



RHEOLOGY OF EMULSIONS
ELECTROHYDRODYNAMICS PRINCIPLES

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This interesting book covers both, research and development (R&D) and fundamental research of the selected finely dispersed systems, that is emulsions and double emulsions. In general, an interdisciplinary and/or multi-disciplinary approach has been applied to the phenomena occurring at developed liquid-liquid interfaces during their formation, duration, and destruction processes.

A brief description of the book content can underline few most important achievements, that is developing the concept of entities and concept of memristor and memristive systems it was

possible to define a new constitutive model of liquids. Considering this constitutive model a deeper understanding of the process of coalescence or electrocoalescence was enabled. Based on electrohydrodynamics principles theory of electroviscoelasticity is postulated. Experimentally corroborated theory of electroviscoelasticity permitted the further solution of the entrainment problem in *extended chemical or metallurgical engineering* (heat, mass, momentum, and electron transfer phenomena). Finally, based on the concept of memristive systems and developed theory it has been possible to model some biological systems; in particular, DNA as a sequence of quantum entangled electromechanical oscillators-clusters, the brain as a quantum entangled “Core-Shell” chain structure, and the universe as a giant quantum entangled polydispersed system.

The material presented in this book may be of interest to a number of scientists, engineers, graduate students, or researchers dealing with phenomena that occur at small separations (micro, nano, and atto scale). Some particularly related fields are:

- Hydrometallurgical Operations and Processes;
- Colloid and Interface Science;
- Nanoscience and Nanotechnology;
- Chemical and Biological Sensors;
- Electroanalytical Methods;
- Biology and Biomedicine;
- Metallurgical and Chemical Engineering Science.

Miroslav Sokic, Guest Editor of MME-Special Issue Dedicated to the Hydrometallurgical Operations and Processes