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# Facile synthesis of self-assembled polyaniline nanorods doped with sulphuric acid for high-performance supercapacitors

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## Abstract

Polyaniline (PANI) nanorods have been successfully synthesized via a simple self-assembly method without any surfactant or template. Sulphuric acid (SA) and ammonium persulfate ((NH<sub>4</sub>)<sub>2</sub>S<sub>2</sub>O<sub>8</sub>) were used as dopant and oxidant, respectively. The morphologies and structures of the PANI-SA with different [SA]/[aniline] molar ratios were investigated by scanning electron microscopy (SEM), transmission electron microscopy (TEM), Fourier transform infrared (FT-IR) and X-ray diffraction (XRD). The results indicated that PANI-SA exhibited different morphologies and properties with the change of [SA]/[aniline] molar ratio. PANI-SA with nanorods

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