

**EDITORIAL AND BUSINESS ADDRESS:**

*Chemical Engineering Education*  
 Department of Chemical Engineering  
 University of Florida  
 Gainesville, FL 32611  
 PHONE and FAX : 904-392-0861

**EDITOR**

*Ray W. Fahien*

**ASSOCIATE EDITOR**

*T. J. Anderson*

**CONSULTING EDITOR**

*Mack Tyner*

**MANAGING EDITOR**

*Carole Yocum*

**PROBLEM EDITORS**

*James O. Wilkes and Mark A. Burns*  
*University of Michigan*

**LEARNING IN INDUSTRY EDITOR**

*William J. Koros*  
*University of Texas, Austin*

**PUBLICATIONS BOARD****• CHAIRMAN •**

*E. Dendy Sloan, Jr.*  
*Colorado School of Mines*

**• PAST CHAIRMEN •**

*Gary Poehlein*  
*Georgia Institute of Technology*

*Klaus Timmerhaus*  
*University of Colorado*

**• MEMBERS •**

*George Burnet*  
*Iowa State University*

*Anthony T. DiBenedetto*  
*University of Connecticut*

*Thomas F. Edgar*  
*University of Texas at Austin*

*Richard M. Felder*  
*North Carolina State University*

*Bruce A. Finlayson*  
*University of Washington*

*H. Scott Fogler*  
*University of Michigan*

*J. David Hellums*  
*Rice University*

*Angelo J. Perna*  
*New Jersey Institute of Technology*

*Stanley I Sandler*  
*University of Delaware*

*Richard C. Seagrave*  
*Iowa State University*

*M. Sami Selim*  
*Colorado School of Mines*

*James E. Stice*  
*University of Texas at Austin*

*Phillip C. Wankat*  
*Purdue University*

*Donald R. Woods*  
*McMaster University*

**Chemical Engineering Education****Volume 28****Number 3****Summer 1994****DEPARTMENT**

154 *Arizona State University, Gene Sater, Neil Berman*

**EDUCATOR**

158 *David F. Ollis, of North Carolina State University*

**AWARD LECTURE**

162 *Polymer Flow Instabilities: A Picaresque Tale, Morton M. Denn*

**CLASSROOM**

168 *Teaching Thermo With the Help of Friends, Johannes M. Nitsche*

184 *Judging the Speed of a Reaction From Its Funny-Looking Rate Constant, Robert R. Hudgins*

188 *Fun Ways to Learn Fluid Mechanics and Heat Transfer, Bernard J. Van Wie, Joe C. Poshusta, Robert D. Greenlee, Robert A. Brereton*

198 *Performance Problems, Richard C. Bailie, Joseph A. Shaeiwitz*  
 204 *A Holistic Approach to ChE Education: Part 2. Approach at the Introductory Level,*

*Francesc Giralt, A. Fabregat, X. Farriol, F.X. Grau, J. Giralt, M. Medir*

218 *Teaching Process Analysis, Moses O. Tadé, Terence N. Smith*

**RANDOM THOUGHTS**

174 *Any Questions? Richard M. Felder*

**ESSAY**

176 *The Third Law of Thermodynamics, B. G. Kyle*

**CLASS AND HOME PROBLEMS**

180 *Magic Unveiled Through the Concept of Heat and Its Transfer, A. R. Konak*

183 *A Second Look at Thermodynamics and Common Sense, Octave Levenspiel*

**LEARNING IN INDUSTRY**

194 *Accelerated BS/Master's Industry Program in Chemical Engineering, Ron Darby*

**CURRICULUM**

210 *Process Systems Engineering: The Cornerstone of a Modern Chemical Engineering Curriculum, I.T. Cameron, P.L. Douglas, P.L. Lee*

**LABORATORY**

214 *A Simple but Effective Fluidized-Bed Experiment, Conan J. Fee*

167 *Books Received*

166, 187, 192, 193 *Book Reviews*

167 *Errata*

CHEMICAL ENGINEERING EDUCATION (ISSN 0009-2479) is published quarterly by the Chemical Engineering Division, American Society for Engineering Education, and is edited at the University of Florida. Correspondence regarding editorial matter, circulation, and changes of address should be sent to CEE, Chemical Engineering Department, University of Florida, Gainesville, FL 32611-2022. Copyright © 1994 by the Chemical Engineering Division, American Society for Engineering Education. The statements and opinions expressed in this periodical are those of the writers and not necessarily those of the ChE Division, ASEE, which body assumes no responsibility for them. Defective copies replaced if notified within 120 days of publication. Write for information on subscription costs and for back copy costs and availability. POSTMASTER: Send address changes to CEE, Chemical Engineering Department, University of Florida, Gainesville, FL 32611.