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Preparation and Application of Regularly Structured Porous Materials

Guest Editor:

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Message from the Guest Editor

Rapid developments in the field of materials and production technologies have made it possible to produce new types of sophisticated components that are significantly lighter than traditional products filled with material in the entire volume. This is due to materials that are characterized by a periodic or stochastic arrangement of open or closed pores with different characteristics of their topology, whether they are two-dimensional configurations of structures (e.g., honeycomb), three-dimensional polyhedral arrangements (e.g., lattice structures), or three-dimensional periodic complex shapes (e.g., minimum areas). These specific materials can provide a product with an extraordinary combination of mechanical, physical, or chemical properties compared to full-volume materials.

Potential topics include, but are not limited to:
- Recent innovation in materials with a regular distribution of pores (cellular materials/mesoporous materials/metamaterials/lightweight materials);
- Mechanical/chemical/physical properties;
- Testing, analysis, simulation, and behavior;
- Production and processing;
- Application.

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Message from the Editor-in-Chief

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