

Supporting information

beta-manganese dioxide nanoflowers self-assembled by thin nanoplates with enhanced supercapacitive performance

Li-Li Yu ^{a,*}, Jun-Jie Zhu ^{a,c}, Jing-Tai Zhao ^{b,c*}

^a Key Laboratory of Transparent Opto-Functional Inorganic Materials of Chinese Academy of Sciences, Shanghai Institute of Ceramics, 1295 Dingxi Road, Shanghai 200050, P.R. China

^b School of Material Science and Engineering, Shanghai University, 149 Yanchang Road, Shanghai, 200072, P.R. China

^c University of Chinese Academy of Sciences, Beijing 100039, P.R. China

Correspond to: jtzhao@mail.sic.ac.cn, lly522@mail.sic.ac.cn

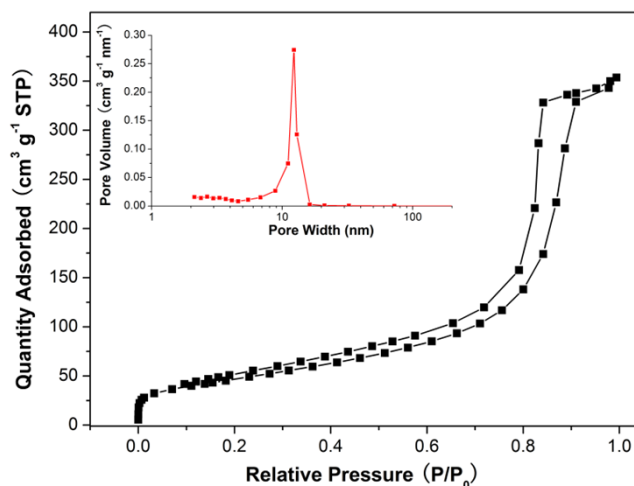


Fig. S1 Nitrogen adsorption-desorption isotherm plots and corresponding pore size distributions (insets) of samples S_{RT}-350

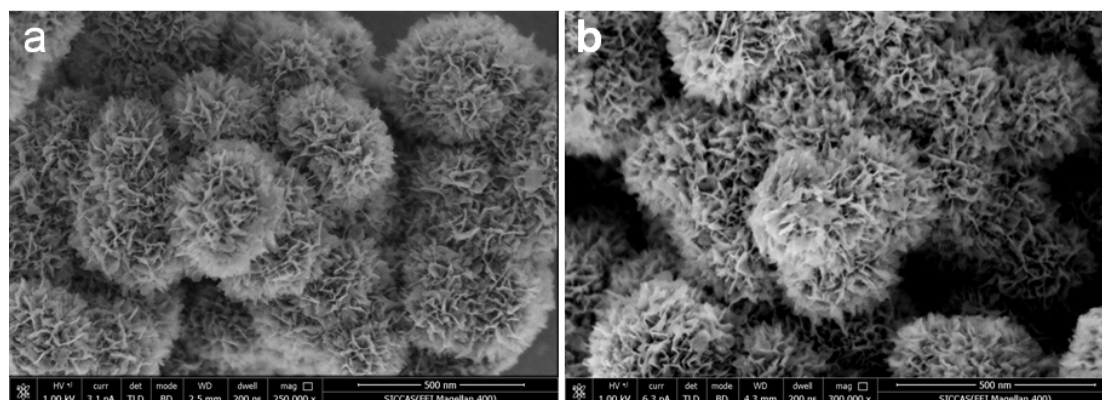


Fig. S2 SEM images of samples S_{RT}-H₂SO₄ (a) and S_{RT}-HNO₃ (b)

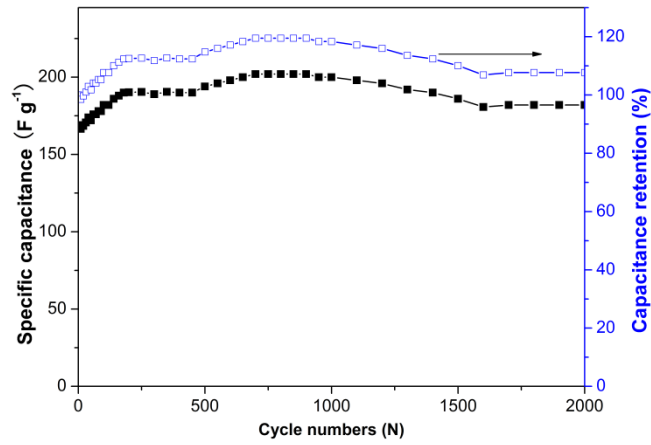


Fig. S3 Charge/discharge cycling life tests of S_{RT}-350 at the current density of 2 A g⁻¹

***E* and *P* calculation**

Energy density (*E*) and power density (*P*) of the as-prepared porous nanoflowers were calculated from the following equations:

$$E = \frac{1}{2}C(\Delta V)^2$$

$$P = \frac{E}{t}$$

Where *E* (W h Kg⁻¹), *C* (F g⁻¹), ΔV (V), and *P* (W kg⁻¹) are energy density specific capacitance, potential window of discharge time, and power density, respectively.