

Electronic Supplementary Information

Hierarchically nanostructured MnO₂ electrodes for pseudocapacitor application

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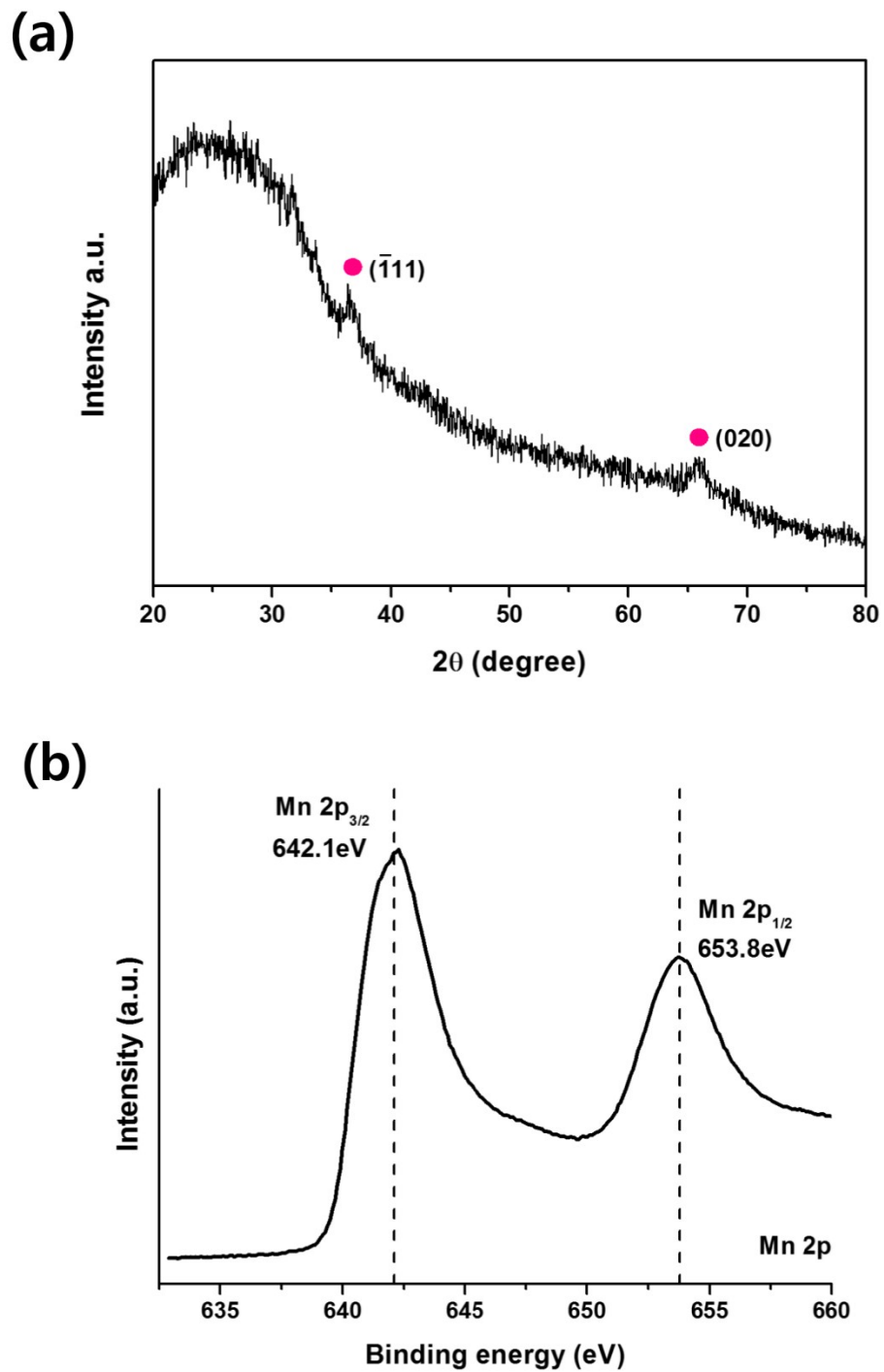


Figure S1. (a) Powder X-ray diffraction pattern and (b) X-ray photoelectron spectrum of the electrodeposited MnO₂ thin film. The diffraction peaks indexed in (a) are consistent with standard data for MnO₂ from JCPDS no. 44-014.

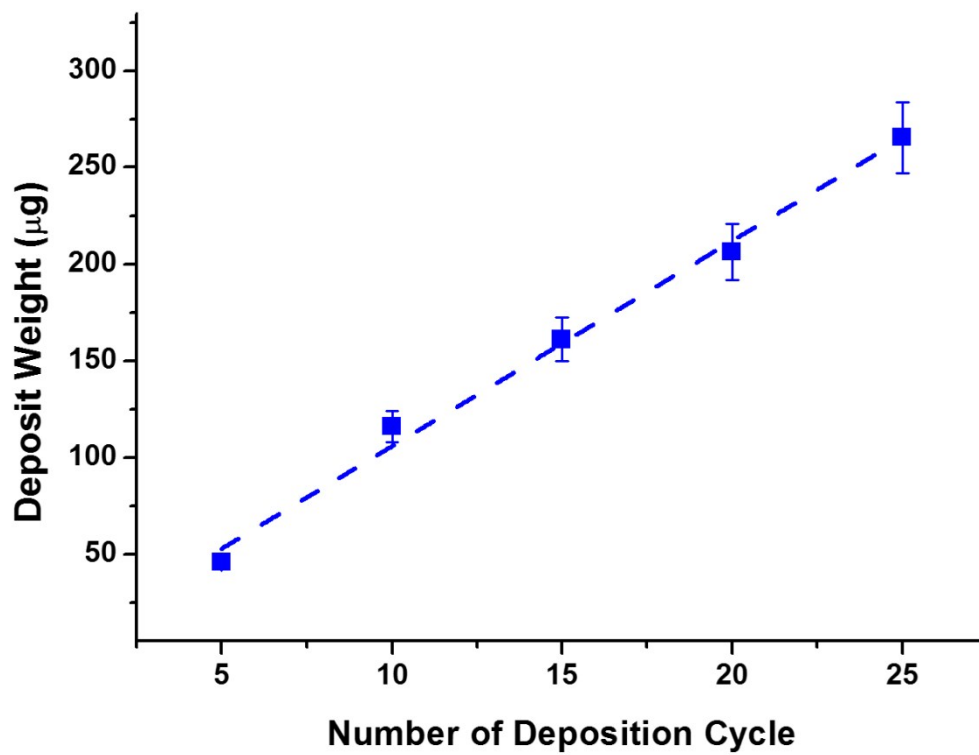


Figure S2. Plots of deposit weights of MnO_2 for the hierarchically nanostructured electrodes as a function of the number of electrodeposition cycles.

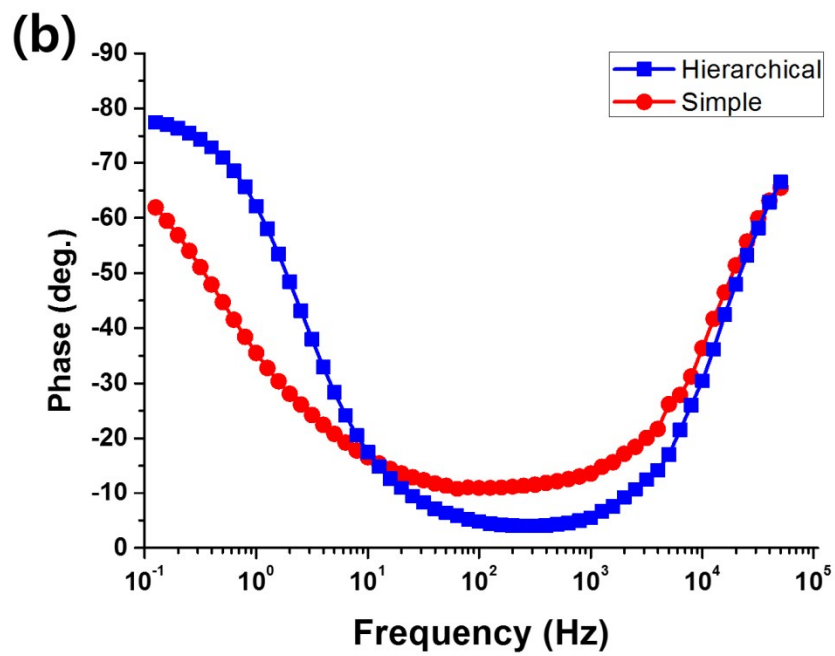
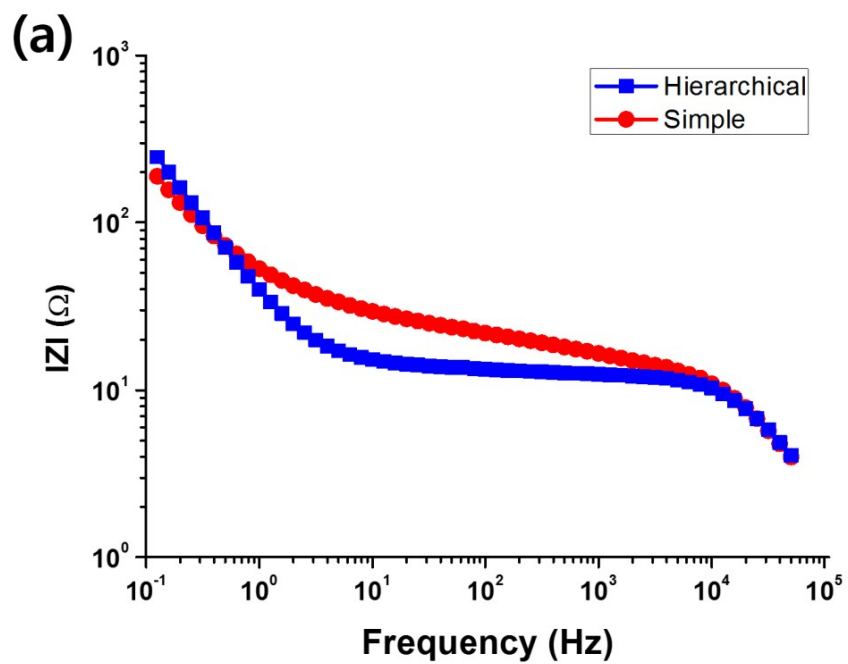


Figure S3. (a) Bode $|Z|$ and (b) Bode angle plots of the hierarchical and simple MnO_2 nanostructure electrodes.

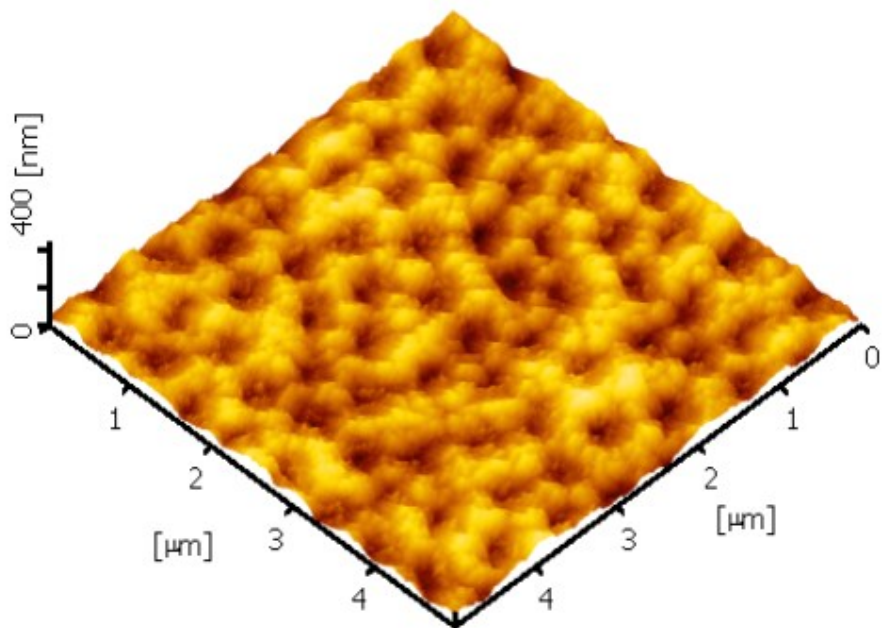


Figure S4. AFM image of the hierarchical MnO₂ nanostructure. The number of electrodeposition cycle is 15.

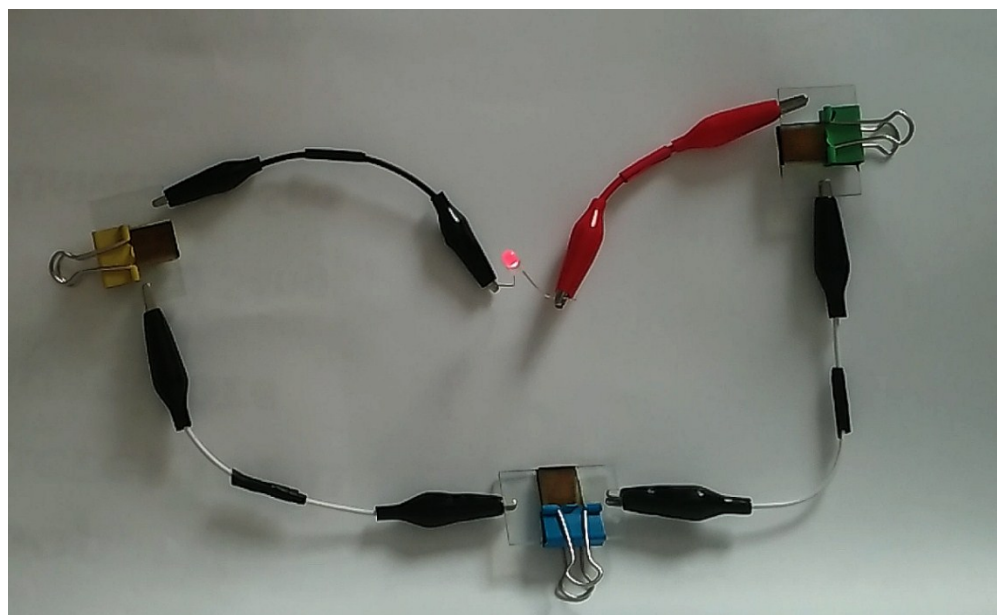


Figure S5. A photograph of a red LED lightened by three asymmetric supercapacitor units connected in series. Each unit consists of activated carbon electrode based half-cell and hierarchical MnO₂ nanostructure electrode based half-cell.