

Table of Contents

Effect of Feature Selection on Data-Driven Prediction of Catalyst Performance: A Case Study on Methanol Formation from Thermocatalytic CO₂ Hydrogenation on Cu-Based Catalysts	
N.N. Hidayat, U. Sudibyo, A.W. Kurniawan, F.H. Arvianto, M. Naufal, W.A.E. Prabowo, H.A. Azies and M. Akrom	1
Microkinetic Comparison of CO₂ Hydrogenation to Methanol over Unsupported and Supported Subnanometer Pd_x Clusters	
D.A. Syaifullah, M.A. Nuruzzahran, A.P. Wijaya, A. Ikhtiarudin, R. Budiantono, M.H. Mahyuddin and A.G. Saputro	7
Exploring the Spontaneous Dissociation of Inorganic Salts: Thermodynamic Analysis and Reaction Kinetics in an Exothermic System	
W.R. Abdullah and A.A. Mahmood	15
Theoretical and Experimental Study Using Hyperchem-8 and Gaussian Computer Program to Study the Stability, Binding Energies, and Electrical Characteristics of Triazole-Based Metal Complexes in the Gas Phase	
J.H. Abdulameer, A.I. Mohammed, M.F. Alias and M.A. Reishaan	23
Enhanced Humidity Sensing Properties of Sn-Doped ZnO Nanostructures on AZO/PET Substrates via Sol-Gel Immersion Method	
S. Ahmad Kamal, N.D. Md. Sin, M.H. Mamat, M.Z. Hussin, F.K. Abd Hamid, M.H. Abdullah and N.A. Asli	39
Review of Mechanical and Physicochemical Pretreatments in Essential Oil Extraction: Mass-Transfer Enhancement and Yield Optimization	
D.S. Ramadhan, V.O. Azzahra, S. Kanza, D. Wardana and R. Mustofa	51
Sustainable Biochar Production from Palm Kernel Shell through Slow Pyrolysis: A Life Cycle Assessment of Its Application as an Eco-Friendly Fertilizer	
A. Fikarda, M.R. Rahman, Y. Bindar and L.D. Kasmiarno	69
Optimizing Co-Firing Ratio of RDF MSW and Coal in a Fluidized Bed Reactor	
I.M.A. Putrawan, I.N.S. Winaya, I.N. Simpen, I.B.A. Swamardika, I.M. Rajendra, W.G. Ariastina, I.P.A.Y. Pratama and I.G.N.P. Tenaya	83
Simulation of Hydrogen Gas Production Process from Oil Palm Empty Fruit Bunch (OPEFB) Combine with Carbon Capture Based on Aspen Plus Software	
R.M. Rachman, A.Y. Gautama and F. Nurrahman	93
A Comparison Study between Steady-State and Dynamic Operation Models on the HTPS Performance	
Z.Y. Al-Moosawi, A.A. Ateeq and M.T. Al Shamkhani	105
Novel Design of Vertical Undivided Electrochemical Cell with Concentric Electrodes for Continuous Production of Sodium Hypochlorite	
S.A. Jafar, Z.A. Abdel-Rahman, A.A. Younes, L.I. Saeed and J.I. Humadi	119