

ADVANCED FUNCTIONAL MATERIALS

Supporting Information

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3D-Printed Graphene Oxide Framework with Thermal Shock
Synthesized Nanoparticles for Li-CO₂ Batteries

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Shuaiming He, Weiwei Ping, Boyang Liu, and Liangbing Hu**

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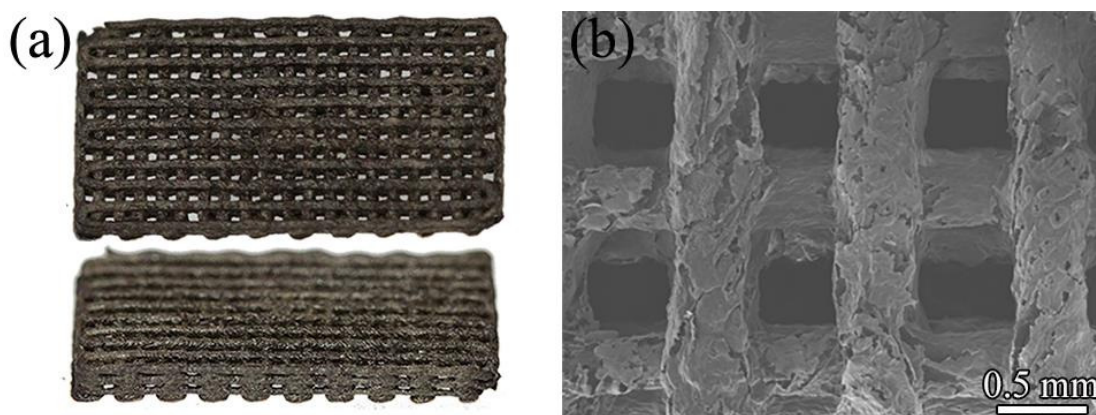


Figure S1. (a) Digital photograph and (b) FE-SEM image of the printed GO framework.

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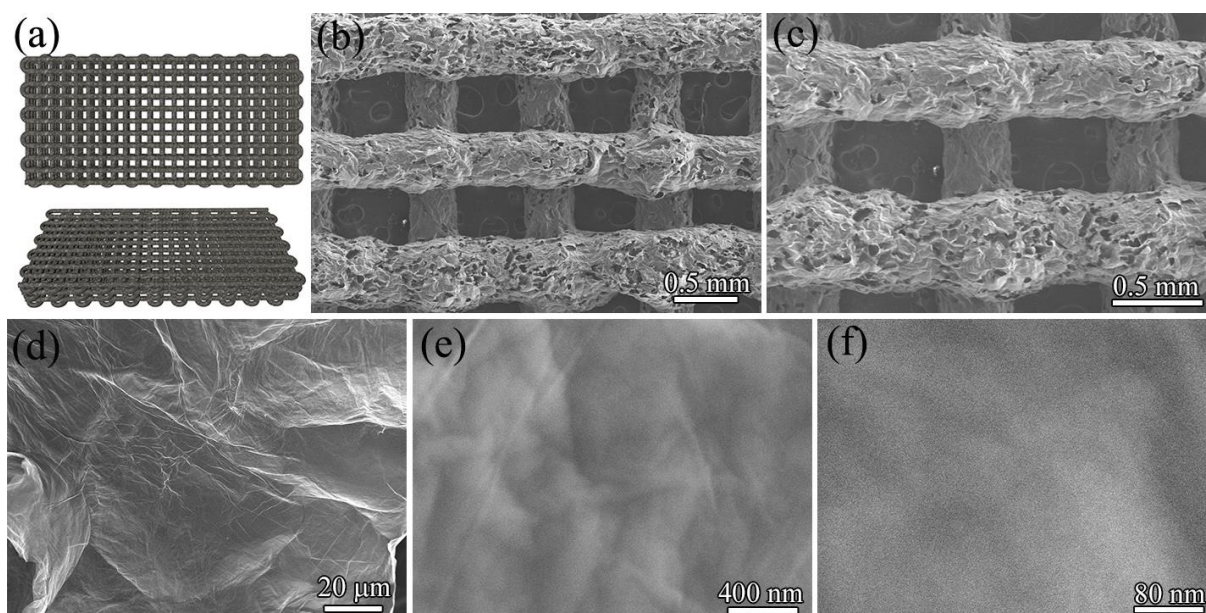


Figure S2. (a) Schematic illustration of the r-GO framework from the top and side view, (b-f) FE-SEM images of the r-GO framework.

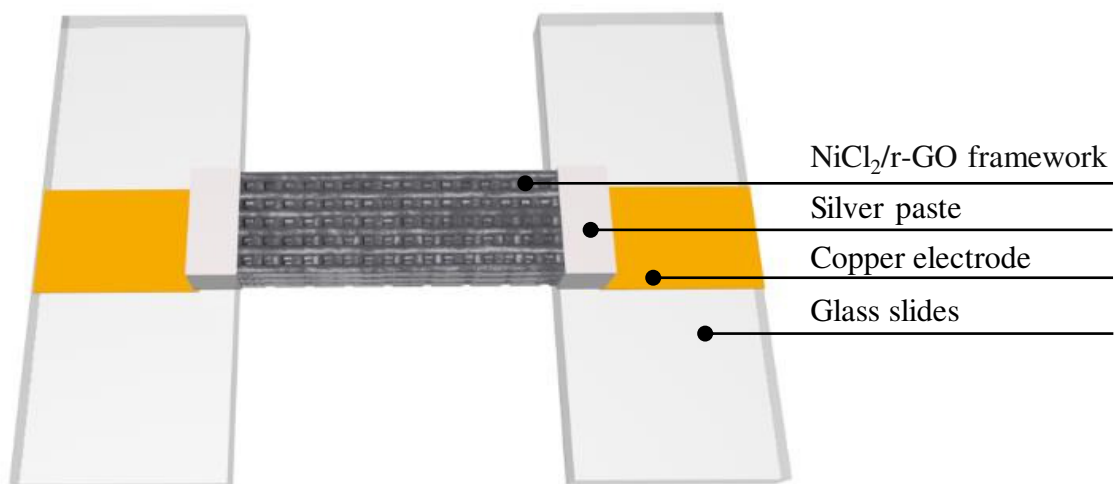


Figure S3. Schematic illustration of the device for thermal shock treatment.

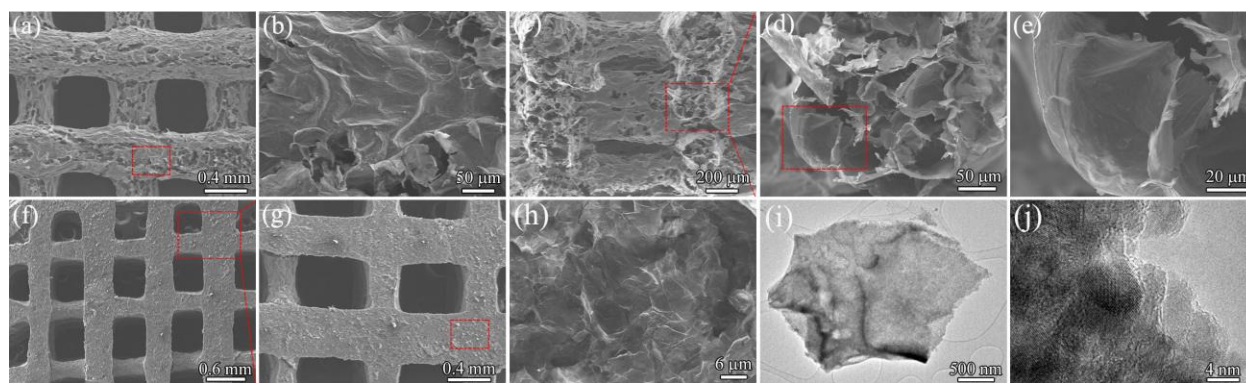


Figure S4. FE-SEM images of the (a, b) top view, (c-e) front view in the middle cross-section, and (f-h) bottom view of the printed framework. (i, j) TEM images of Ni/r-GO framework after thermal shock treatment.

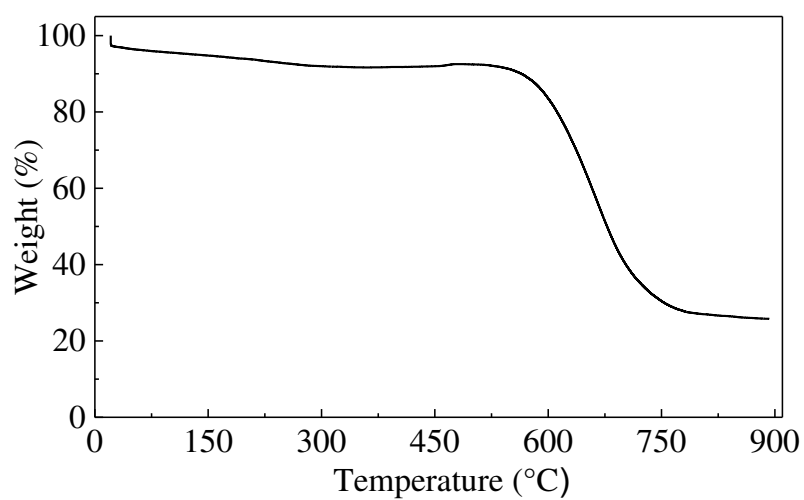


Figure S5. TGA curve of Ni/r-GO framework.

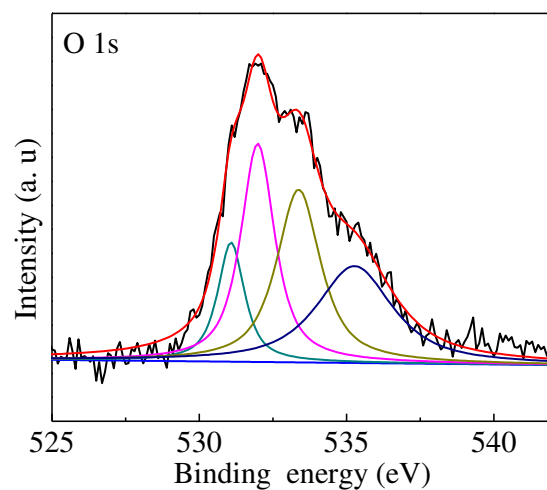


Figure S6. High-resolution XPS O 1s spectra of Ni/r-GO framework.

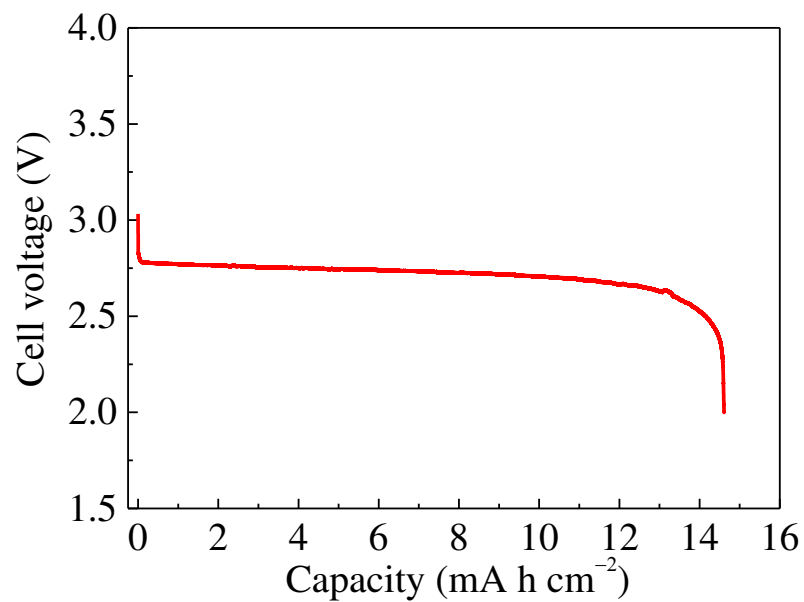


Figure S7. Full discharge curve of the Ni/r-GO electrode at a current density of 0.1 mA cm^{-2} .

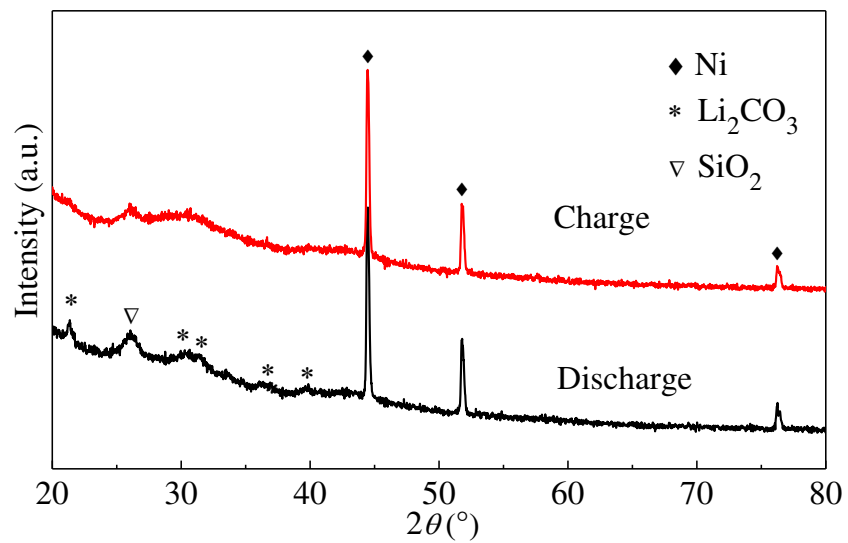


Figure S8. XRD patterns of Ni/r-GO framework as cathode after the initial full discharge to 2.0 V and full charge to 4.5 V.