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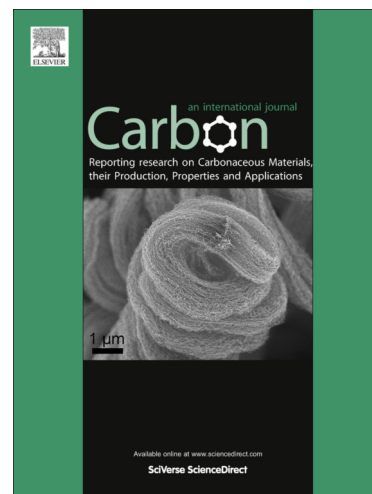
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Triple Hierarchical Micro-Meso-Macroporous Carbonaceous Foams Bearing Highly Monodisperse Macroporosity

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Abstract

The limited coalescence phenomenon occurring in Pickering emulsions stabilized by solid particles allows preparing monolithic silica foams with nearly monodisperse macroscopic voids and also meso- and microporosities. After soaking of these foam hard templates with a phenolic resin, partially graphitized interconnected porous carbon monoliths can be obtained easily. Like the silica templates, these carbon monoliths possess a hierarchical, triple porosity. Mercury intrusion porosimetry reports a macropore volume fraction of 45–70 % with a narrow pore size distribution, while their BET specific surface area values lie between 700 and 900 m²·g⁻¹ and their BJH mesopore specific surface area between 200 and 500 m²·g⁻¹. This approach allows preparing

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