

- [ACS Style Guide: Citing References \[PDF\]](#)
- [Copyright & Permissions/Rightslink](#)
- [ACS Author & Reviewer Resource Center](#)
- [Subscriptions](#)
- [About the Journal](#)
 - [About the Journal](#)
 - [Editors](#)
 - [Editor Profile](#)
 - [Masthead \[PDF\]](#)
 - [Editorial Advisory Board \[PDF\]](#)
 - [Advertising](#)

[Previous Issue](#) [Next Issue](#)

Table of Contents




[Larger Cover](#)

January 16, 2008
Volume 47, Issue 2
Pages 273-490

In this issue:

- [Commentary](#)
- [APPLIED CHEMISTRY](#)
- [KINETICS, CATALYSIS, AND REACTION ENGINEERING](#)
- [PROCESS DESIGN AND CONTROL](#)
- [SEPARATIONS](#)
- [GENERAL RESEARCH](#)
- [RESEARCH NOTES](#)

 ACS AuthorChoice indicates the article is freely available through sponsorship by the author or related funding agency. [More about this program.](#)

Select All For Selected Content:

Commentary




[Difficulties in Trying To Model and Scale-Up the Bubbling Fluidized Bed \(BFB\) Reactor](#)

pp 273–277

Publication Date (Web): December 22, 2007 (Commentary)

DOI: 10.1021/ie071355v

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[380K]
-  [PDF w/ Links](#)[261K]

APPLIED CHEMISTRY

[Surface Decontamination of Radioactive Metal Wastes Using Acid-in-Supercritical CO₂ Emulsions](#)

Moonsung Koh, Jaeryong Yoo, Minsu Ju, Bokyoung Joo, Kwangheon Park, Hakwon Kim, and Hongdoo Kim Bruno Fournel

pp 278–283

Publication Date (Web): December 14, 2007 (Article)

DOI: 10.1021/ie070865m

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[337K]

-  [PDF w/ Links](#)[249K]




[Experimental Design to Optimize the Oxidation of Orange II Dye Solution Using a Clay-based Fenton-like Catalyst](#)

J. Herney-Ramirez, M. Lampinen, Miguel A. Vicente, Carlos A. Costa, and Luis M. Madeira
pp 284–294

Publication Date (Web): December 12, 2007 (Article)

DOI: 10.1021/ie070990y

[Abstract](#) | [Supporting Info](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[637K]
-  [PDF w/ Links](#)[395K]




[Synthesis of Zeolite From Thermally Treated Sediment](#)

Deyi Wu, Yikai Lu, Hainan Kong, Chun Ye, and Xiangcan Jin
pp 295–302

Publication Date (Web): December 21, 2007 (Article)

DOI: 10.1021/ie071063u

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[399K]
-  [PDF w/ Links](#)[269K]

KINETICS, CATALYSIS, AND REACTION ENGINEERING

[Deactivation of Modified Iron Oxide Materials in the Cyclic](#)

[Water Gas Shift Process for CO-Free Hydrogen Production](#)




Vladimir Galvita, Thomas Hempel, Heike Lorenz, Liisa K. Rihko-Struckmann, and Kai Sundmacher

pp 303–310

Publication Date (Web): December 18, 2007 (Article)

DOI: 10.1021/ie0708879

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[747K]
-  [PDF w/ Links](#)[405K]

[Global Kinetics for a Commercial Diesel Oxidation Catalyst with Two Exhaust Hydrocarbons](#)




Chaitanya S. Sampara, Edward J. Bissett, and Matthew Chmielewski

pp 311–322

Publication Date (Web): December 18, 2007 (Article)

DOI: 10.1021/ie070813x

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[357K]
-  [PDF w/ Links](#)[446K]

PROCESS DESIGN AND CONTROL

[Optimal Design of Synthesis Gas Production Process with Recycled Carbon Dioxide Utilization](#)




Seungjune Choi, Jehun Park, Chonghun Han, and En Sup Yoon

pp 323–331

Publication Date (Web): December 12, 2007 (Article)

DOI: 10.1021/ie070961n

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[268K]
-  [PDF w/ Links](#)[240K]

[Detection of Unmeasured Disturbances in Model Predictive Control \(MPC\) Plant Test Data](#)




Hongbin Dong and James B. Riggs

pp 332–343

Publication Date (Web): December 12, 2007 (Article)

DOI: 10.1021/ie061623+

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[339K]
-  [PDF w/ Links](#)[439K]

[A Comparative Study of Recent/Popular PID Tuning Rules for Stable, First-Order Plus Dead Time, Single-Input Single-Output Processes](#)




M. G. Lin, S. Lakshminarayanan, and G. P. Rangaiah

pp 344–368

Publication Date (Web): January 09, 2008 (Article)

DOI: 10.1021/ie0704546

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[1709K]
-  [PDF w/ Links](#)[1591K]

[Impact of Multiple Storage in Wastewater Minimization for Multicontaminant Batch Plants: Toward Zero Effluent](#)




Jacques F. Gouws and Thokozani Majozi

pp 369–379

Publication Date (Web): December 14, 2007 (Article)

DOI: 10.1021/ie070790m

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[171K]
-  [PDF w/ Links](#)[195K]

[Parameter Estimation in Continuous-Time Dynamic Models in the Presence of Unmeasured States and Nonstationary Disturbances](#)




M. Saeed Varziri, Kim B. McAuley, and P. James McLellan

pp 380–393

Publication Date (Web): December 15, 2007 (Article)

DOI: 10.1021/ie070824q

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[505K]
-  [PDF w/ Links](#)[615K]




Improving Agility of Cryogenic Air Separation Plants

Jason Miller and William L. Luyben Paul Belanger, Stephane Blouin, and Larry Megan
pp 394–404

Publication Date (Web): December 13, 2007 (Article)

DOI: 10.1021/ie070975t

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[493K]
-  [PDF w/ Links](#)[411K]




Exponentially Weighted Moving Average (EWMA) Control Charts for Monitoring an Analytical Process

Polona K. Carson and Arthur B. Yeh
pp 405–411

Publication Date (Web): December 12, 2007 (Article)

DOI: 10.1021/ie070589b

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[134K]
-  [PDF w/ Links](#)[147K]

Enhancement of the CO₂ Retention Capacity of Y Zeolites by Na and Cs Treatments: Effect of Adsorption Temperature and Water Treatment




Eva Díaz, Emilio Muñoz, Aurelio Vega, and Salvador Ordóñez

pp 412–418

Publication Date (Web): December 15, 2007 (Article)

DOI: 10.1021/ie070685c

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[159K]
-  [PDF w/ Links](#)[163K]

[Variable MWPCA for Adaptive Process Monitoring](#)




Xiao Bin He and Yu Pu Yang

pp 419–427

Publication Date (Web): December 13, 2007 (Article)

DOI: 10.1021/ie070712z

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[216K]
-  [PDF w/ Links](#)[186K]

SEPARATIONS

[Recovery of Molybdate from Dilute Aqueous Solutions by Complexation with Cationic Surfactants and Extraction with Isobutanol](#)




Nilay Sameer, Marilyn Markwei, Bandaru V. Ramarao, and Raymond C. Francis

pp 428–433

Publication Date (Web): December 12, 2007 (Article)

DOI: 10.1021/ie070053q

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[442K]
-  [PDF w/ Links](#)[280K]




[Compositional Effects of Nanocrystalline Lithium Zirconate on Its CO₂ Capture Properties](#)

Esther Ochoa-Fernández, Magnus Rønning, Xiaofeng Yu, Tor Grande, and De Chen
pp 434–442

Publication Date (Web): December 13, 2007 (Article)

DOI: 10.1021/ie0705150

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[365K]
-  [PDF w/ Links](#)[277K]




[Liquid–Liquid Equilibria of the Methyl Oleate–Glycerol–Hexane–Methanol System](#)

Roza Tizvar, David D. McLean, Morris Kates, and Marc A. Dubé
pp 443–450

Publication Date (Web): December 15, 2007 (Article)

DOI: 10.1021/ie070882b

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[121K]
-  [PDF w/ Links](#)[136K]

GENERAL RESEARCH

Semiempirical Method for Determining Water Content of Methane-Rich Hydrocarbon Gas in Equilibrium with Gas Hydrates




Amir H. Mohammadi and Dominique Richon

pp 451–458

Publication Date (Web): December 14, 2007 (Article)

DOI: 10.1021/ie070372h

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[61K]
-  [PDF w/ Links](#)[76K]

Phase Equilibrium in Two-Phase, Water-Rich-Liquid, Hydrate Systems: Experiment and Theory




Yi ZhangGerald D. HolderRobert P. Warzinski

pp 459–469

Publication Date (Web): December 18, 2007 (Article)

DOI: 10.1021/ie070846c

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[406K]
-  [PDF w/ Links](#)[504K]

Computational Investigation of Horizontal Slug Flow in

Pneumatic Conveying




S. B. Kuang, K. W. Chu, A. B. Yu, Z. S. Zou, and Y. Q. Feng

pp 470–480

Publication Date (Web): December 20, 2007 (Article)

DOI: 10.1021/ie070991q

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[454K]
-  [PDF w/ Links](#)[467K]

RESEARCH NOTES

Master Curve for the Discrete-Element Method




Eldin Wee Chuan Lim

pp 481–485

Publication Date (Web): December 15, 2007 (Research Note)

DOI: 10.1021/ie0709032

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[107K]
-  [PDF w/ Links](#)[138K]

Neural Network Modeling and Simulation of the Solid/Liquid Activated Carbon Adsorption Process




K. Vasanth Kumar, K. Porkodi, R. L. Avila Rondon, and F. Rocha

pp 486–490

Publication Date (Web): December 15, 2007 (Research Note)

DOI: 10.1021/ie071134p

[Abstract](#)

-  [Full Text HTML](#)
-  [Hi-Res PDF](#)[356K]
-  [PDF w/ Links](#)[217K]

Select All For Selected Content:

[Previous Issue](#) [Next Issue](#)



Browse By Issue

[List of Issues](#)

Stay Current

Get your research ASAP.

[e-Alerts](#) | [RSS Feeds](#) 

Advertisements

ACS Network

Where
Chemists
Connect.

REGISTER
NOW!

[Info for Advertisers](#)

Copyright © 2009 American Chemical Society
1155 Sixteenth Street N.W., Washington, DC 20036

[Journals A–Z](#) | [Books](#) | [Authors & Reviewers](#) | [Librarians](#) | [ACS Members](#) | [Help](#)

PORTICO COUNTER  ACS Publications is a partner of:

Technology Partner - [Atypon Systems, Inc.](#)