



## Contents

Announcement .....	1
Development of a three-phase fluidized bed reactor with enhanced oxygen transfer .....	2
L. Wan, M. Alvarez-Cuenca, S.R. Upreti, A. Lohi (Ontario, Canada)	
Global sensitivity analysis in the flowsheet simulation of solids processes .....	9
D. Schwier, E.-U. Hartge, J. Werther, G. Gruhn (Hamburg, Germany)	
Cyclic auto-seeded polythermal preferential crystallization—Effect of impurity accumulation .....	22
F. Czaplá, D. Polenske, L. Klúkas, H. Lorenz, A. Seidel-Morgenstern (Magdeburg, Germany)	
Modeling and numerical analysis of counter-current dialyzer at steady state .....	29
Z. Palatý, H. Bendová (Pardubice, Czech Republic)	
Photocatalytic reaction intensification using monolithic supports designed by stereolithography .....	35
M. Furman, S. Corbel, G. Wild, O. Zahraa (Nancy, France)	
Enhancement of solid dissolution process under the influence of rotating magnetic field .....	42
R. Rakoczy (Szczecin, Poland)	
Experimental investigation and modeling of steam cracking of Fischer–Tropsch naphtha for light olefins .....	51
F. Wang (Taiyuan, China and Beijing, China), Y. Xu, J. Ren, Y. Li (Taiyuan, China)	
Modeling of non-catalytic partial oxidation of natural gas under conditions found in industrial reformers .....	59
X. Zhou, C. Chen, F. Wang (Shanghai, PR China)	
Atmospheric continuous cold plasma treatment: Thermal and hydrodynamical diagnostics of a plasma jet pilot unit .....	65
A. Ceria, G. Rovero, S. Sicardi, F. Ferrero (Torino, Italy)	
Process intensification in the petrochemicals industry: Drivers and hurdles for commercial implementation .....	70
J. Harmsen (Amsterdam, The Netherlands)	
Case-based selection of a model of a reverse flow reactor .....	74
C.C. Botar-Jid (Cluj-Napoca, Romania), Y. Avramenko, A. Kraslawski (Lappeenranta, Finland), P.-S. Agachi (Cluj-Napoca, Romania)	
Kinetics and mechanism of extraction of Cu(II) by CYANEX 302 from nitrate medium and oxidative stripping of Cu(I) using Lewis cell technique .....	84
N.E. El-Hefny (Cairo, Egypt)	
Process analysis of the extract unit of vacuum residue through mixed C4 solvent for deasphalting .....	91
F. Cao, D. Jiang, W. Li, P. Du, G. Yang, W. Ying (Shanghai, China)	

The publisher encourages the submission of articles using the journal online submission system: <http://ees.elsevier.com/cep>

Hydrodynamic and mass transfer characterization of a flat-panel airlift photobioreactor with high light path .....	97
R. Reyna-Velarde, E. Cristiani-Urbina, D.J. Hernández-Melchor, F. Thalasso, R.O. Cañizares-Villanueva (México, Mexico)	
Identification of stable operating ranges of a counter-current multistage fluidized bed reactor with downcomer .....	104
C.R. Mohanty, B. Rajmohan (Kharagpur, India), B.C. Meikap (Kharagpur, India and Durban, South Africa)	
Testing a KrCl excilamp as new enhanced UV source for 4-chlorophenol degradation: Experimental results and kinetic model .....	113
M. Gomez, M.D. Murcia, J.L. Gomez (Murcia, Spain), G. Matafonova, V. Batoev (Ulan-Ude, Russia), N. Christofi (Scotland, UK)	
Optimization of preparation of matrix pellets containing ethylcellulose .....	120
E.I. Hamedelniel, J. Bajdik, K. Pintye-Hódi (Szeged, Hungary)	
Analysis by droplet size classes of the liquid flow structure in a pressure swirl hollow cone spray .....	125
J.L. Santolaya, L.A. Aísa, E. Calvo, I. García, J.A. García (Zaragoza, Spain)	
Experimental study and process simulation of n-butyl acetate produced by transesterification in a catalytic distillation column ....	132
J. He (Tianjin, China), B. Xu (Tianjin, China and Shanghai, China), W. Zhang, C. Zhou, X. Chen (Tianjin, China)	