
BOOK REVIEW

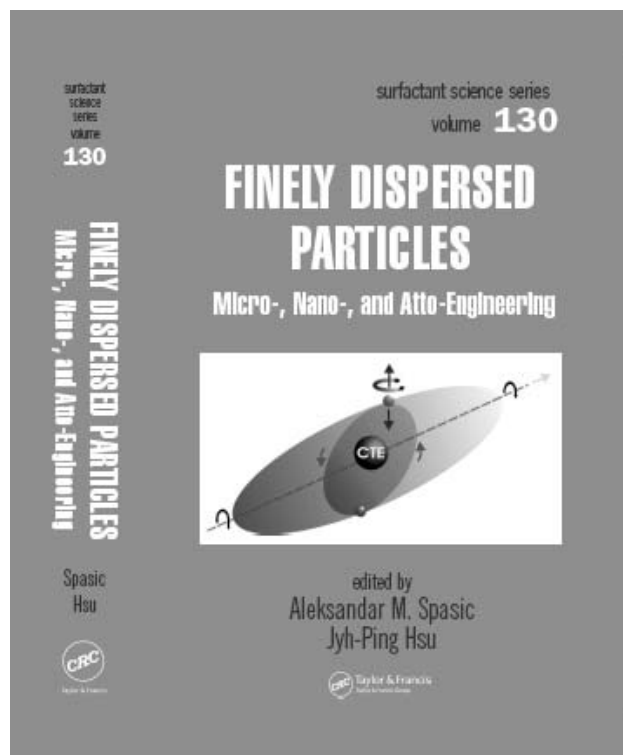
**"Finely Dispersed Particles: Micro-, Nano-, and Atto-Engineering",
Aleksandar M. Spasic and Jyh-Ping Hsu, editors [CRC Press-Taylor & Francis,
Boca Raton-London-New York, 2005/2006] 960 pages.**

This very interesting new book, presents a comprehensive and in-depth treatise on more aspects of recent developments in basic and applied science and engineering of finely dispersed particles and related systems. Written by a team of outstanding scientists, with great experience and knowledge this reference refers to an interdisciplinary approach to the elucidation of the heat, mass and momentum transfer phenomena as well as the electron transfer phenomenon, at well-characterized interfaces. The studied scales are milli, micro, nano and atto, using various theoretical approaches, both coherence and decoherence. Milli and micro scales may cover more or less classical chemical engineering insight, while nano and atto scales focus on modern molecular and atomic engineering. In this context, "atomic engineering" recalls the ancient idea of interplay of particles that are small, indivisible and integer [Greek "ατομοζ"]. In the recent leading scientific literature, terms such as nano-science and nanotechnology, functional artificial nano-architectures, nano-systems and molecular machinery, once considered merely futuristic, have become focuses of attention. The essential purpose of the proposed book is to provide the readers with recent concepts in the physics and chemistry of well-studied interfaces of rigid and deformable particles in homo- and hetero-aggregate dispersed systems. Since many such systems are non-Newtonian, apart from classical momentum, heat and mass transfer phenomena, also the electron transfer phenomenon is introduced into their description. Examples of such systems are: emulsions, dispersoids, suspensions, nanopowders, foams, fluosols, polymer membranes, biocolloids and plasmas. Thus, the central themes of this book are phenomena described by the hydrodynamic, electrodynamic and thermodynamic instabilities and that occur at interfaces and the rheological properties of the interfacial layers responsible for the existence of droplets, particles, and droplet-particle-film structures in finely dispersed systems.

Finally, this impressive book, which represents a significant contribution to the collection of representative selections, can be recommended to scientists, engineers and graduate students [having a basic knowledge of physical chemistry, electromagnetism, fluid mechanics, quantum mechanics and wave mechanics], as well as to the readership of this Journal.

Editor Dr Aleksandar Spasić received "Prize of the City of Belgrade, field: Natural and Technical Sciences" for 2005.

Prof. Dr Bojan Djordjević



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