

# **Management Division**

**Core Programming Topic at the 2011 AIChE Annual Meeting**

**Minneapolis, Minnesota, USA  
16-21 October 2011**

**ISBN: 978-1-61839-726-3**

**Printed from e-media with permission by:**

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



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

Copyright© (2011) by AIChE  
All rights reserved.

Printed by Curran Associates, Inc. (2012)

For permission requests, please contact AIChE  
at the address below.

AIChE  
3 Park Avenue  
New York, NY 10016-5991

Phone: (203) 702-7660  
Fax: (203) 775-5177

[www.aiche.org](http://www.aiche.org)

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2634  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

# TABLE OF CONTENTS

<b>Effective Application of Project Risk Management</b> .....	1
<i>Stephen L. Cabano</i>	
<b>The Legal System As a Driver for Innovation In Energy Technology</b> .....	11
<i>Richard D. Jordan, Mary Ternes</i>	
<b>Patenting Basics</b> .....	12
<i>Vivek Koppikar</i>	
<b>Ethical Project Management</b> .....	13
<i>Eldon R. Larsen</i>	
<b>The Future for 3M in Nanomaterials Science and Engineering</b> .....	18
<i>Larry A. Wendling</i>	
<b>Educating Global Chemical Engineers in the 21st Century</b> .....	19
<i>Robert A. Brown</i>	
<b>Novel Structures for Public-Private Partnerships: Case Studies with Medical Devices and Biopharmaceuticals</b> .....	20
<i>Sangtae Kim</i>	
<b>Corning's R&amp;D / Innovation Approach</b> .....	21
<i>Joseph A. Miller</i>	
<b>The Future of Fuels and Alternative Feedstocks - Recognizing Hype vs. Practical Limitations</b> .....	44
<i>William Banholzer</i>	
<b>Importance of Human Capital: Why Major in Chemical Engineering?</b> .....	45
<i>John Anderson</i>	
<b>The Future for Emerging Energy Technologies</b> .....	46
<i>Anthony Cugini</i>	
<b>Chemical Product Life Cycle Management and Enterprise Environmental Stewardship</b> .....	47
<i>Monty Alger</i>	
<b>Rapid Development of Coal Chemical Industry in China Providing a Rewarding Career for a Chemical Engineer</b> .....	N/A
<i>Zhenping Lu</i>	
<b>Global Career Opportunities for Chemical Engineers</b> .....	N/A
<i>Kelly Seibert</i>	
<b>Career Opportunities for Chemical Engineers in Singapore</b> .....	N/A
<i>Jim Yang Lee</i>	
<b>Career Opportunities for Chemical Engineers in India</b> .....	N/A
<i>K. Venkataramanan</i>	
<b>Tools and Techniques for Managing Innovation From Beginning to End</b> .....	52
<i>Jack Hipple, Eldon R. Larsen, Mukund Karanjikar</i>	
<b>Managing Your Career</b> .....	N/A
<i>Wendy Young</i>	
<b>Who Are You Leading? How Do You Know?</b> .....	57
<i>Jack Hipple</i>	
<b>Strategies for Motivating Employees</b> .....	N/A
<i>Charlene A. Wall-Warren</i>	
<b>Successful Networking-Yes, Engineers Can Network Too!</b> .....	N/A
<i>Lori McDowell</i>	
<b>Dealing with Uncertainty In Decision Making</b> .....	N/A
<i>Diana Matonis</i>	
<b>Effective Communications</b> .....	N/A
<i>Gautam Pillay</i>	
<b>Speaking Truth to Power</b> .....	N/A
<i>Deborah Grubbe</i>	
<b>Dhamma Tools for Managers</b> .....	66
<i>Gavin Towler</i>	
<b>Historical Perspective On Consumer Goods</b> .....	67
<i>Tasha Desai</i>	
<b>Using Other Peoples' Brains to Invent New Products</b> .....	68
<i>Jack Hipple</i>	

<b>Facing the Top Five Innovation Barriers for Consumer Products: Systems and Strategies</b> .....	71
<i>Jeff Lindsay, Cheryl Perkins</i>	
<b>The Science Behind the Innovative Laundry Sheet Purex Complete 3-In-1</b> .....	72
<i>Matthew Petkus</i>	
<b>Rational Design of Pharmaceutical and Other Liquid Formulations</b> .....	73
<i>Elisa Conte, Sascha Sansonetti, Peter A. Crafts, Rafiqul Gani</i>	
<b>Academics and Open Innovation</b> .....	75
<i>Richard L. Long</i>	
<b>Effective Quantitative Decision-Making Based On Lowering Cost of Capital and ROI Thru Safety Engineering Studies</b> .....	76
<i>Glenda J. Gutiérrez Capriles</i>	
<b>Exogenous Uncertainty: Choosing Innovation Projects</b> .....	N/A
<i>Diana Matonis</i>	
<b>Identifying &amp; Transforming Local Best Practices to a Global Competence</b> .....	100
<i>Marcus A. Tennant</i>	
<b>Author Index</b>	