

Solubility and Thermodynamic Properties Related to Environmental Issues

Solubility is a basic phenomenon that determines the extent of most pollution problems, both environmental and industrial. However, no book is currently available on the importance of solubility and thermodynamic properties to environmental issues.

The objective of this project is to publish a 25-chapter book on recent developments in solubility and in thermodynamics that have a bearing on environmental issues. This, we the project leaders believe, could lead to new ways of thinking about and solving environmental problems. In true IUPAC style, the authors of this book have been drawn from 17 countries.

The chapters focus on such areas as predicting and modeling of environmental pollutants from basic thermodynamics considerations; designing remediation and cleaner industrial processes; predicting and measuring the uptake of pollutants and new industrial chemicals in humans and in animals; and environmental issues related to health science, mining, pesticides, soil chemistry, supercritical and phase equilibria separation processes, gasoline additives, ionic liquids in industry, corrosion control, surfactants, green synthesis, surface adsorption, and biodegradable plastic films.

The book is scheduled to be published in 2007. Another book on Developments and Applications in Solubility is the subject of a separate project and is scheduled to be published later in 2006.

For more information and comments, contact the Task Group Chairman Trevor Letcher <trevor@letcher.eclipse.co.uk>.



www.iupac.org/projects/2005/2005-048-2-100.html

Terminology for Self-Assembly and Aggregation of Polymers

With nanoscience and nanotechnology enabling many of the key developments in modern functional materials, aggregation and self-assembly in polymers is of growing importance. The physical and chemical properties of aggregated polymers and polymer molecules that spontaneously assemble into ordered structures are more often determined by these macroscopic structures than by the individual polymer molecules from which they are built. Many of the terms used to

describe the different aggregated structures and self-assemblies, their methods of formation, their characterization, and any related terminology might be totally unfamiliar to scientists whose background is not in this discipline.

This project, therefore, will develop a list of terms and definitions for chemists and materials scientists within academia and industry. The definitions will be harmonized for acceptance by the chemistry, polymer, and materials communities. To assist in achieving this assent, members of the learned societies of different countries will be consulted to ensure that the definitions are accepted worldwide.

For more information, contact Task Group Chairmen Christopher Ober <cober@ccmr.cornell.edu> or Richard Jones <dick@rgjones.freemove.co.uk>.



www.iupac.org/projects/2005/2005-043-2-400.html

Nomenclature of Phosphorus-Containing Compounds of Biochemical Importance

The objective of this project is to update and clarify recommendations for naming phosphorus-containing compounds. Many of these compounds are extremely important in biochemistry and hence in nearly all branches of biology and medicine. Most biochemically important compounds are esters and/or anhydrides of various phosphorus-containing acids with complex organic alcohols and organic acids.

Existing recommendations, available at <www.chem.qmul.ac.uk/iupac/misc/phospho.html>, have not been revised since 1976; since that time, much more has become known about many classes of phosphorus-containing compounds (e.g., inositol phosphates). The Chemical Nomenclature and Structure Representation Division (VIII) and the IUBMB-IUPAC Joint Commission on Biochemical Nomenclature are supporting this project in recognition of the need to redraft the recommendations more clearly, define the symbols used, and use as examples compounds that feature widely in biochemistry.

For more information, contact Task Group Chairman Hal Dixon <h.b.f.dixon@bioc.cam.ac.uk>.



www.iupac.org/projects/2006/2006-019-1-800.html