

Developments in Chemical Engineering & Mineral Processing

The Australasian Research Journal

Volume 13, Numbers 5/6, 2005

ISSN 0969-1855

Special Theme Issue:

Bioprocess and Environmental Biotechnology Research

- 517 Guest Editorial: *Professor K.B. Ramachandran and Associate Professor Mohd Azlan Hussain, Dept of Chemical Eng., University of Malaya, Malaysia*
- 519 Purification and Characterization of Thermostable α -Amylase from a Newly Isolated Thermophilic *Bacillus stearothermophilus* GRE 1
S.M. Zakir Hossain, G.D. Haki and S.K. Rakshit
- 531 Sensitivity to Hydrogen Peroxide of Growth and Hyaluronic Acid Production by *Streptococcus zooepidemicus* ATCC 39920
M.D. Mashitah, K.B. Ramachandran and H. Masitah
- 541 Initial Screening of Fermentation Variables for the Production of Cyclomaltodextrin Glucanotransferase (CGTase) from Local Isolated *Bacillus stearothermophilus* HR1
T.E. Wong, R.M. Illias, M.M. Salleh, O. Hassan, K. Kamaruddin, R.A. Rahman and A.F. Ismail
- 549 Photobiological Hydrogen Production from Synthesis Gas: Carbon Sources, $K_L a$ and Kinetics Evaluation
G. Najafpour, H. Younesi, K.S.K. Ismail, A.R. Mohamed and A.H. Kamaruddin
- 563 Callus Induction from Tobacco (*Nicotiana tabacum*) Leaf Explants for the Production of Quinone
Murnilawati Abd Gani Husin, Masitah Hasan and Rosna Mat Taha
- 573 Issues in Plant Cell Culture Engineering for Enhancement of Productivity
Mohd A. Abdullah, Nordin H. Lajis, Abdul M. Ali, M. Marziah, Anthony J. Sinskey and ChoKyun Rha
- 589 Modelling and Simulation of Enzymatic Membrane Reactor for Hydrolysis of Ibuprofen Ester: Separation of Products
Wei Sing Long, Azlina Harun Kamaruddin and Subhash Bhatia
- 599 Operational Stability of Lipase Enzyme: Effect of Temperature and Shear
M.M. Shamel, K.B. Ramachandran and M. Hasan
- 605 Enzymatic Enantioselective Acylation of Sterically Aromatic Secondary Alcohol
Lee-Suan Chua and Mohamad Roji Sarmidi

- 617 Mechanical, Physical and Antimicrobial Characterization of Edible Films Based on Alginate and Chitosan Containing Garlic Oil
Yudi Pranoto, Sudip Kumar Rakshit and Vilas Mahadeo Salokhe
- 627 Direct Treatment of an Acidic and High-Strength Nitrate-Polluted Wastewater Containing Heavy Metals by Using a Bio-electrochemical Reactor
Tomohide Watanabe, Hong-Wei Jin, Kyung-Jin Cho, and Masao Kuroda
- 639 The Effect of Chemical and Biopulping Process on Bagasse Pulp
Antaresti, Y. Sudaryanto, Setiyadi, H. Wibowo, Yogi, and Y. Purnomo
- 645 Performance of Dual-Media Expanded Bed Bioreactor
R. Abdul-Rahman, N. Zainol and A. Abu-Bakar
- 655 Formation of Biofilm on Different Particulate Media Using Modified Kitchen Waste Extract as Initial Growth Substrate for Use in PCB Degradation
J. Aurenesia, S. Ang, D. Espinosa, J. Juan, J. Borja and D. Taleon
- 667 Treatment of Skim Latex Serum Using Gas Sparged Ultrafiltration
Harunsyah, Nik Meriam Sulaiman and Mohamed Kheireddine Aroua
- 675 Modeling and Dynamic Simulation of Activated Sludge Process in Sequencing Batch Reactor
Azwar, M.A Hussain and K.B. Ramachandran
- 687 The Biodiesel Production Process from Vegetable Oil
Supranto

General Papers

- 693 A Study of Particle Packing Compression under Fluid Drag Force by DEM Simulations
Q. Li, V. Rudolph, F.Y. Wang and M. Horio
- 709 Investigation of the Effect of Different Comminution Methods on the Quality of Chilli Powder
W. Zhou and J. Goh
- 719 Two- and Three-Phase Flow Through a 90 Degree Bend
P.L. Spedding, E. Benard and G.M. McNally
- 730