

Supplementary Data

Title: Ternary nanocomposite ReMIL-CN (ReSe₂@MIL-53(Fe)@g-C₃N₄) for Energy Storage and Electroactive Integrated H₂O₂ Sensor Application

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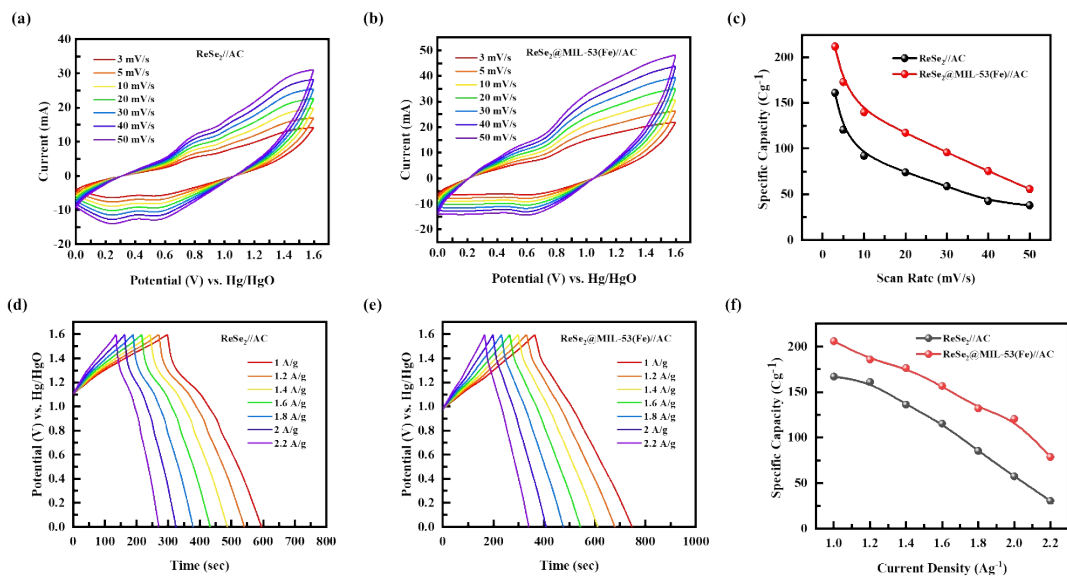


Figure S1: Device level performance of (a-c) $\text{ReSe}_2//\text{AC}$, (d-f) $\text{ReSe}_2@MIL-53//\text{AC}$.

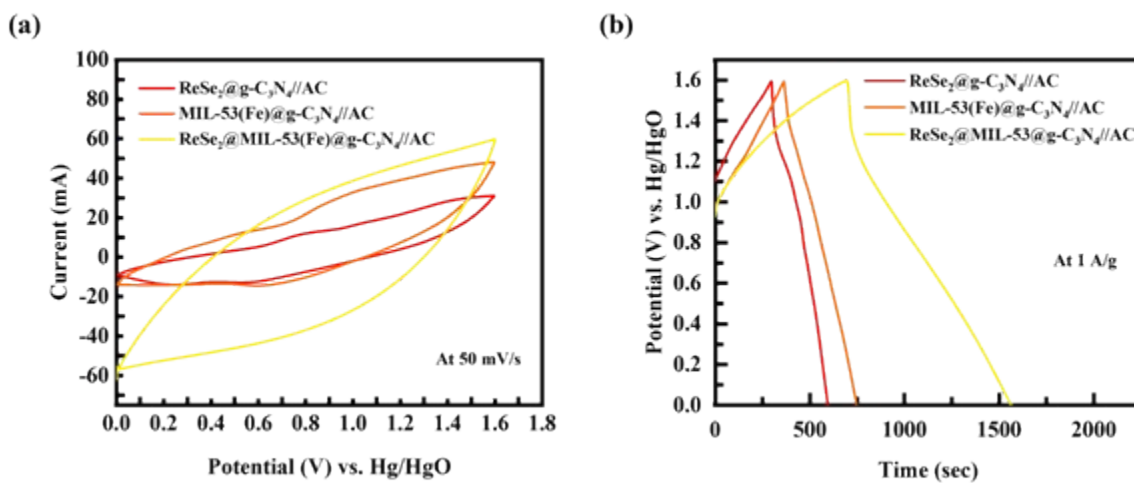


Figure S2: Comparison of device level performance of $\text{ReSe}_2//\text{AC}$, $\text{ReSe}_2@MIL-53//\text{AC}$, and ReMIL-CN//AC ($\text{ReSe}_2@MIL-53@g-C_3N_4//\text{AC}$) systems.

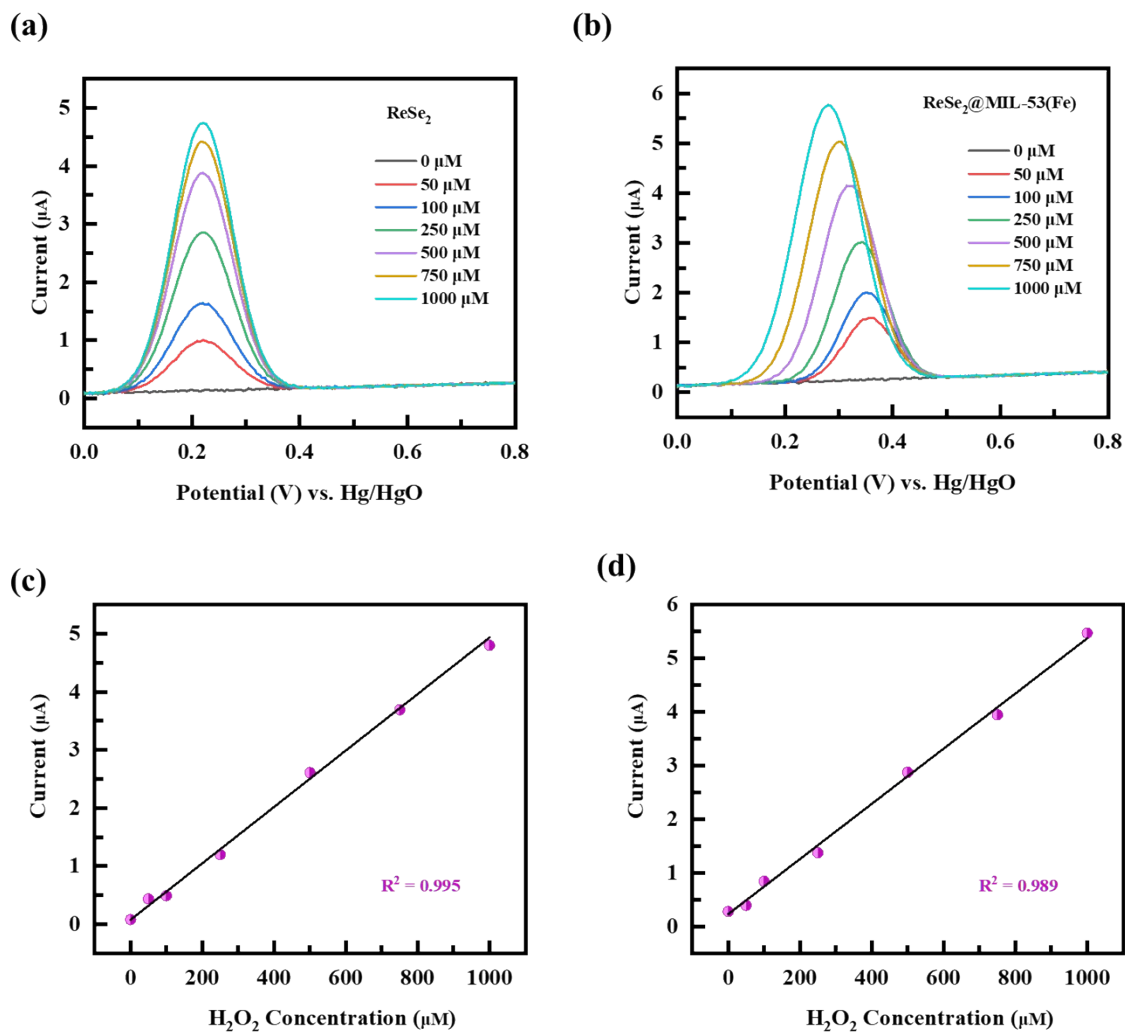


Figure S3: (a-d) DPV curves and calibration plots of ReSe₂ and ReSe₂@MIL-53 composite

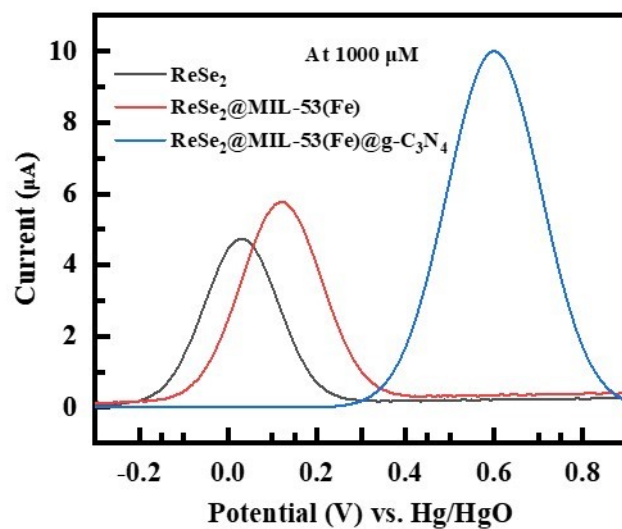


Figure S4: DPV comparison plots of the ReSe₂, ReSe₂@MIL-53, and ReSe₂@MIL-532g-C₃N₄-electrodes for H₂O₂ detection system.