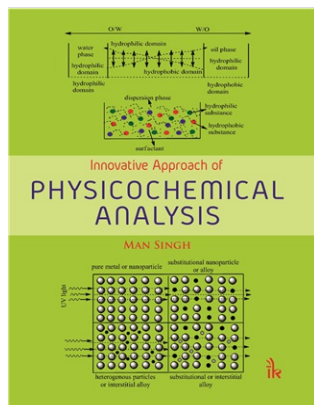


Innovative Approach of Physicochemical Analysis

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About the Book

Many physicochemical properties or parameters (PCPs) like surface tension, viscosity, interfacial tension, wetting coefficient, entropy, enthalpy, friccohesity, tentropy, intramolecular multiple forces theory (IMMFT), activation energy, molar and partial molar quantities, and Gibbs energy of molecular liquid mixtures as function of structures have been widely applied for understanding the behavior of substances such as biomolecules, surfactants, dendrimers, free radical, dyes and drugs in wanted solvents. Their measurements and interpretation have become a most dynamic interface for studying the behavior of molecular mixtures and is an important part of academic curriculum of educational and technological institutions for their graduate and postgraduate classes and advanced research in materials sciences.

Innovative Approach of 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, *Innovative Approach of Physicochemical Analysis* establishes an operational link between 'formulation of liquid mixtures and molecular interaction engineering through the PCPs' as a physicochemical technology of material sciences, depicted as physmatology. This link leads to develop 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.

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About the Author

Man Singh :- **Man Singh** earned 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), 09 Gaussian 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 has introduced the Molecular Interaction Engineering, a special curriculum to Masters Students 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 Engendering and during his academic career he has come up with new inventions, equations and concepts. His invention named as Survismeter is commercialized by Borosil and an US patent is granted to oscosurvismeter. Friccohesity, which effectively advances the understanding molecular interactions out of cohesive and frictional forces, NOSIA (non-breakable sodium ignition apparatus), econoburette, visionmeter, tentropy, and mansingh equation and mansingh constant have been his effective breakthroughs.