## **Supporting Information**

## Recycling expired pharmaceutical drugs as redox materials for efficient and sustainable flexible supercapacitors

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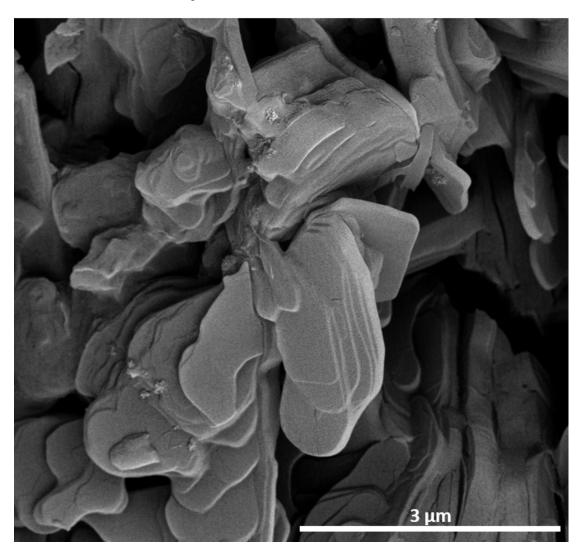


Figure S1. A closer SEM image of the DICLO powder employed in this work

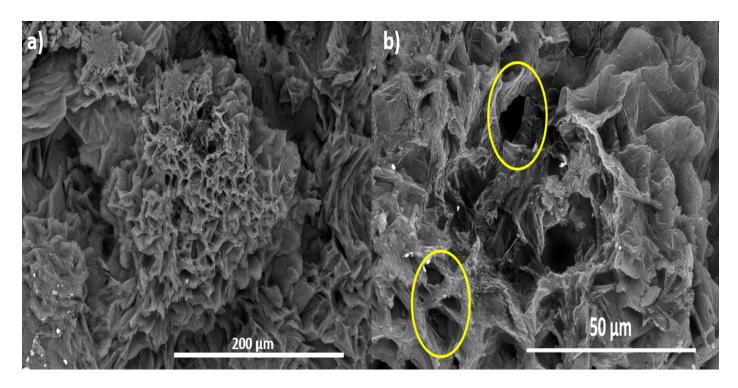


Figure S2. SEM images for the IBU powder at higher magnifications

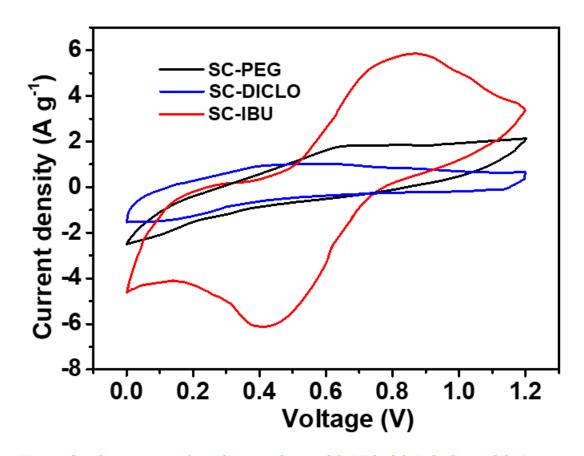
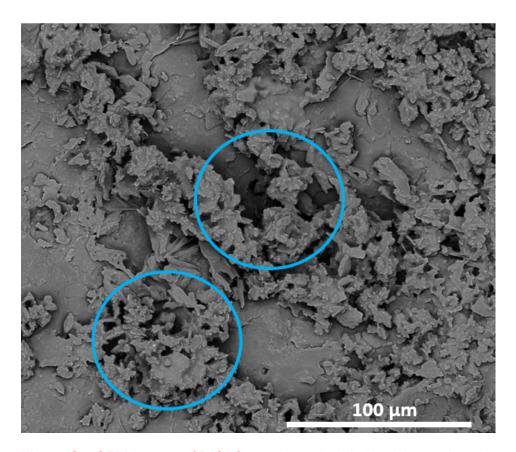


Figure S3. Comparison of the CV plots for the SC-PEG, SC-DICLO and SC-IBU devices.



**Figure S4.** SEM images of DICLO powder embedded on the graphene layer.

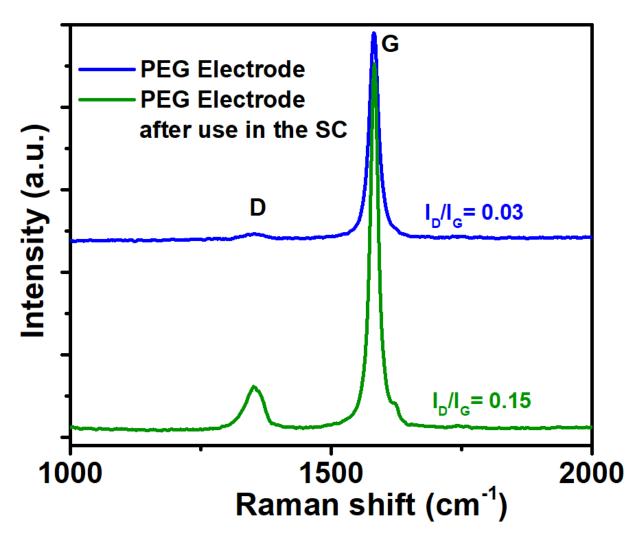
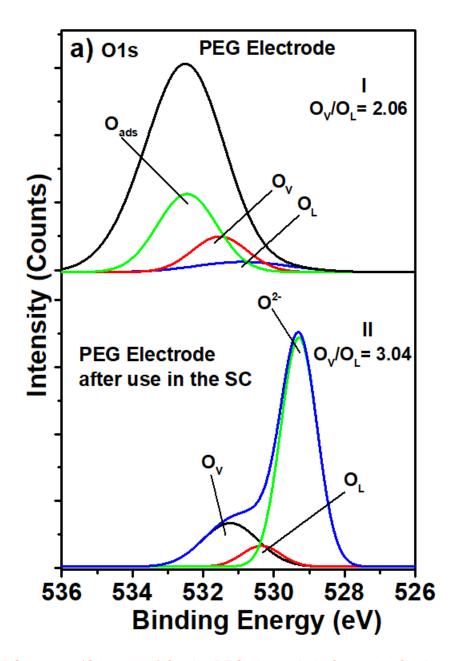
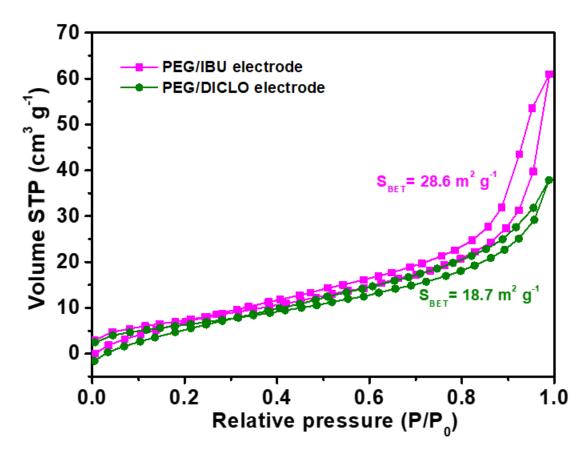


Figure S5. Raman spectra for the PEG electrode before and after its use in the SC-PEG device.



**Figure S6.** XPS spectra (O1s orbital) for the PEG electrode before and after its use in the SC-PEG device.



**Figure S7.** Nitrogen adsorption-desorption BET isotherms for the PEG/IBU and PEG/DICLO electrodes.