CuFeO$_2$-NiFe$_2$O$_4$ hybrid electrode for lithium-ion batteries with ultra-stable electrochemical performance

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Fig. S1. SEM-EDS analysis of (a) CFO and (b) CFO-Ni (0.4).
Fig. S2. XPS spectrum for (a) Cu, (b) Fe, and (c) Ni for CFO-Ni (0.4).
Fig. S3. Charge and discharge profile of CFO in the formation cycle.
**Fig. S4.** Charge and discharge profile of CFO in the 2nd, 10th, 50th, and 100th cycle.
**Fig. S5.** *Ex situ* XRD patterns of (a) CFO and (b) CFO-Ni (0.4) after cycling.
**Table S1.** Comparison of electrochemical performance for Co$_3$O$_4$ NPs by fast formation cycling with previously reported Co$_3$O$_4$-based electrodes.

| Sample                  | Capacity (mAh g$^{-1}$) | Current Density (mA g$^{-1}$) | Cycles | References |
|-------------------------|-------------------------|-------------------------------|--------|------------|
| CuFeO$_2$@rGO          | 587                     | 200                           | 100    | [1]        |
| CuFeO$_2$/graphene     | 670                     | 141.6                         | 100    | [2]        |
| CuFeO$_2$ (650 °C)     | 475                     | 354                           | 100    | [3]        |
| CFO-Ni (0.4)           | 147                     | 5000                          | 800    | This Work  |
| CFO-Ni (0.4)           | 500                     | 500                           | 100    | This Work  |
References

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