DESCRIPTION

The word particuology was coined to parallel the discipline for the science and technology of particles. Particuology is an interdisciplinary journal that publishes frontier research articles and critical reviews on the discovery, formulation and engineering of particulate materials, processes and systems. It especially welcomes contributions utilising advanced theoretical, modelling and measurement methods to enable the discovery and creation of new particulate materials, and the manufacturing of functional particulate-based products, such as sensors.

Papers are handled by Thematic Editors who oversee contributions from specific subject fields. These fields are classified into: Particle Synthesis and Modification; Particle Characterization and Measurement; Granular Systems and Bulk Solids Technology; Fluidization and Particle-Fluid Systems; Aerosols; and Applications of Particle Technology.

Key topics concerning the creation and processing of particulates include: Modelling and simulation of particle formation, collective behaviour of particles and systems for particle production over a broad spectrum of length scales. Mining of experimental data for particle synthesis and surface properties to facilitate the creation of new materials and processes. Particle design and preparation including controlled response and sensing functionalities in formation, delivery systems and biological systems, etc. Experimental and computational methods for visualization and analysis of particulate systems.

These topics are broadly relevant to the production of materials, pharmaceuticals and food, and to the conversion of energy resources to fuels and protection of the environment.

With a focus on new learning related to complex multi-scale systems and phenomena, Particuology especially welcomes and now provides a platform for themes related to meso-science. This emerging field recognises that common phenomena can be observed across length scales ranging from elemental particles through to that of the observable universe. Since particulate systems are ubiquitous in various fields, this initiative extends the scope of the journal, while maintaining a focus on the common scientific challenges for these fields.

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Introduction

PARTICUOLOGY, an international bimonthly journal, is jointly sponsored by Chinese Society of Particuology and Institute of Process Engineering, Chinese Academy of Sciences, and published by Elsevier B. V. and Science Press.

The word PARTICUOLOGY was coined to parallel the technical terminology for the science and technology of particles by combining the Latin prefix particula for particles and the Greek suffix logia denoting subject of study, which covers all related branches of the physical sciences including mathematics and spans a wide range of industries to include chemical, petrochemical, agricultural, food, pharmaceutical, mineral processing, advanced materials, energy, and the environment.

This journal purports to present the best papers in research, engineering and application in the overall field of particuology, including particle characterization, particle preparation, aerosol, fluidization and ultra-fine particles, and ranging from the molecular level to the systems level. The Editors particularly welcome contributions on newly emerging topics that fall within the broad scope of particuology.

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