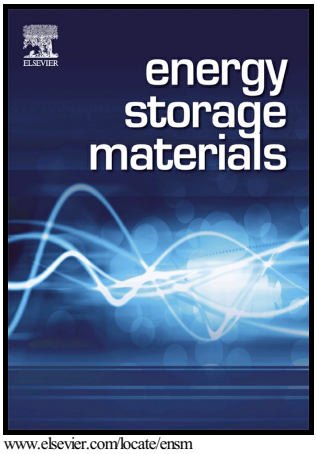

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Abstract: Monodisperse SiO_x/C microspheres with tunable size (300 – 1000 nm) and well-controlled carbon content (~ 20 – 60 wt. %) have been fabricated through a facile sol-gel method. The judicious selection of silicon and carbon precursors (vinyltriethoxysilane and resorcinol/formaldehyde) enables the formation of an homogeneous SiO_x/C (x = 1.63) composite, in which the SiO_x mainly exists as ultrafine nano-domains (< 2 nm). Benefiting from the unique structural features, the resultant SiO_x/C microspheres demonstrate high capacity and outstanding cyclability.