

Exploring the electrochemical performance of Copper Doped Cobalt- Manganese Phosphates for potential supercapattery applications

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The named assigned to the sonochemically synthesized samples with respect to their composition are tabulated in **Table S1**.

Table S1: Different samples along with their respective concentration.

Concentration	Sample Names
Cu_{0.50}Mn_{0.50}PO₄	S1
Co_{0.75}Cu_{0.25}MnPO₄	S2
Co_{0.50}Cu_{0.50}MnPO₄	S3
Co_{0.25}Cu_{0.75}MnPO₄	S4
Co_{0.50}Mn_{0.50}PO₄	S5

The maximum specific capacity delivered by all the prepared electrodes comprising of synthesized active materials in three cell configurations is demonstrated in Fig. S1 which reveals the dominant performance of S3.

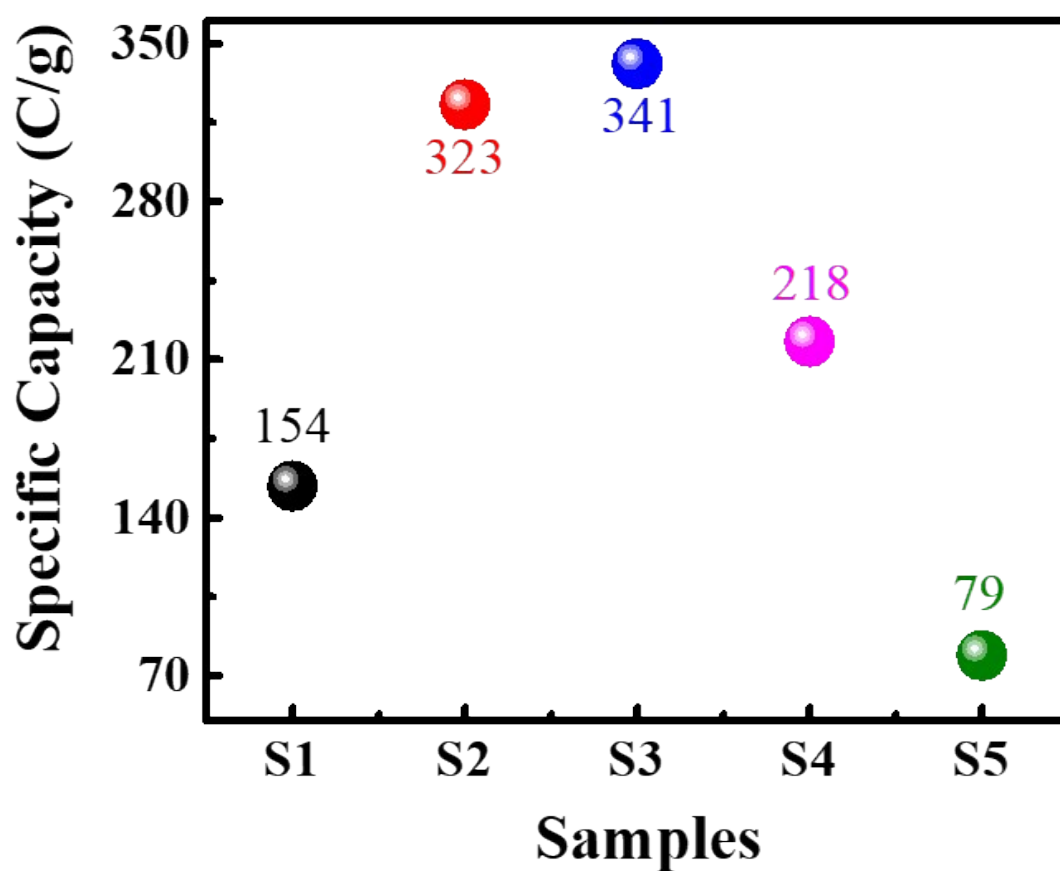


Figure S1: Comparison plot of maximum specific capacity for all the samples.

The equivalent series resistance observed via the real axis intercept of EIS spectrum for all the prepared electrodes in three cell configurations is displayed in Fig. S2 which reveals the optimum conductive nature of S3.

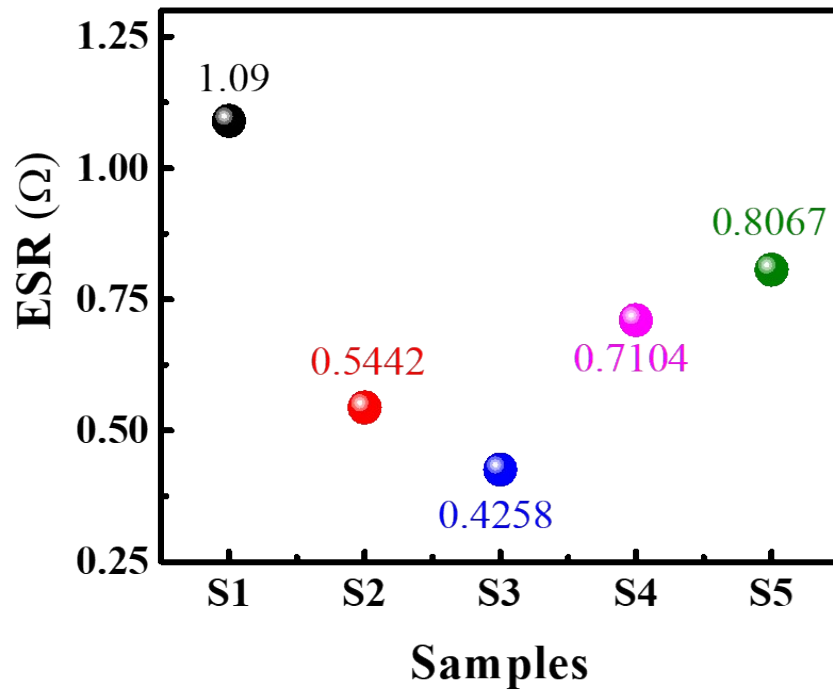


Figure S2: Respective ESR values of all samples

The supercapattery performance was further investigated via b-value fitting. The device reveals the b-values ranging from 0.59 to 0.64 which evinces its hybrid nature.

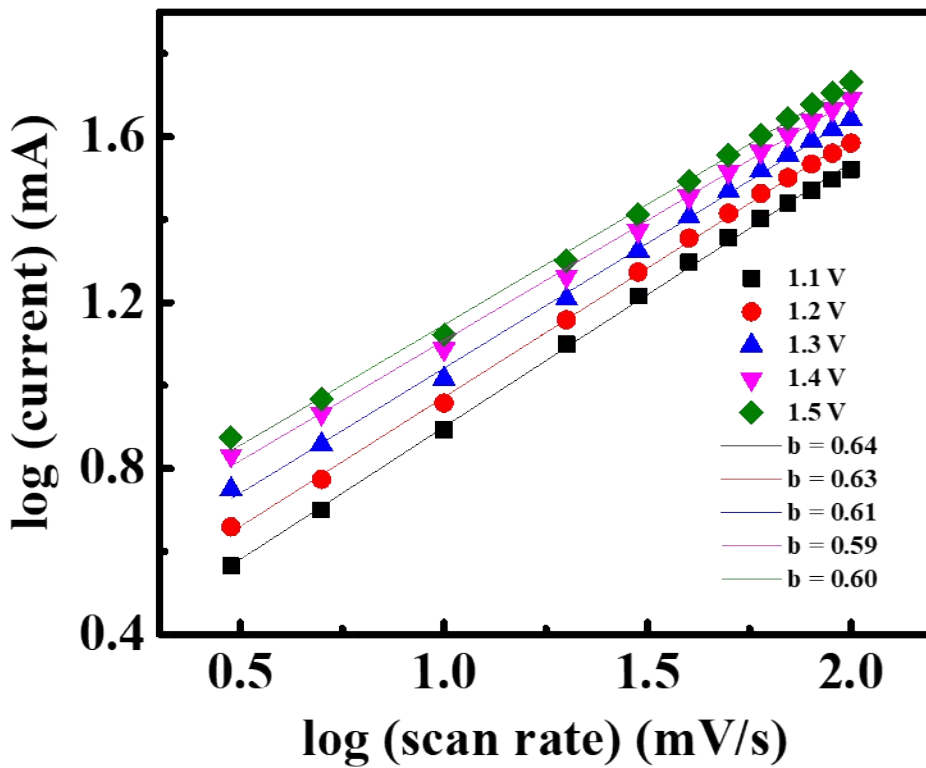


Figure S3: b-value fitting of real device.