

CONTENTS

Plenary lectures presented at the 16th International Conference on Physical Organic Chemistry (ICPOC-16): Structure and Mechanism in Organic Chemistry, San Diego, California, USA, 4–9 August 2002

- iv Preface, *C. L. Perrin*
- 541 Light-powered molecular-scale machines
V. Balzani, A. Credi, and M. Venturi
- 549 New structurally interesting cyclopropane derivatives. A world of wonders and surprises
A. de Meijere, S. I. Kozhushkov, A. A. Fokin, I. Emme, S. Redlich, and P. R. Schreiner
- 563 In control of switching, motion, and organization
B. L. Feringa, R. A. van Delden, and M. K. J. ter Wiel
- 577 Catalytic control of electron-transfer processes
S. Fukuzumi
- 589 Salt effects on the conformational behavior of 5-substituted 1,3-dioxanes
E. Juaristi, G. A. Rosquete-Pina, M. Vázquez-Hernández, and A. J. Mota
- 601 Dynamic barriers and tunneling. New views of hydrogen transfer in enzyme reactions
J. P. Klinman
- 609 Toward replicatable, multifunctional, nanoscaffolded machines. A chemical manifesto
G. von Kiedrowski, L.-H. Eckardt, K. Naumann, W. M. Pankau, M. Reimold, and M. Rein
- 621 Millimeter-scale self-assembly and its applications
M. Boncheva, D. A. Bruzewicz, and G. M. Whitesides

IUPAC Recommendations and Technical Reports

- 631 Endocrine disruptors in the environment (IUPAC Technical Report)
J. Lintelmann, A. Katayama, N. Kurihara, L. Shore, and A. Wenzel

INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY

Plenary lectures presented at the

**16th INTERNATIONAL CONFERENCE ON PHYSICAL
ORGANIC CHEMISTRY (ICPOC-16):
STRUCTURE AND MECHANISM IN ORGANIC
CHEMISTRY**

*Held in San Diego, California, USA
4–9 August 2002*

Conference Editor
CHARLES L. PERRIN

Department of Chemistry, University of California at San Diego, La Jolla, CA 92093, USA

International Advisory Committee: J. L. Abboud (Spain); P. Ahlberg (Sweden); W. T. Borden (USA); R. Breslow (USA); F. Diederich (Switzerland); D. A. Dougherty (USA); M. A. Fox (USA); E. Humeres (Brazil); G.-Z. Ji (China); E. Juaristi (Mexico); S. S. Kim (Korea); M. Lahav (Israel); J. Lambert (USA); V. I. Minkin (Russia); E. Nakamura (Japan); N. S. Nudelman (Argentina); L. Radom (Australia); D. N. Reinhoudt (Netherlands); J. K. M. Sanders (UK); H. Schwarz (Germany); P. J. Stang (USA); T. T. Tidwell (Canada).

Local Organizing Committee: Marjorie Caserio (UCSD); Tammy Dwyer (USD); Nathaniel Finney (UCSD); Reza Ghadiri (TSRI); Murray Goodman (UCSD); Joseph M. O'Connor (UCSD); Charles L. Perrin (UCSD); Julius Rebek, Jr. (TSRI); Ignacio Rivero (ITTj); Jay S. Siegel (UCSD); Yitzhak Tor (UCSD); Patricia S. Traylor (USD).