Chemical Thermodynamics
A "Chemistry for the 21st Century Monograph".

T.M. Letcher, ed.

Chemical thermodynamics is not only alive and well and making a valuable contribution to our understanding of the world around us, but is helping to create a better world. As we stand on the brink of an unprecedented increase in world population and pollution, and possibly a significant change in climatic conditions, the applications of chemical thermodynamics become particularly poignant. The essays contained in this book are aimed not only at those working in the area, but also at the general chemist, the prospective researcher, and also those involved in funding chemical research. This volume introduces the reader to twenty-seven topics in chemical thermodynamics, each which illustrates a new and potentially useful area of study.

* 45 leading experts in the field contribute to 27 topics within the field
* global authorship (spanning 12 countries)
* covers recent advances in the field and potential new areas for study

Contents
The Basis for the Synthesis, Design and Optimization of Thermal Separation; Environmental Pollution; Colloidal Systems; Microemulsions; Liquid Mixture Adsorption on Solids; Applications of Adsorption by Porous Solids; Electrolyte Systems; Supercritical Fluid Extraction; Supercritical Water; Energy Science and Commerce: The Petrochemical Industry; Electrochemical Synthesis from Molten Salts; Nuclear Applications; Separation Processes using Nonporous Membranes; Thermodynamics and Microgravity - What Can We Learn?; Experiments? - No Thank You!; Polymer Mixtures; Liquid Polymers and Solutions; Advanced Engineering Materials; Amorphous Materials and their Elucidation by Adiabatic calorimetry; Metallic Glasses; Food Science: Short and Long Term Trends; Biology: A New Light on Cell Biology from an Old Lamp; Enzyme-Catalyzed Reactions; Thermodynamic Prediction of the Relative Stabilities of Hyperthermophilic Enzymes; Calorimetry and Medicine; Dielectrics

126 illustrations
360 pages

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