

EDITORIAL



On behalf of the Editorial Committee of *Journal of Chemical Engineering Research Updates*, we have the honor and the great pleasure to launch and preface the first inaugural issue of that journal. Our aim is to publish state-of-the-art and innovative research in Chemical Engineering and Materials Science.



The journal will publish original research articles, insightful reviews, technical notes and conference papers in all aspects of the field of Chemical Engineering. It specifically encourages articles that represent specific investigations and important advances realized in the framework of chemical engineering including, but not limited to, the following areas of interest Biochemical Engineering, Bio-Engineering Materials, Chemical Engineering Biotechnology, Chemical Reaction Engineering, Composite Materials, Electrochemistry of Nanomaterials, Energy Engineering, Environmental Engineering, Fluid Engineering, Materials Engineering, Mathematical, Modeling and Simulation, Molecular Assembly, Nanotechnology, Natural Products, Petrochemicals, Pharmaceuticals, Polymers Process Technology, Reservoir Engineering, Separations Technology, Thermodynamic Engineering, Transport Phenomena.

The first issue of our journal contains four scientific papers prepared in the spirit of creating the challenge to scientists, chemical engineers and people dealing with practical branches of Chemical Engineering and Materials Science.

The first paper entitled "Frost Heave and Ice Lenses Formation in Freezing Soils" by L. Bornfenbrener concerns the generalized formation model for secondary frost heave in freezing fine-grained soils. The proposed model predicts the frost heave and ice lenses formation in freezing soils with reasonable accuracy, satisfactorily reflects observed phenomena, and thus can be suitable for engineering practice.

The second paper entitled "Carbonization Kinetics of Different Biomass Sources" by D. Özçimen and A. Ersoy-Meriçboyu presents the carbonization kinetic parameters of hazelnut shell, apricot stone, grape seed and chestnut shell using the experimental data analyzed by thermogravimetric (TG) analyzer. The most appropriate kinetic models which represent the carbonization of the cellulosic and lignin ingredients of the biomass samples were found as $f(\alpha) = (1 - \alpha)^2$ and $f(\alpha) = 0.5(1 - \alpha)[- \ln(1 - \alpha)] - 1$, respectively.

The third paper entitled "Production and Purification of Fungal Milk Clotting Enzyme from *Aspergillus candidus*" by G. Baskar, S. B. Merlin, D.V. Sneha and J. A. Vidhula describes commercially viable and cost efficient method for purification of rennet from microbial sources, *Aspergillus candidus*. The rennet was purified using a two-step process involving solvent precipitation and chromatographic separation with DEAE cellulose. The Michaelis-Menten parameters, such as Michaelis constant (K_m) and the maximum reaction rate (V_{max}), were determined to be 0.059 mg/ml and 8.59×10^{-3} mmol/ml/sec, respectively.

The last paper entitled "Carbon Spheres for the Removal of Heavy Metal Ions From Refinery Effluents" by A. T. Derebe, K. Wang and S. Mondal deals with preparation of carbon spheres (CS) from glucose solution by environmentally-friendly hydrothermal procedure. The CS activated by NaOH showed highest adsorption capacity toward heavy metal ions, while CH_3COOH treated CS displayed a lower uptake than the control CS. The CS revealed to be a high potential for the removal of heavy-metal ions from aqueous solutions.

In conclusion it can be observed that the contents of the previous four articles published in this first issue of the ***Journal of Chemical Engineering Research Updates*** are focused on a wide spectrum of topics concerning the chain of chemical engineering. This remark creates a platform for future articles in the numerous fields involved in the research and development required by the present and future Chemical Engineering and Materials Science.

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