodology, *Rasayan Journal of Chemistry* (2021) 14, 261-269.
- M.Ahmad, S.D.Alqadhi, S.Alsulamy, S.Islam, R.Khan, **M.Danish**, Development of Self-Cured Sustainable Concrete Using Local Water-Entrainment Aggregates of Vesicular Basalt, Development of Self-Cured Sustainable Concrete Using Local Water-Entrainment Aggregates of Vesicular Basalt, *Sustainability*, 13(12), 6756, 2021.
- Lu Z, Jafar A, Mahmoud S, Al dadah R, Albaik I, **Ismail M**, Integration of concentrated multi-junction solar cells with small-scale organic rankine cycle, International Conference on Applied Energy, Bangkok, Thailand, December 2021.
- Alamri A. Yassir, Albaik Ibrahim, Mahmoud Saad, Aldadah, **Ismail A**. Mohamed, Integration of concentrated multi-junction solar cells with small-scale organic rankine cycle, *Energy Conversion Management*, Volume 239, 114235, July 2021.
- K.B. Ansari, B. Kamal, S. Beg, M.A.W. Khan, M.S. Khan, M. K. Al Mesfer, M. Danish, Recent developments in investigating reaction chemistry and transport effects in biomass fast pyrolysis: a review, *Renewable and Sustainable Energy Reviews*, 150, 111454, 2021.
- Norah Salem Alsaiari, **Abdelfattah Amari**, Khadijah MohammedsalehKatubi, Fatimah Mohammed Alzahrani, Hamed N. Harharah, Faouzi Ben Rebah and Mohamed A. Tahoon. The Biocatalytic Degradation of Organic Dyes Using Laccase Immobilized Magnetic Nanoparticles. *Applied Sciences*, 11(17), 8216, **2021**.
- Noureddine Mahdhi, Norah Salem Alsaiari, Fatimah Mohammed Alzahrani, Khadijah MohammedsalehKatubi, **Abdelfattah Amari** and Saber Hammami. Theoretical Investigation of the Adsorption of Cadmium Iodide from Water using Polyaniline Polymer Filled with TiO₂ and ZnO Nanoparticles. *Water* 13(18), 2591, (2021).
- Khurram Shahzad, Muhammad Imran Khan, Abdallah Shanableh, Noureddine Elboughdiri, ShaziaJabeen, Muhammad Altaf Nazir, Nosheen Farooq, Hassan Ali, **Amari Abdelfattah** and Aziz Ur Rehman. Silver supported-Ag@PMOS onto thumb structured porous organosilica materials with efficient heterojunction active sites for photo-degradation of methyl orange dye. *Inorganic and Nano-Metal Chemistry* 51(9), 1147-1296, (2021).
- **Abdelfattah Amari**, Fatimah Mohammed Alzahrani, Khadijah MohammedsalehKatubi, Norah Salem Alsaiari, Mohamed A. Tahoon and Faouzi Ben Rebah. Clay-Polymer Nanocomposites: Preparations and Utilization for Pollutants Removal. *Materials* 14(6), 1365, **2021**.

- Norah Salem Alsaiari, **Abdelfattah Amari**, Khadijah MohammedsalehKatubi, Fatimah Mohammed Alzahrani ,Faouzi Ben Rebah and Mohamed A. Tahooon. Innovative magnetite based polymeric nanocomposite for simultaneous removal of methyl orange and hexavalent chromium from water. *Processes* 9(4), 576, **2021**.
- **Abdelfattah Amari**, Fatimah Mohammed Alzahrani, Norah Salem Alsaiari, Khadijah MohammedsalehKatubi, Faouzi Ben Rebah and Mohamed A. Tahooon. Magnetic metal organic framework immobilized laccase for wastewater decolorization. *Processes* 9 (5), 774, **2021**.
- Khadijah MohammedsalehKatubi, Fatimah Mohammed Alzahrani, Norah Salem Alsaiari, **Abdelfattah Amari**, Faouzi Ben Rebah and Mohamed A Tahooon. Partially reduced graphene oxide modified with polyacrylonitrile for the removal of Sm^{3+} from water. *Processes* 9(5), 818, **2021**.
- Khadijah MohammedsalehKatubi, **Abdelfattah Amari**, Hamed N. Harharah, Moutaz M. Eldirderi, Mohamed A. Tahooon and Faouzi Ben Rebah. Aloe vera as Promising Material for Water Treatment: A Review. *Processes* 9(5), 782, **2021**.
- Fatimah Mohammed Alzahrani, Norah Salem Alsaiari, Khadijah MohammedsalehKatubi, **Abdelfattah Amari**, Faouzi Ben Rebah and Mohamed A. Tahooon. Synthesis of polymer-based magnetic nanocomposite for multi-pollutants removal from water. *Polymers*. 13(11), 1742, **2021**.
- Norah Salem Alsaiari, Fatimah Mohammed Alzahrani, Khadijah MohammedsalehKatubi, **Abdelfattah Amari**, Faouzi Ben Rebah and Mohamed A. Tahooon. Polyethylenimine-Modified Magnetic Chitosan for the Uptake of Arsenic from Water. *Applied Sciences*, 11(12), 5630, **2021**.
- Fatimah Mohammed Alzahrani, Norah Salem Alsaiari, Khadijah MohammedsalehKatubi, **Abdelfattah Amari**, Abubakr M. Elkhaleefa, Faouzi Ben Rebah and Mohamed A. Tahooon. Magnetic Nitrogen-Doped Porous Carbon Nanocomposite for $\text{Pb}(\text{II})$ Adsorption from Aqueous Solution. *Molecules*, 26(16), 4809, **2021**.
- Abdelfattah Amari, Mohammed K. Al Mesfer, Norah Salem Alsaiari, Mohd Danish,Ali M. Alshahrani, Mohamed A. Tahooon, and Faouzi Ben Rebah. Electrochemical and Optical Properties of Tellurium Dioxide (TeO_2) Nanoparticles. *International Journal of Electrochemical Science*, 16, (2021).
- Zhang, L.; Ullah, S.; Al Alwan, B.; Alshehri, A.; Sumelka, W.Mathematical assessment of constant and time-dependent control measures on the dynamics of the novel coronavirus: An application of optimal control theory. *Results in Physics* 2021, 31, 104971.
- Fatima, B.; Al Alwan, B.; Siddiqui, S.; Ahmad, R.; Almesfer, M.; Khanna, M.; Mishra, R.; Ravi, R.; Oh, S.Facile Synthesis of Cu-Zn Binary Oxide Coupled Cadmium Tungstate (Cu-ZnBO-Cp-CT) with Enhanced Performance of Dye Adsorption. *Water* 2021, 13, 3287.
- Osman,H.; Shigidi, I.; Elkhaleefa, A.; Ali, I.; Brima, E.; Al Alwan, B. $\text{Ni}(\text{II})$ removal using date seed powder biosorbent: Process parameters classification and RSM modeling. *JOURNAL OF THE AIR & WASTE MANAGEMENT ASSOCIATION*2021, DOI: 10.1080/10962247.2021.1990160.
- Al Mesfer, M.; Danish, M.; Al Alwan, B.; Awwad, N. CO_2 sorption from a mixture of N-2/ CO_2 using an activated carbon and silica gel: equilibrium, breakthrough, column efficiency and mass transfer zone. *Global NEST Journal* 2021, 23(1), 1-12.
- Renuga, R; Manikandan, A; Mary, J; Muthukrishnaraj, A; Khan, A; Srinivasan, S; Al Alwan, B; Khedher, K. Enhanced Magneto-Optical, Morphological, and

Photocatalytic Properties of Nickel-Substituted SnO₂ Nanoparticles. J Supercond Nov Magn (2021) 34:825–836.