

Research Publications 2017

- [1]. Z. Khan, S. Yusup, P. Kamble, I. Watson, Assessment of Energy Flows in Integrated Catalytic Adsorption (ICA) Steam Gasification for Hydrogen Production. *Energy Procedia*. 142 (2017) 1577-1581.
- [2]. M. Ashfaq, K. Nawaz Khan, M. Saif Ur Rehman, G. Mustafa, M. Faizan Nazar, Q. Sun, J. Iqbal, S.I. Mulla, C.-P. Yu, Ecological risk assessment of pharmaceuticals in the receiving environment of pharmaceutical wastewater in Pakistan. *Ecotoxicology and Environmental Safety*. 136 (2017) 31-39.
- [3]. A. Inayat, M.M. Ahmad, M.A. Mutalib, S. Yusup, Z. Khan, Economic analysis and optimization for bio-hydrogen production from oil palm waste via steam gasification. *Energy Sources, Part B: Economics, Planning, and Policy*. 12 (2017) 158-165.
- [4]. S.Y. Khawaja, M.R. Usman, M. Nasif, M.S. Akram, W. Afzal, N.A. Akhtar, Mass transfer efficiency of a tall and low plate free area liquid pulsed sieve-plate extraction column. *International Journal of Industrial Chemistry*. 8 (2017) 397-410.
- [5]. M.Z. Shahid, M.R. Usman, M.S. Akram, S.Y. Khawaja, W. Afzal, Initial Interfacial Tension for Various Organic-Water Systems and Study of the Effect of Solute Concentration and Temperature. *Journal of Chemical & Engineering Data*. 62 (2017) 1198-1203.
- [6]. M.A. Ahmed, M.S.U. Rehman, R. Terán-Hilares, S. Khalid, J.-I. Han, Optimization of twin gear-based pretreatment of rice straw for bioethanol production. *Energy Conversion and Management*. 141 (2017) 120-125.
- [7]. H. Waqas, A. Shan, Y.G. Khan, R. Nawaz, M. Rizwan, M.S.-U. Rehman, M.B. Shakoor, W. Ahmed, M. Jabeen, Human health risk assessment of arsenic in groundwater aquifers of Lahore, Pakistan. *Human and Ecological Risk Assessment: An International Journal*. 23 (2017) 836-850.
- [8]. M. Ashfaq, N. Noor, M. Saif-Ur-Rehman, Q. Sun, G. Mustafa, M. Faizan Nazar, C.P. Yu, Determination of Commonly used pharmaceuticals in Hospital waste of Pakistan and evaluation of their ecological risk assessment. *CLEAN–Soil, Air, Water*. 45 (2017).
- [9]. W. Yang, G. Chen, P. Wang, J. Qiao, F. Hu, S. Liu, Q. Zhang, M. Hussain, R. Dong, G. Wu, Enhanced thermal conductivity in Diamond/Aluminum composites with tungsten coatings on diamond particles prepared by magnetron sputtering method. *Journal of Alloys and Compounds*. 726 (2017) 623-631.
- [10]. M. Usman, J. Akhtar, J. Iqbal, Adsorption of Gold onto γ -aminopropyltriethoxysilane Grafted Coconut Pith. *Journal of the Chemical Society of Pakistan*. 39 (2017).
- [11]. T. Fazal, A. Mushtaq, F. Rehman, A.U. Khan, N. Rashid, W. Farooq, M.S.U. Rehman, J. Xu, Bioremediation of textile wastewater and successive biodiesel production using microalgae. *Renewable and Sustainable Energy Reviews*. (2017).
- [12]. Y. Liu, F. Rehman, W.B. Zimmerman, Reaction engineering of carbon monoxide generation by treatment with atmospheric pressure, low power CO₂ DBD plasma. *Fuel*. 209 (2017) 117-126.
- [13]. T. Sultan, Z. Ahmad, Z. Anwar, M.S. Khurram, Impact of asymmetric lamp positioning on the performance of a closed-conduit UV reactor. *Ain Shams Engineering Journal*. 8 (2017) 225-235.
- [14]. P. Kamble, Z. Khan, S. Capper, J. Sharp, I. Watson, Improving downdraft gasifier stability by robust instrumentation and control systems. *Energy Procedia*. 142 (2017) 2214-2217.
- [15]. R. Ur Rehman, S. Rafiq, N. Muhammad, A.L. Khan, A. Ur Rehman, L. TingTing, M. Saeed, F. Jamil, M. Ghauri, X. Gu, Development of ethanolamine-based ionic liquid membranes for efficient

- CO₂/CH₄ separation. *Journal of Applied Polymer Science*. 134 (2017).
- [16]. S. Capper, Z. Khan, P. Kamble, J. Sharp, I. Watson, Progression towards Online Tar Detection Systems. *Energy Procedia*. 142 (2017) 892-897.
- [17]. I. Munawar, S.S. Iqbal, M.N. Anwar, M. Batool, S. Tariq, N. Faitma, A.L. Khan, A.U. Khan, U. Nazar, T. Jamil, Synergistic effect of Chitosan-Zinc Oxide Hybrid Nanoparticles on antibiofouling and water disinfection of mixed matrix polyethersulfone nanocomposite membranes. *Carbohydrate polymers*. 175 (2017) 661-670.
- [18]. A. Ilyas, N. Muhammad, M.A. Gilani, K. Ayub, I.F.J. Vankelecom, A.L. Khan, Supported protic ionic liquid membrane based on 3-(trimethoxysilyl)propan-1-aminium acetate for the highly selective separation of CO₂. *Journal of Membrane Science*. 543 (2017) 301-309.
- [19]. S. Park, M. Yasin, J. Jeong, M. Cha, H. Kang, N. Jang, I.-G. Choi, I.S. Chang, Acetate-assisted increase of butyrate production by *Eubacterium limosum* KIST612 during carbon monoxide fermentation. *Bioresource technology*. 245 (2017) 560-566.
- [20]. M. Ghauri, K. Shahzad, M.S. Khurram, M.H. Jaffery, N. Ali, W.A. Khan, K.R. Cliffe, Development of a Temperature Programmed Identification Technique to Characterize the Organic Sulphur Functional Groups in Coal. *Energies*. 10 (2017) 782.
- [21]. A. Jamshaid, A. Hamid, N. Muhammad, A. Naseer, M. Ghauri, J. Iqbal, S. Rafiq, N.S. Shah, Cellulose-based Materials for the Removal of Heavy Metals from Wastewater—An Overview. *ChemBioEng Reviews*. (2017).
- [22]. M. Saeed, S. Rafiq, L.H. Bergersen, L. Deng, Tailoring of water swollen PVA membrane for hosting carriers in CO₂ facilitated transport membranes. *Separation and Purification Technology*. 179 (2017) 550-560.
- [23]. K. Majeed, A. Hassan, A. Abu Bakar, Barrier, Biodegradation, and mechanical properties of (Rice husk)/(Montmorillonite) hybrid filler-filled low-density polyethylene nanocomposite films. *J. Vinyl additTechnol.* 23 (2017) 162-171.
- [24]. M. Hussain, P. Akhter, J. Iqbal, Z. Ali, W. Yang, N. Shehzad, K. Majeed, R. Sheikh, N. Russo, VOCs photocatalytic abatement using nanostructured titania-silica catalysts. *Journal of Environmental Chemical Engineering*. (2017).
- [25]. W. Yang, G. Chen, J. Qiao, S. Liu, R. Xiao, R. Dong, M. Hussain, G. Wu, Graphene nanoflakes reinforced Al-20Si matrix composites prepared by pressure infiltration method. *Materials Science and Engineering: A*. 700 (2017) 351-357.
- [26]. W.-S. Yang, G.-Q. Chen, P. Wu, M. Hussain, J.-B. Song, R.-H. Dong, G.-H. Wu, Electrical Discharge Machining of Al2024-65 vol% SiC Composites. *Acta Metallurgica Sinica (English Letters)*. 30 (2017) 447-455.
- [27]. N. Jang, M. Yasin, S. Park, R.W. Lovitt, I.S. Chang, Determination of volumetric gas–liquid mass transfer coefficient of carbon monoxide in a batch cultivation system using kinetic simulations. *Bioresource technology*. 239 (2017) 387-393.
- [28]. F. Ahmed, J.-K. Kim, A.U. Khan, H.Y. Park, Y.K. Yeo, A Fast Converging and Consistent Teaching-Learning-Self-Study Algorithm for Optimization: A Case Study of Tuning of LSSVM Parameters for the Prediction of NO_x Emissions from a Tangentially Fired Pulverized Coal Boiler. *Journal of Chemical Engineering of Japan*. 50 (2017) 273-290.
- [29]. L. Xin, W. Yang, Q. Zhao, R. Dong, P. Wu, Z. Xiu, M. Hussain, G. Wu, Strengthening behavior in SiC nanowires reinforced pure Al composite. *Journal of Alloys and Compounds*. 695 (2017) 2406-2412.
- [30]. L. Xin, W. Yang, Q. Zhao, R. Dong, X. Liang, Z. Xiu, M. Hussain, G. Wu, Effect of extrusion

treatment on the microstructure and mechanical behavior of SiC nanowires reinforced Al matrix composites. *Materials Science and Engineering: A.* 682 (2017) 38-44.

[31]. H.-J. Cho, F. Ahmed, T.Y. Kim, B.S. Kim, Y.-K. Yeo, A comparative study of teaching-learning-self-study algorithms on benchmark function optimization. *Korean Journal of Chemical Engineering*. 34 (2017) 628-641.

[32]. A.M. Abu-Jrai, F. Jamil, H. Ala'a, M. Baawain, L. Al-Haj, M. Al-Hinai, M. Al-Abri, S. Rafiq, Valorization of waste Date pits biomass for biodiesel production in presence of green carbon catalyst. *Energy Conversion and Management*. 135 (2017) 236-243.

[33]. M.A. Akhtar, S. Riaz, A. Hayat, M. Nasir, N. Muhammad, A. Rahim, M.H. Nawaz, Poly (ethylene oxide) tethered trans-porphyrin: Synthesis, self-assembly with fullerene (C₆₀) and DNA binding studies. *Journal of Molecular Liquids*. 225 (2017) 235-239.