Electronic Supplementary Information

Bilayered microelectrodes based on electrochemically deposited MnO$_2$/polypyrrole towards fast charge transport kinetics for micro-supercapacitor

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Fig. S1. Configuration and dimension of the microelectrodes.
Fig. S2. (a) Optical microscope image and (b) SEM image of MnO\textsubscript{2}/PPy microelectrodes.

Fig. S3. EDS characterization results of MnO\textsubscript{2}/PPy.
**Fig. S4.** Electrochemical performance of MnO$_2$/PPy-MSC. (a) Cyclic voltammetry curves at different scan rates and (b) charge-discharge curves at different current densities.

**Fig. S5.** Comparison of (a) CV and (b) GCD curves of MnO$_2$/PPy-MSC and PPy@MnO$_2$-MSC.
Fig. S6. Rate capability and corresponding voltage drop of MnO$_2$/PPy-MSC at different current densities.

Fig. S7. Energy and power densities of MnO$_2$/PPy-MSC at different current densities.