

Preface: 1st International Congress and XXXII National Meeting of the Mexican Association for Research and Teaching in Chemical Engineering (AMIDIQ 2011)

AMIDIQ was born 31 years ago at Universidad Autónoma de Nuevo León, a public university located in Monterrey, Nuevo León México, to promote education, research and technology in the chemical engineering field. After 31 years of successful national meetings, and highly cognizant of the dynamic changes that knowledge and technology impose on education, research, technology, and innovation, the organizers of the XXXII National Meeting decided to include throughout the first International Congress of AMIDIQ a global vision, to better understand the new type of challenges that chemical engineers must face during the XXI century.

AMIDIQ 2011, "*Chemical Engineering in the International Year of Chemistry*", was organized by Universidad Iberoamericana and Universidad Autónoma del Estado de México and took place May 3–6, 2011, alongside the beautiful beaches of the Riviera Maya, Quintana Roo. The National Meeting and International Congress were comprised of (1) 4 plenary lectures by well-known professors and researchers (Ignacio Grossmann, Donald R. Paul, Gilbert F. Froment, and Rafiqul Gani); (2) 1100 presentations (300 oral presentations and 800 posters) distributed in 10 characteristic areas of chemical engineering (Education, Transport Phenomena, Thermodynamics, Alternative Energy Sources, Biotechnology, Chemical Process Design, Polymers and Materials, Food Engineering, Sustainable Engineering, and Catalysis/Reaction Engineering); and (3) the special forum, "*Worldwide Trends and Changes in Chemical Engineering*", to analyze and discuss the new subjects that professors and students must include in undergraduate and postgraduate programs so they can better understand and satisfy the requirements set for a new type of chemical industry. The Forum was presented by four well-known professors: Stratos Pistikopoulos, Ed Cussler, Richard M. Felder, and Warren D. Seider.

This special edition of *Industrial and Engineering Chemistry Research* is a collection of at least 14 full papers, covering five general themes: (1) Simulation, Optimization and Control in Distillation/Extraction and Chemical Reaction Processes; (2) Electrochemical and Adsorption Processes; (3) Plastic Reinforcement by Magnetic Aligned Halloysite and Coenzyme Microencapsulation Using CO₂ SCF; (4) Ceramic Membranes for Seawater Desalination; and (5) A Mathematical Programming Approach to Pollution Trading.

The guest editors acknowledge the willingness of these authors to submit their contributions to the international review process and eventually disseminate their published papers.

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