Special Issue

Fluidization and Flow Properties of Fine Cohesive Powders

Message from the Guest Editor

The Special Issue will address experimental/theoretical research and latest progress in the science and technology of fluidization and flow behavior of fine/ultrafine particles. The interest in using this type of granular materials raises many questions around how they can be handled and processed in large-scale applications. In this framework, fluidization is one of the most effective available techniques in ensuring continuous powder handling and dispersion characterized by good heat and mass transfer coefficients. However, fluidization of fine powders is very challenging due to their intrinsic cohesive nature deriving from strong interparticle forces. In particular, interparticle forces are closely related to powder flowability, a complex of different characteristics generally adopted for measuring the ability of a powder to flow under specified conditions. Articles dealing with fundamental aspects of powder flow behavior, also highlighting the complex link between local particles interactions and their fluidization behavior, and with methods to predict and improve powder flowability are very welcome.

Guest Editor

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Deadline for manuscript submissions

closed (30 September 2021)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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