

Supporting Information

Self-assembled Mn₃O₄ nano-clusters over carbon nanotube threads with enhanced supercapacitor performance

Vishwanath Hiremath¹, Min cho^{2,*} and Jeong Gil Seo^{1,*}

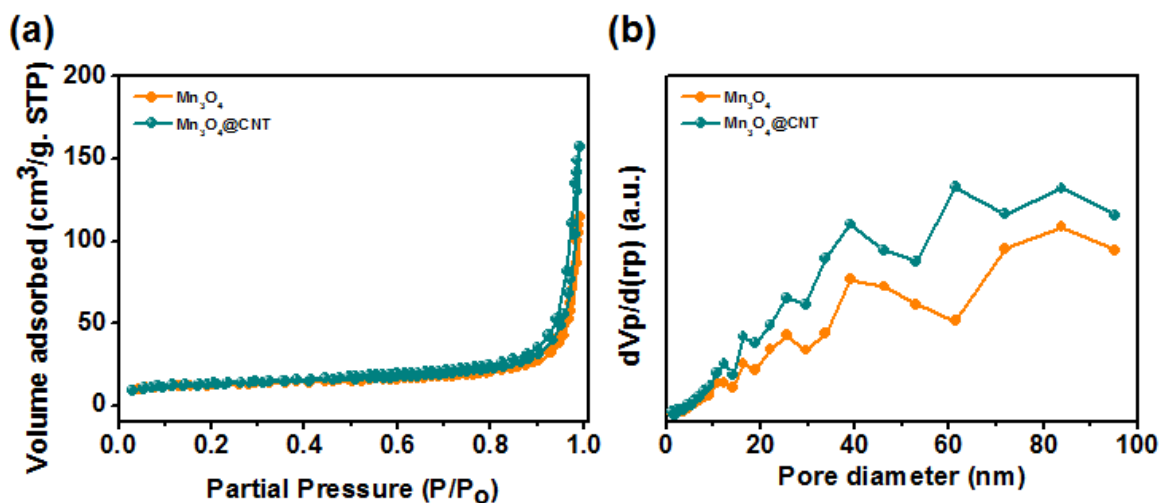


Fig. S1 Textural properties of Mn₃O₄ and Mn₃O₄@CNT (a) N₂ adsorption-desorption isotherms, (b) Pore size distribution curves.

Table S1 Summary of textural properties of Mn₃O₄ and Mn₃O₄@CNT nano-clusters.

Sample	Crystallite size (nm)	Specific surface area (m ² /g)	Total pore volume (cm ³ /g)	Average pore diameter (nm)
Mn ₃ O ₄	35.6	44	0.17	15.6
Mn ₃ O ₄ @CNT	36.9	45	0.23	20.8

¹Department of Energy Science and Technology, Myongji University,
116Myongji-ro, Cheoin-gu, Yongin, Gyeonggi-do 17058, Republic of Korea
E-mail: jaseo@mju.ac.kr

²Division of Biotechnology, Safety, Environment and Life Science Institute, College
of Environmental and Bioresource Sciences, Chonbuk National University, Iksan
570-752, Republic of Korea
E-mail: cho317@jbnu.ac.kr

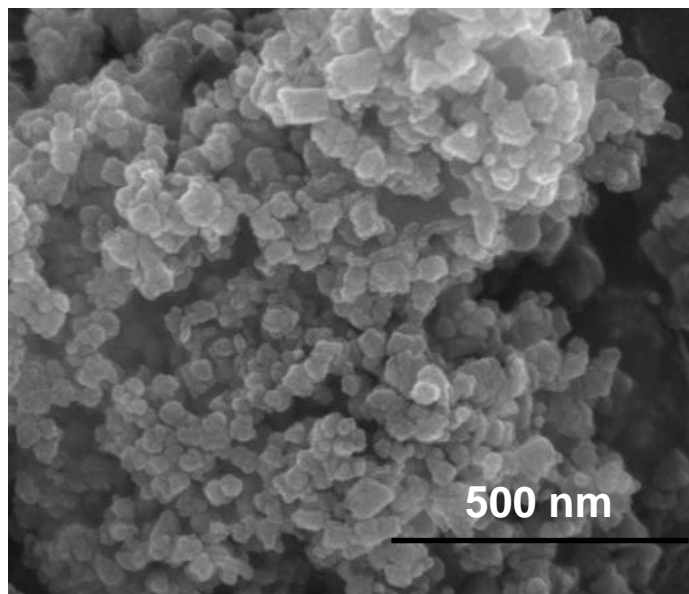


Fig. S2 FE-SEM images for Mn₃O₄ nanoclusters

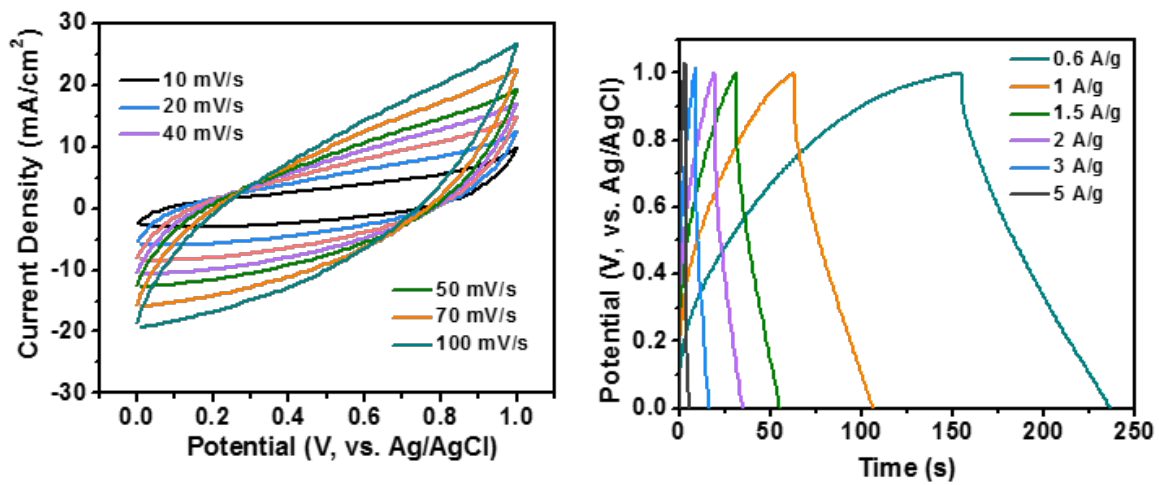


Fig. S3 (a) Cyclic voltamograms of pristine Mn₃O₄ nanoparticles electrode at different scan rates, (b) galvanostatic charge-discharge curves of pristine Mn₃O₄ nanoparticles at different potential

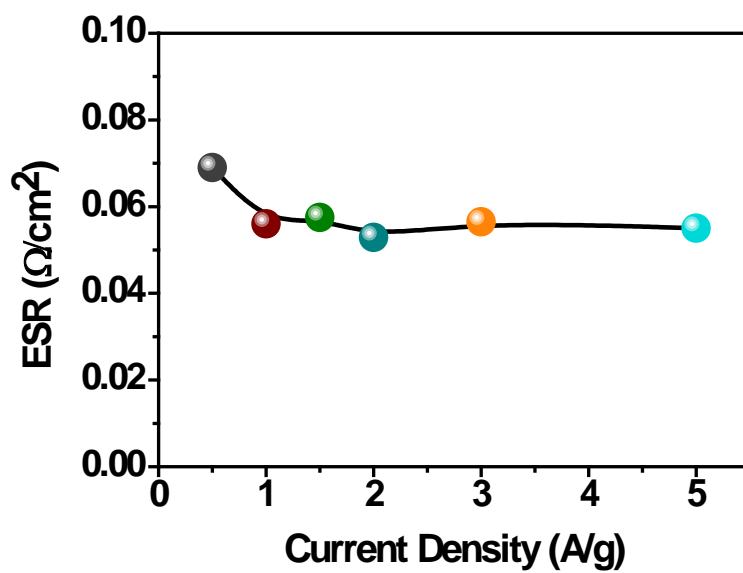


Fig. S4 calculated ESR for Mn₃O₄@CNT at different current densities.