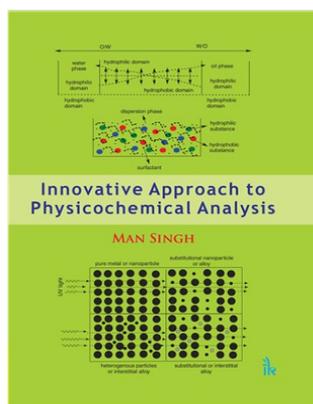


Innovative Approach of Physicochemical Analysis

Man Singh



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About the Book

Innovative Approach to Physicochemical Analysis deals with substantial and conceptual explanations of physicochemical systems, stability, properties and applicability in relevant areas. It tracks and focuses frontiers of molecular interactions and their potential interfaces that are highly applicable in academics and various industries like chemical sciences, pharmaceuticals, biotechnology, biochemical engineering, nanosciences, biophysics, drug binding and release systems, cosmetics, agrochemical, rheology of food and nutrition, and critical solvents via interaction engineering.

Fundamentally, this book establishes an operational link between 'formulation of liquid mixtures and molecular interaction engineering through the physicochemical properties (PCPs)' as a physicochemical technology of material sciences, depicted as physmatology. This link leads to developing a new thrust area of current research due to its emergence as an interdisciplinary subject for multidisciplinary applications in understanding foundational theories of molecular dynamics in varieties of liquid mixtures.

Salient Features

With its coverage and treatment, this is one of the most authoritative and exhaustive treatises in the field of physicochemical properties of liquid mixtures.

The core focus of the book is around liquid mixtures, their nature, components, and behavior demonstrated with various theories like surface tension, entropy, friccohesity, etc., and devices like the Survismeter.

The book concludes with a rich question bank for the readers to test their knowledge and level of understanding.

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About the Author

Man Singh :- obtained his PhD in area of thermodynamics of structured liquid mixtures from Department of Chemistry, University of Delhi, Delhi (1987), and did postdoctoral work from School of Polymer Chemistry, Kyoto University (2007-2008), Japan. He has taught physicochemical sciences in Bahir Dar University, Ethiopia (1999-2001); undergone an intensified course of 'molecular self-assemblies' conducted by Department of Chemistry, Delaware University, USA (2007); training course on fundamentals of NMR in Zurich, Switzerland (2012); and Gaussian patterns of theoretical features of atoms in molecule at Ulm Germany (2014). In the year 2009, he joined Central University of Gujarat as Professor of Chemistry and is a Founder Professor and Dean, School of Chemical Sciences, Central University of Gujarat. Prof. Singh, as Visiting Professor, introduced the Molecular Interaction Engineering, a special curriculum to Master's in Uniwersytet Kardynala Stefana Warsaw, Poland from September 2015 to November 2015.

He has established a new area of research noted as Thermodynamics of Molecular Interaction Engineering and during his academic career, he has come up with new inventions, equations and concepts. His invention, Survismeter, is commercialized by Borosil and US patent is granted to oscosurvismeter. European patent is granted for tohesive forces and microfluidics or friccfluidics. Friccohesity, which effectively advances the understanding of molecular interactions out of cohesive and frictional forces, NOSIA (non-breakable sodium ignition apparatus), econoburette, visionmeter, tentropy, and Man Singh equation and Man Singh constant have been his effective breakthroughs.