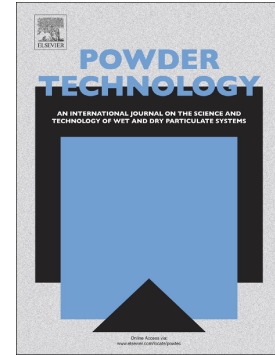


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Micromanipulation of Spherical Particles During Condensation and Evaporation of Water in an Environmental Scanning Electron Microscope

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Abstract

The main topic of this research is the use of an environmental scanning electron microscope to observe microscopic particles during condensation and evaporation processes. Complex particle systems are modified with micromanipulators to interfere with the experimental set-up at various moments. These particle systems are initially arranged, or modified during condensation and evaporation. The findings and observed phenomena of these experiments are presented in this paper. The manipulators exert a large influence on the physical properties of the set-up. Therefore, the use of these tools is reserved for the preparation phase only. If the manipulators could be cooled at the same rate as the sample, they would be helpful in conducting dynamic experiments on liquid bridges and self-organisation processes.

Key Words

Liquid bridges, micromanipulation, environmental scanning electron microscope

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