Electronic Supplementary Material (ESI) for Materials Advances.


# Supplementary Information

**Hydrothermal synthesis of $MoS_2/MnO_2$ nanocomposite: a unique 3D-nanoflower/1D-nanorod structure for high-performance energy storage applications.**

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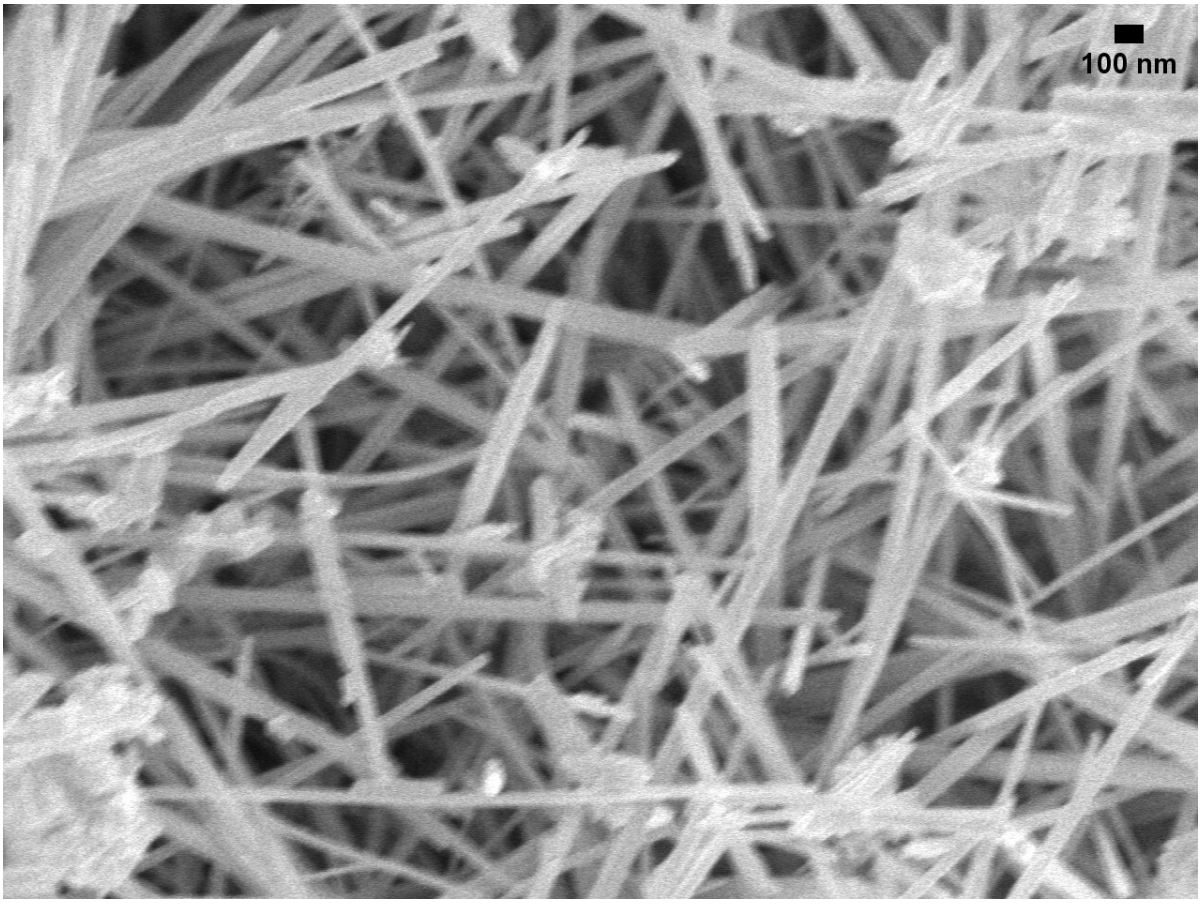
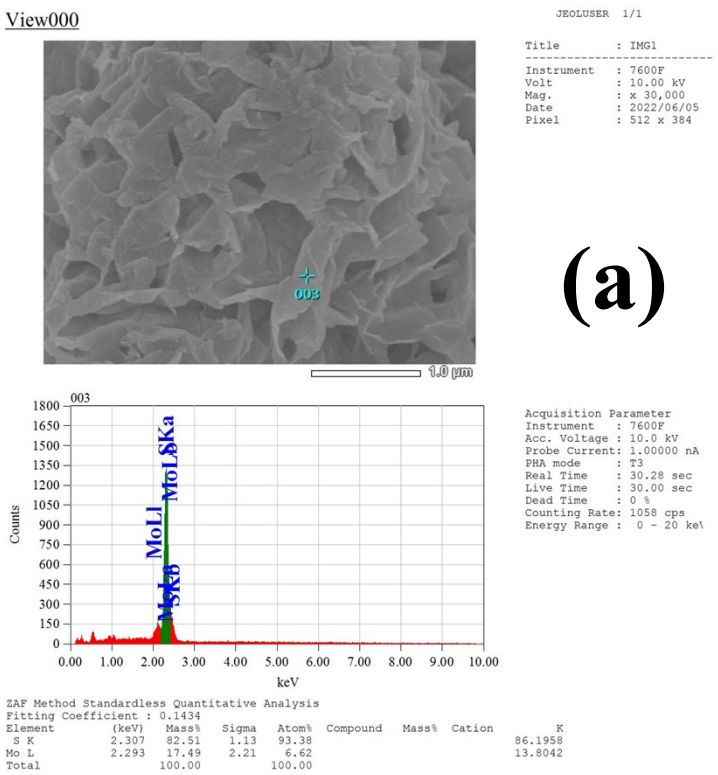
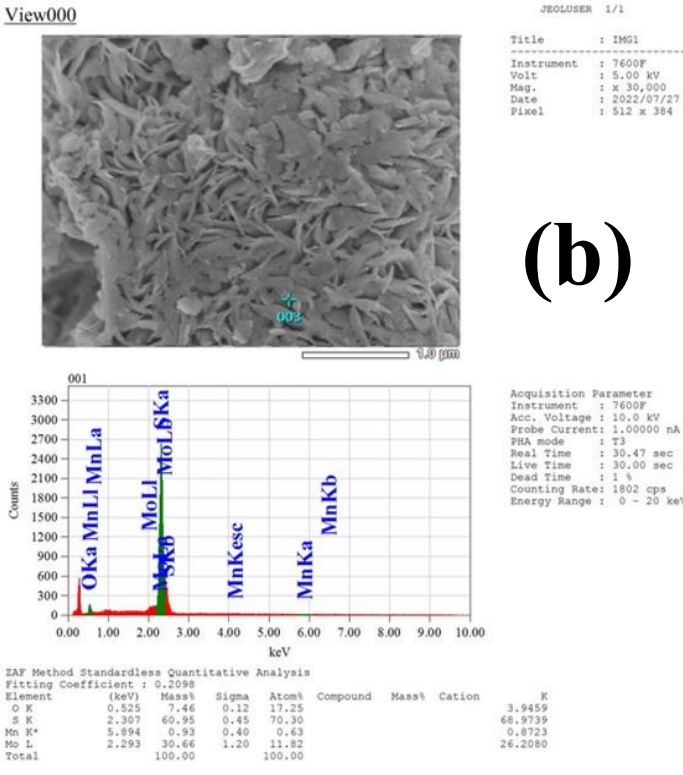
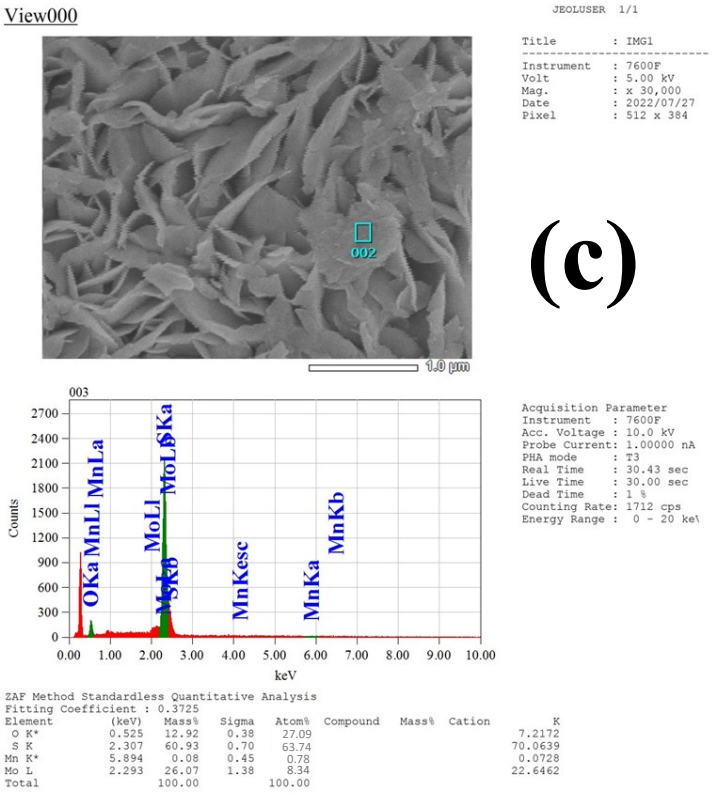



**Fig. SF1** FE-SEM image of $MnO_2$ nanorod at high magnification



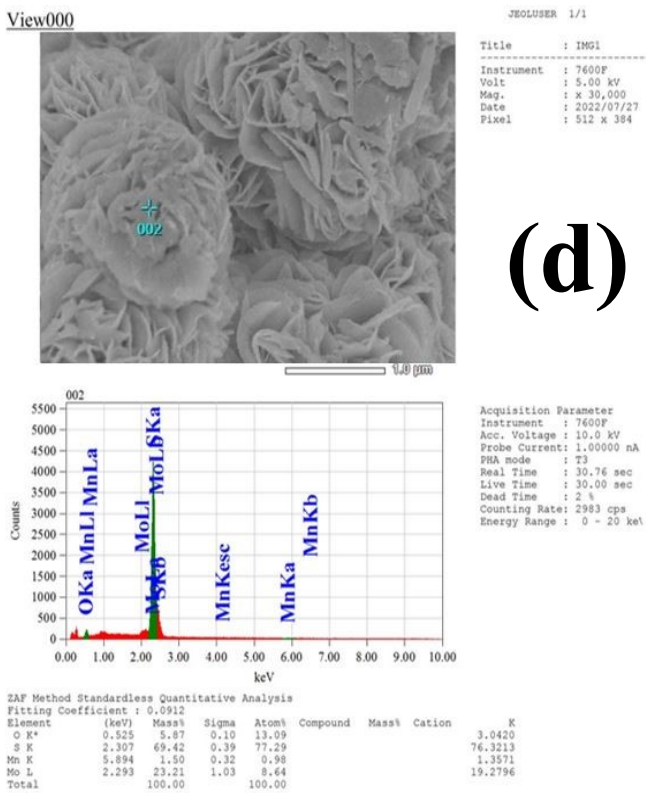




**Fig. SF2** EDX spectra of (a) $MoS_2$ nanoflower, ,(b) $MoS_2$ /$MnO_2$ (2wt%) ,(c) $MoS_2$ /$MnO_2$ (4wt%) ,and (d)$MoS_2$ /$MnO_2$ (6wt%) nanocomposites.

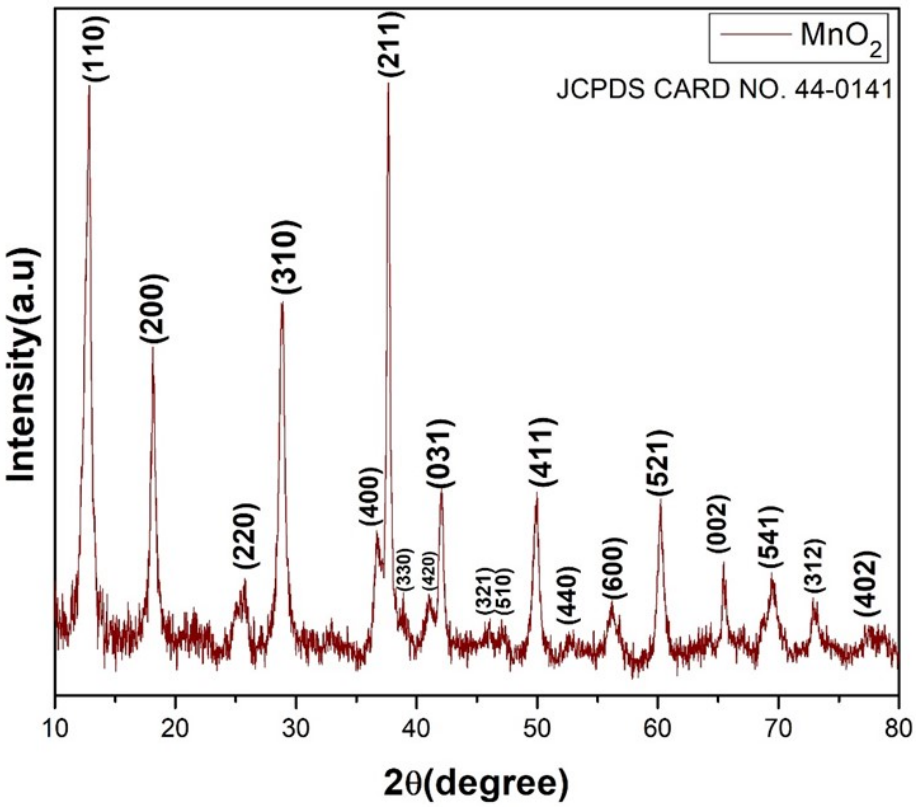



**Fig. SF3** XRD pattern of as prepared $MnO_2$ nanorod.

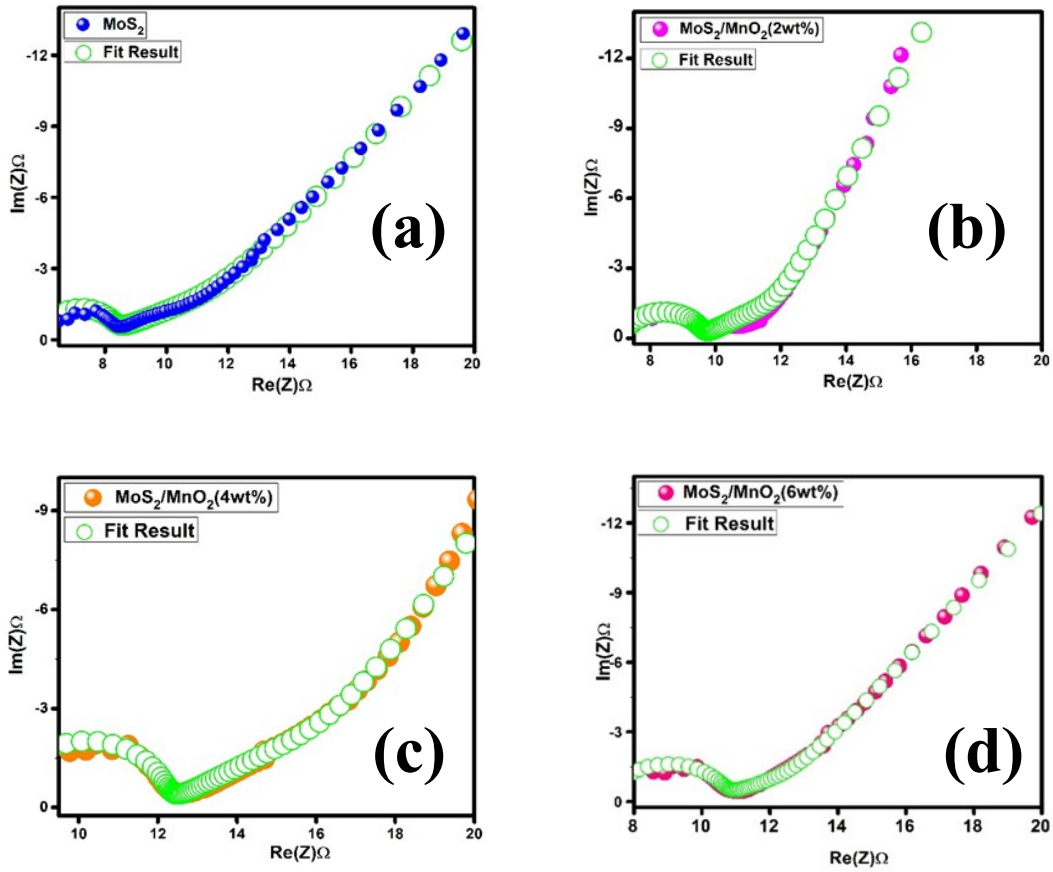



**Fig. SF4** Simulated and experimental Nyquist plots of $MoS_2$ NF and as prepared $MoS_2/MnO_2$ nanocomposites.

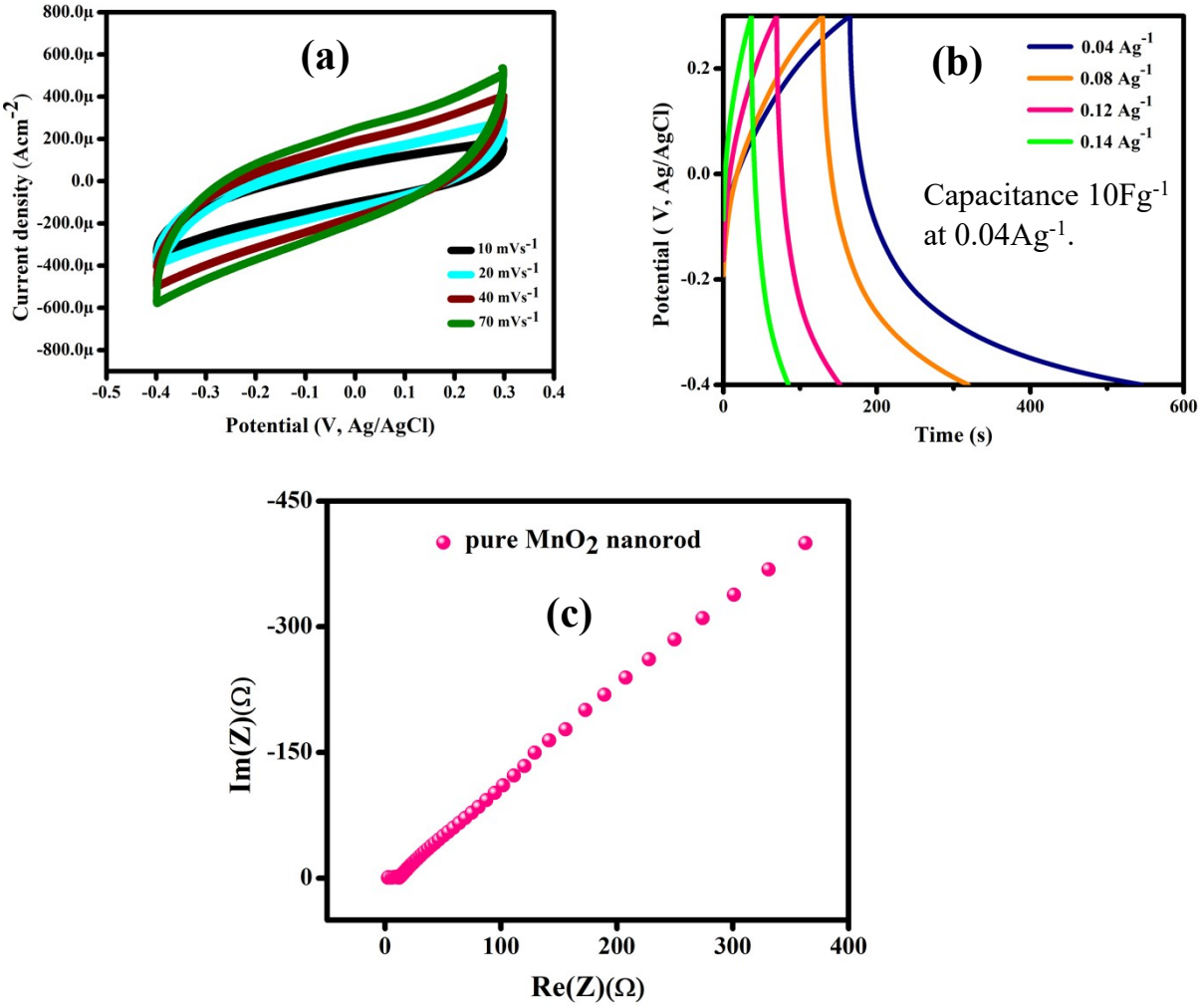



**Fig. SF5** (a) CV, (b) GCD, and (c) EIS curve of pure $MnO_2$ nanorod.

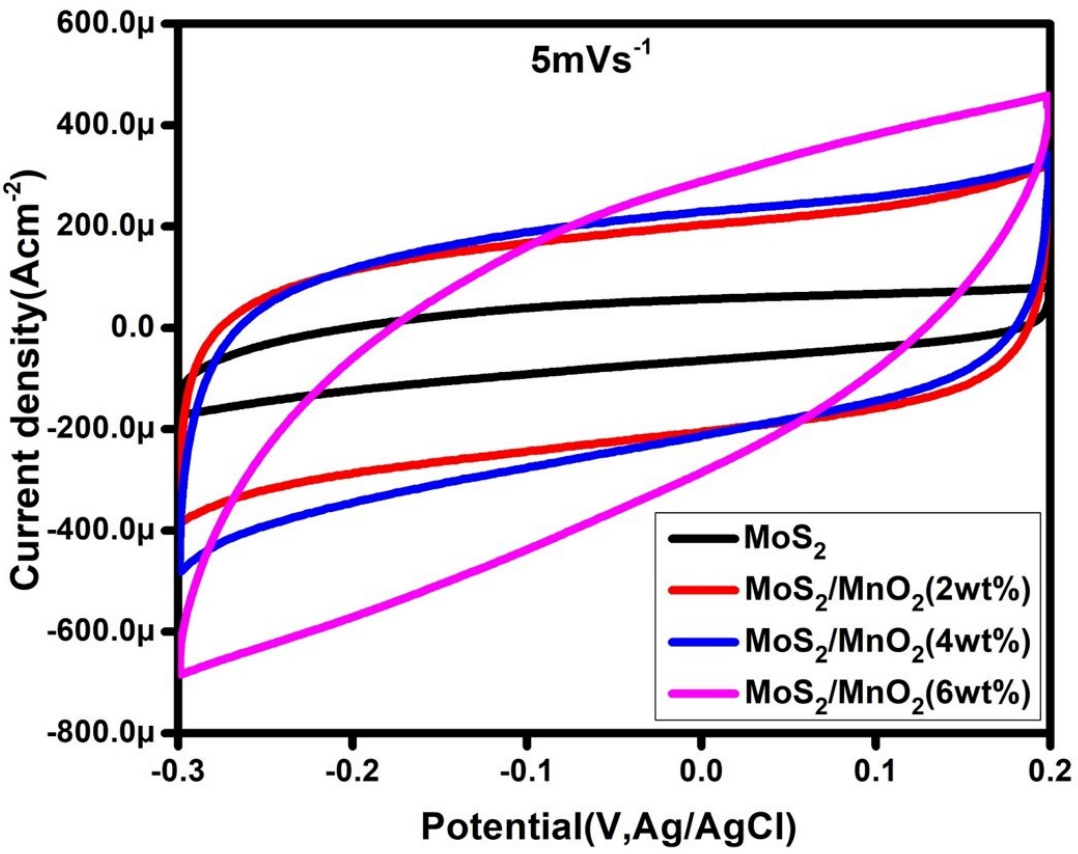



**Fig. SF6** The CV area of all samples at constant scan rate 5mVs$^{-1}$