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Hydrothermal synthesis and characterization of Sm_2O_3 thin films for supercapacitor application

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Description	[en] Samarium oxide (Sm 2 O 3) thin films were synthesized by simple and inexpensive hydrothermal method and used for super capacitive application. The synthesized thin films were characterized by X-ray diffraction, field emission scanning electron microscopy (FE-SEM), contact angle (CA) and electrochemical analysis. The X-ray diffraction analysis shows the formation of Sm 2 O 3 with cubic crystal structure. FE-SEM image of Sm 2 O 3 film shows the elongated groundnuts-like porous surface morphology. The Sm 2 O 3 film shows hydrophilic nature with a contact angle of 28.6. The Sm 2 O 3 film exhibits specific capacitance value of 113.33 Fg-1 at 5 mVs-1 scan rate and galvanostatic charge discharge study demonstrated energy density (15.74) Wh. kg-1 and power density (1.5 kW. kg-1).(author)
Scholar articles	Hydrothermal synthesis and characterization of Sm 2 O 3 thin films for supercapacitor application SB Ubale, TT Ghogare, SB Kale, MR Phadatare… - Proceedings of the national conference on advanced …, 2018