

THE CANADIAN JOURNAL OF CHEMICAL ENGINEERING

SEPTEMBER 2019

VOLUME 97 NUMBER 9

Issue Highlights 2371

Special Series: Experimental Methods in Chemical Engineering

Experimental Methods in Chemical Engineering: Artificial Neural Networks—ANNs 2372
Jacopo Panerati, Matthias A. Schnellmann, Christian Patience, Giovanni Beltrame and Gregory S. Patience

Experimental Methods in Chemical Engineering: Reactors—Fluidized Beds 2383
Miguel Menéndez, Javier Herguido, Ariane Bérard and Gregory S. Patience

Articles

Environment, Renewable Resources and Green Processes

Shear Rheological Properties of Composite Fluids and Stability of Particle Suspensions: Potential Implications for Fracturing and Environmental Fluids 2395
Erica Pensini, Braulio Macias Rodriguez, Alejandro G. Marangoni, Christopher M. Collier, Abdallah Elsayed and Amanda Siwik

Activated Carbon Impregnation with Ag and Cu Composed Nanoparticles for *Escherichia coli* Contaminated Water Treatment 2408
Flávia Sayuri Arakawa, Quelen Letícia Shimabuku-Biadola, Simone de Lima Bazana, Marcela Fernandes Silva, Benício Alves de Abreu Filho and Rosângela Bergamasco

Investigation of Advanced NO Oxidation Process with the Delivery of $\cdot\text{OH}$ from Thermal Decomposition of H_2O_2 2419
Kaikai Kou, Wei Zhou, Yan Wang, Haiqian Zhao and Jihui Gao

Industrial Applications of Chemical Engineering

Optimization of Zinc-Nickel Film Electrodeposition for Better Corrosion Resistant Characteristics 2426
Shams Anwar, Faisal Khan, Yahui Zhang and Susan Caines

New Materials, Nanomaterials and Nanotechnology

One-Step Solvothermal Synthesis of Hollow Bi_2WO_6 Photocatalyst 2440
Yanhua Gao, Xinyao Shan, Dongdong Song, Elham Gulnigar, Yang Wang, Wei Yang and Ying Chen

Synthesis of Carbon Materials with Different Morphologies by Solvothermal Method with Premixing 2447
Qin Shi, Kun Dong, Liangliang Zhang, Yong Luo, Guangwen Chu, Haikui Zou and Baochang Sun

Process Control, Systems Engineering and Statistics

Fault Diagnosis in Industrial Chemical Processes using Optimal Probabilistic Neural Network 2453
Zihao Xie, Xiaohui Yang, Anyi Li and Zhenchang Ji

Monitoring Tailings Flocculation Performance using Hyperspectral Imagery 2465
Iman Entezari, Benoit Rivard, Vahid Vajihinejad, Ward G. Wilson, João B. P. Soares, Bereket Fisseha and Nicholas Beier

Decoupling Control Method of Paper Cross-Directional Basis Weight Based on Sparse Decomposition 2472
Qiang Zhou, Jing Zhang, Ling Tuo and Wei Li

Online Prediction of Quality-Related Variables for Batch Processes using a Sequential Phase Partition Method 2483
Zheng Li, Pu Wang, Xuejin Gao, Yongsheng Qi and Peng Chang

Reaction Engineering, Chemical Kinetics and Catalysis

Enhanced Low-Temperature Selective Catalytic Reduction (SCR) of NO_x by $\text{CuO-CeO}_2\text{-MnO}_x/\gamma\text{-Al}_2\text{O}_3$ Mixed Oxide Catalysts 2498
Jiaying Sun, Heng Chen, Hao Wu, Changsong Zhou and Hongmin Yang

Precious Metal Nanoparticles Supported on KOH Pretreated Activated Carbon under Microwave Radiation as a Catalyst for Selective Hydrogenation of Cinnamaldehyde 2505
Li-Hui Zeng, Hao-Xiang Yan, Yong-Kang Zeng, Yue-Feng Li, Zhi-Xiang Zhang, Zhong-Wen Liu and Zhao-Tie Liu

Optimally Designed Synthesis of Advanced Pd-Rh Bimetallic Three-Way Catalyst 2516
Li Lan, Shanhu Chen, Hongmei Li, Dayu Liu, Dacheng Li, Jinfeng Wang and Yaoqiang Chen

Separation Processes

Ionic Liquid-Mediated Aqueous Two-Phase System to Enhance the Partitioning of Lignin 2527
Gayatri Gogoi and Swapnali Hazarika

(Continued)

2369

Use of Axial Dispersion and Plug Flow Models for
Determination of Axial Mixing and Mass Transfer
Coefficient in an L-Shaped Pulsed Packed Extraction
Column. 2536
*Sajad Khooshechin, Jaber Safdari, Mohammad Ali Moosavian
and Mohammad Hassan Mallah*

**Transport Phenomena, Fluid Dynamics and
Thermodynamics**

Application of Extended Quadrature Method of Moments for
Simulation of Bubbly Flow and Mass Transfer in Gas-Liquid
Stirred Tanks 2548
Ehsan Askari, Gabriel St-Pierre Lemieux and Pierre Proulx

Analysis of Non-Isothermal Viscous Flow Coalescence at
Micro Scale 2565
*Mohammadmahdi Kamyabi, Rahmat Sotudeh-Gharebagh,
Reza Zarghami and Khashayar Saleh*