

Bookworm

Green-Sustainable Chemistry

Pure and Applied Chemistry, Vol. 79, No. 11,
November 2007, Special Issue (pp. 1831-2100)

foreword by James R. Bull

preface (reproduced in part below) by Pietro Tundo

This Special Topic Issue on green chemistry is a continuation of the Special Topic Issue published in July 2000. The articles have been selected (with great difficulty) from the massive, valuable scientific contributions on green chemistry made by numerous professors and researchers during the first International IUPAC Conference on Green-Sustainable Chemistry, held 10-15 September 2006 (for more details on the conference, see May-June 2007 C/).

The topics included in this volume were chosen to appeal to industrial researchers and representatives, colleagues from universities, and politicians and students who are interested in green and sustainable chemistry. Topics include:

- benign syntheses routes (heterogeneous catalysis, new reagents, and catalysis for degradation of pollutants)
- benign process technology (microwave technology, photochemistry, and new regulation devices)



- use of renewable sources (starch, cellulose, sugar, new detergents, and biomass technology)
- future green energy sources (hydrogen technology, fuel cell technology, and biodiesel)

All of the articles point out a general need for novel green processes and recommend that process and product evaluations include environmental and health considerations (Sept.-Oct. 2007 C/). To accomplish that, more basic research on chemical reactions related to green chemistry is essential. Our knowledge in this area is far from complete.

Recently, in fact, the difference between sustainable chemistry and green chemistry is becoming more evident. Sustainable chemistry envisions industrial processes that create better products, result in fewer pollutants, and are profitable. Green chemistry, in contrast, is more innovative. It deals with the fundamental aspects of chemistry

without regard for industrial processes or profitability. Either way round, over time, it will become more and more necessary to create a new type of chemistry that utilizes greener production methods, involves cleaner chemical derivatives, and addresses some of the ethical issues related to environmental responsibility. This special issue of *PAC* addresses this need.

 www.iupac.org/publications/pac/79/11/

Biophysico-Chemical Processes of Heavy Metals and Metalloids in Soil Environments

edited by A. Violante, P.M. Huang, and G.M. Gadd
John Wiley & Sons, 2007 [ISBN 978-0-471-73778-0]

Written by a multidisciplinary group of soil and environmental scientists, *Biophysico-Chemical Processes of Heavy Metals and Metalloids in Soil Environments* provides the scientific community with a critical qualitative and quantitative review of the fundamentals of the processes of pollutants in soil environments. The book covers pollutants' speciation, mobility, bioavail-

ability and toxicity, and impacts on the development of innovative restoration strategies for polluted soils.

The book is the output of IUPAC project 2004-003-3-600. It is also the first volume to be published in a new series entitled "Biophysico-Chemical Processes in Environmental Systems" to be published by John Wiley & Sons (Hoboken, N.J.). The second volume will be the outcome of IUPAC project 2006-014-1-600, entitled "Biophysico-Chemical Processes Involving Natural Nonliving Organic Matter in Environmental Systems."

 www.iupac.org/publications/books/author/violante.html