

American Institute of Chemical Engineers

Distillation Topical Conference and Separations Division Conference

Topical Conference at the
2008 AIChE Spring National Meeting

April 6-10, 2008
New Orleans, Louisiana, USA

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571
www.proceedings.com

ISBN: 978-1-60560-214-1

Some format issues inherent in the e-media version may also appear in this print version.

ISBN: 978-1-60560-214-1

Copyright (2008) by the American Institute of Chemical Engineers.
All rights reserved.

For permission requests, please contact the American Institute of Chemical Engineers at the address below.

American Institute of Chemical Engineers
Proceedings
Three Park Avenue
New York, NY 10016-5991
Phone: 212-591-8100

www.aiche.org

TABLE OF CONTENTS

Thermosiphon Reboilers.....	1
<i>Nicholas F. Urbanski</i>	
Condenser Design Workshop.....	2
<i>Joseph W. Holmes</i>	
Low-Temperature Plasma Modification of Polyvinylidene Fluoride (PVDF) Membrane by Graft of Styrene in Gas.....	3
<i>Jian Chen, Jiding Li, Rongbin Qi, Hong Ye, Cuixian Chen</i>	
Robust and Reliable Modelling for a Distillation Column.....	14
<i>Yahya Chetouani</i>	
Singularities in Non-Equilibrium Reactive Flash Processes.....	16
<i>Gerardo Ruiz, Lakshmi Sridhar, Misael Diaz</i>	
Maximize Propylene Recovery from a FCC Gas Plant	17
<i>Giuseppe Mosca, Norman Burcher</i>	
Separation of O-Xylene from the Mixed Xylenes by Distillative Freezing.....	18
<i>Lie-Ding Shiau, Jung-Hao Chuang</i>	
A New Model for Distillation Simulation.....	19
<i>Xi-Gang Yuan, K. T. Yu</i>	
Standardization of Structured Packing Efficiency Measurements	20
<i>Zarko Olujic, Michael Joedecke, Gunter Schuch</i>	
Successful Industrial / Academia Collaboration	21
<i>Mitch Loescher</i>	
Interdisciplinary Learning for Chemical Engineering Students from Organic Chemistry	22
<i>Matthew J. Armstrong, Richard Comitz, Russ Lachance, Andy Biaglow, Joe Sloop</i>	
Membrane Contactor/ionic Liquid for Ethanol Recovery	39
<i>Lei Sun, Yupo J. Lin, Michael Henry, Seth W. Snyder</i>	
CO₂ Removal from CO₂/H₂ Mixtures Using Immobilized Liquid Membranes Containing Amine Blends as Carrier	41
<i>Aliakbar Heydari Gorji, Tahereh Kaghazchi, Ali Kargari</i>	
Smart Distillation Prevents Problems Before They Occur	50
<i>Jimmy L. Humphrey, J. Christopher Lewis, A. Frank Seibert, John P. Farone</i>	
Hydrodynamic Performance of Crossflow Concentric-Ring Rotating Bed	51
<i>G. Q. Wang, Y. Q. Jiao, Z. C. Xu, J. B. Ji</i>	
Stability and Selectivity of Supported Liquid Membranes with Ionic Liquid for Separation of Organic Liquids by Vapor Permeation	57
<i>Baoguo Wang, Zhaorong Zeng, Jia Lin, Feng Wu, Li Ding, Yong Peng</i>	
Novel Test Results Demonstrate Exciting Advantages for Raschig Super-Pak	58
<i>Michael Schultes, Simon Chambers</i>	

Simplified Modelling of Crude Oil Distillation Columns Meeting Refining Product Specifications	59
<i>Lu Chen, Megan Jobson, Robin Smith</i>	
Distillation Tower Operation Experience	60
<i>Daniel R. Summers</i>	
Implementation and Validation of a Model-Centric Support System within a Pilot Plant Scale Packed Distillation Column	61
<i>Daira Aragon, Pablo A. Rolandi, Jose A. Romagnoli</i>	
A New Model for Predicting Gas / Liquid Effective Surface Area in Packing	63
<i>J. Christopher Lewis, A. Frank Seibert, James Fair</i>	
Eddy Diffusivity Spiegler-Kedem (EDSK) Model for Reverse Osmosis Membrane	64
<i>Senthilmurugan Subbiah Jr., Shard K. Gupta</i>	
What I Learned from Dr. Seibert	72
<i>Jose Bravo</i>	
Temperature Collocation Method for Design of Complex Distillation Column	73
<i>Libin Zhang, Andreas A. Linninger</i>	
Control Structure Selection for a Dividing Wall Column	74
<i>Kwang Il Kim, Moonyong Lee, Sunwon Park</i>	
Preparation of Zr(IV)-Loaded Membranes for Adsorptive Removal of as(V) from Aqueous Solutions	75
<i>Shuai-wen Zou, Yu-Ming Zheng, J. Paul Chen</i>	
Feasibility Studies on Dehydration of Ethanol by Distillation Using Salt Effect (on VLE)	82
<i>Shuzo Ohe</i>	
Ammonia by Pressure Swing Adsorption – Part II	83
<i>Felix Jegede, James Ritter, Armin D. Ebner</i>	
Factors Affecting Overall Tray Efficiency	84
<i>Henry Z. Kister</i>	

Author Index