

## Supplementary Materials

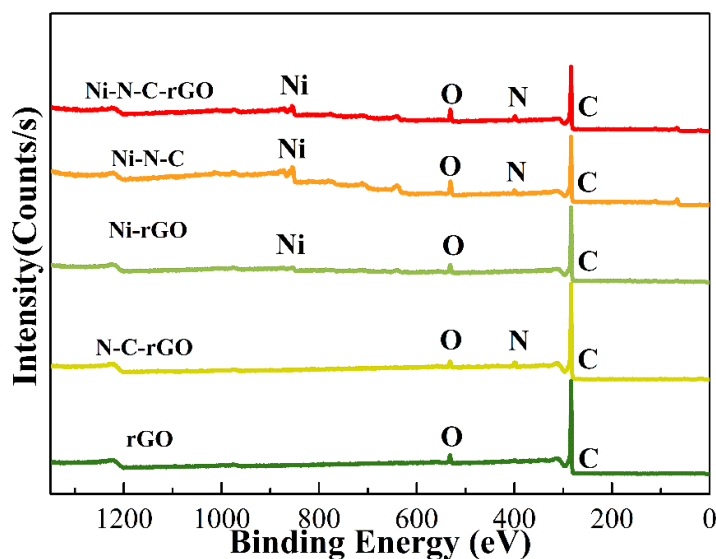
# Ni-N-Doped Carbon-Modified Reduced Graphene Oxide Catalysts for Electrochemical CO<sub>2</sub> Reduction Reaction

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**Figure S1.** XPS spectra of rGO, N-C-rGO, Ni-rGO, Ni-N-C, and Ni-N-C-rGO materials.

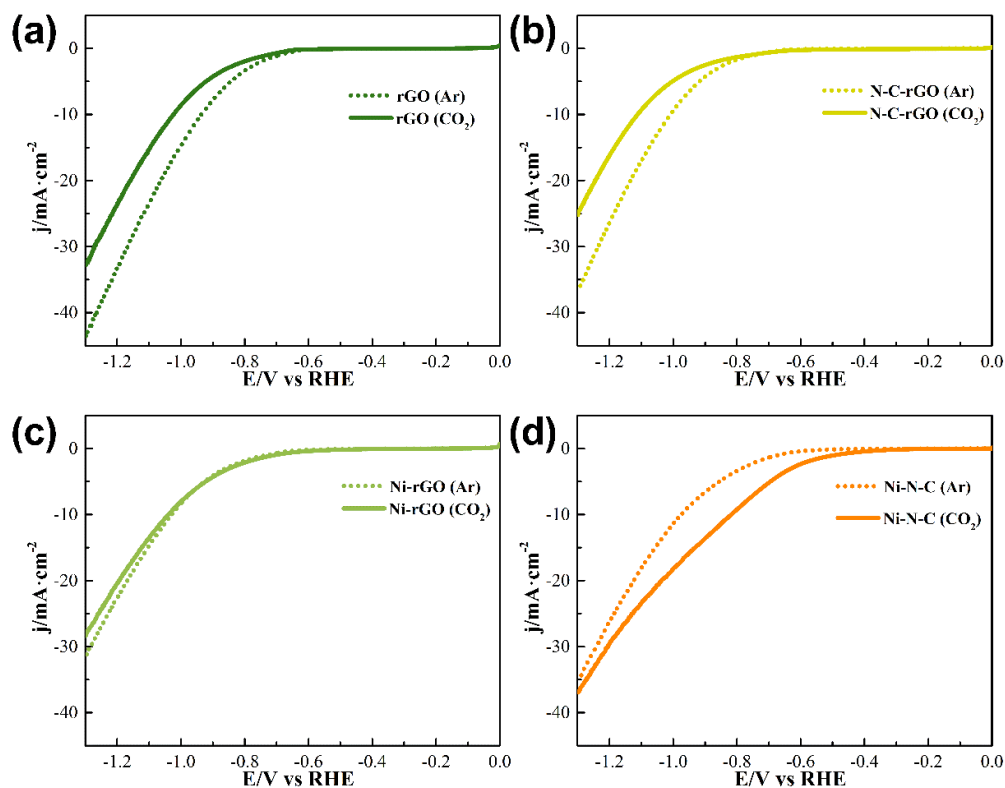


Figure S2. LSV test of (a) rGO, (b) N-C-rGO, (c) Ni-rGO, and (d) Ni-N-C under Ar and  $\text{CO}_2$  atmosphere.

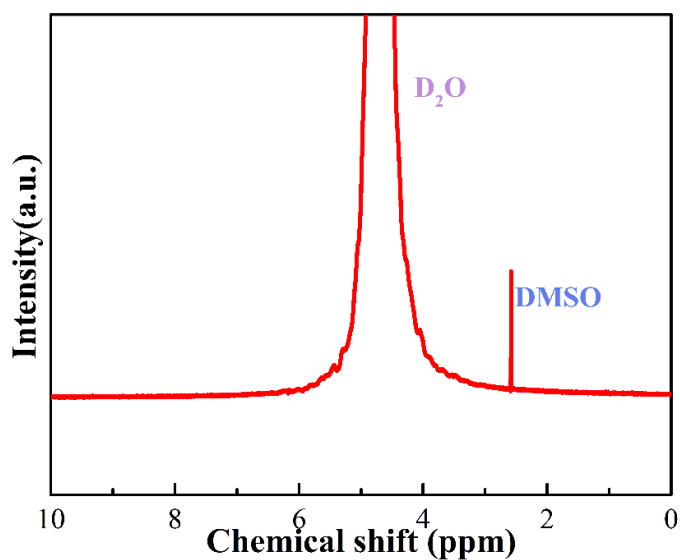
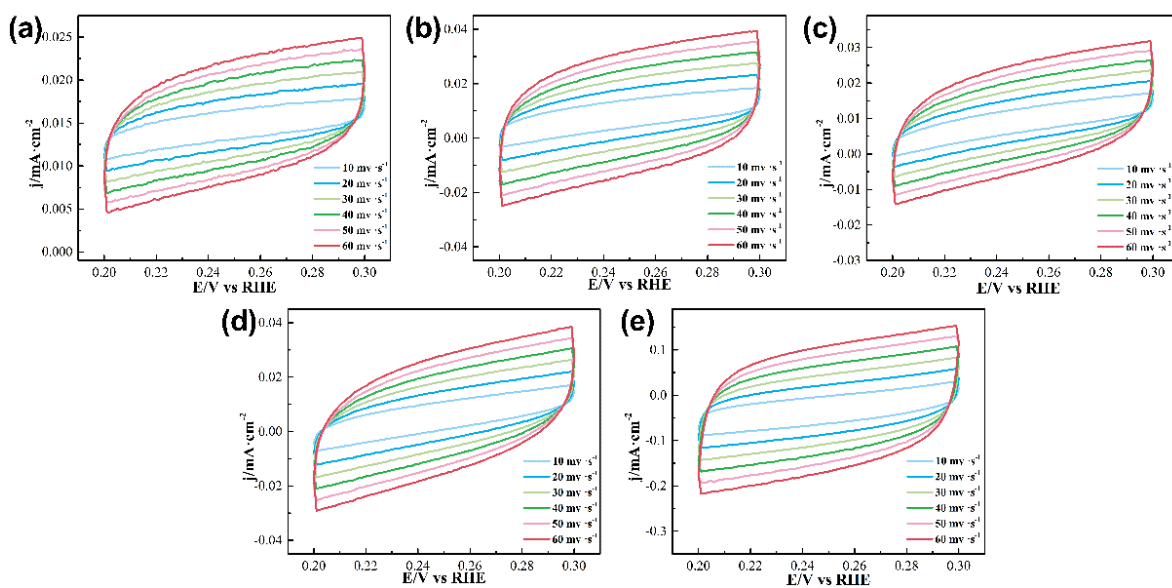
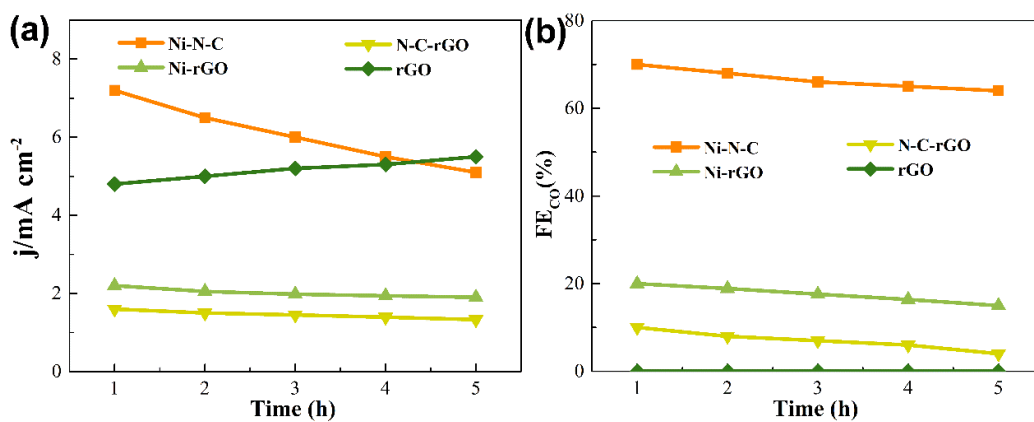


Figure S3.  $^1\text{H}$  NMR of the as-obtained electrolyte solution using the Ni-N-C-rGO catalyst for  $\text{CO}_2$  reduction at  $-0.87$  V for 5 h.



**Figure S4.** Cyclic voltammetry plotted against scan rates: (a) rGO, (b) N-C-rGO, (c) Ni-rGO, (d) Ni-N-C, and (e) Ni-N-C-rGO.



**Figure S5.** Long-term durability: (a) Current density and (b)  $FE_{CO}$  (%) of rGO, N-C-rGO, Ni-rGO, and Ni-N-C at  $-0.87$  V for 5 h.