Special Issue

Structure, Thermodynamics and Applications of Ferrofluids

Message from the Guest Editor

The ferrofluid is a liquid that becomes highly magnetized in the presence of a magnetic field. The measurement of the complex susceptibility of a colloidal suspension of magnetic particles involves the measurement of inductance and resistance of the suspension. The frequency range is determined by the size of the magnetic particles and their subsequent mechanism of relaxation. The conventional method of determining the frequency dependence of the complex susceptibility of a ferrofluid is to insert the fluid into the alternating magnetic field of a coil and observe the changes in its inductance and resistance. Ferrofluids have many applications ranging from small electronic devices to space crafts to cancer treatments to art. Separation, immunoassay, drug delivery, MRI, and hyperthermia are enhanced by the use of magnetic nanoparticles and ferrofluids. This Special Issue focus on the structural, transport, and thermodynamic properties of ferrofluids, practical usability of ferrofluid materials in industrial, environmental, and medical, as well as the dependence of the phase equilibrium properties of these complex fluids on external electric and magnetic fields.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Magnetochemistry constitutes a multidisciplinary field where chemists and physicists not only study magnetic properties but also design and synthesize chemical compounds with desired magnetic properties. *Magnetochemistry* is inviting contributions in any field related with this area, such as theoretical models, crystal engineering, molecular magnetism, SMM, SIM, SCM, SCO, magnetic nanostructures, magnetic MOFs, magnetic recording, qubits, magneto-caloric materials, etc. Our goal is to share your contribution in a timely fashion and in a manner that will be valued by the scientific community.

Editor-in-Chief

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