

Supporting information

Enhanced electrochemical reduction of CO₂ to CO on Ag electrocatalysts with increased unoccupied density of state

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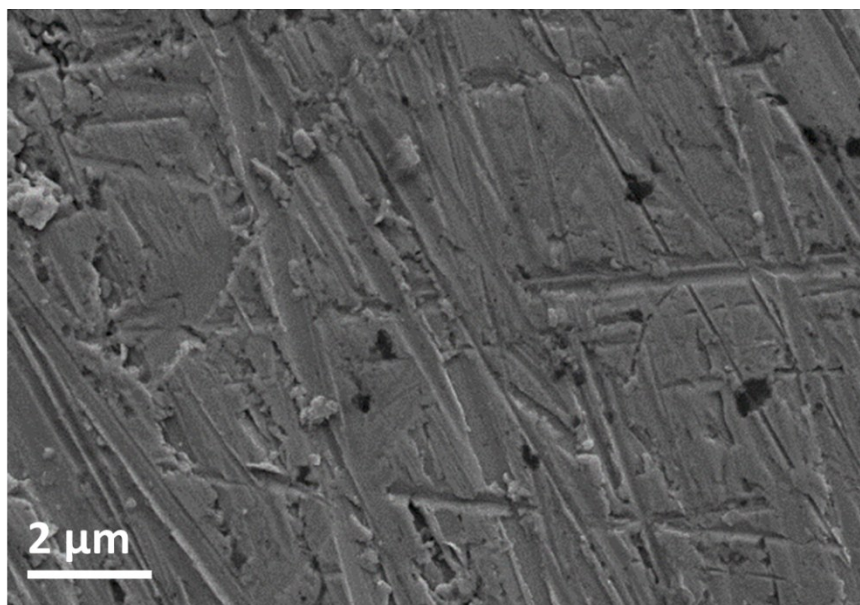


Figure S1. SEM image of polished Ag foil.

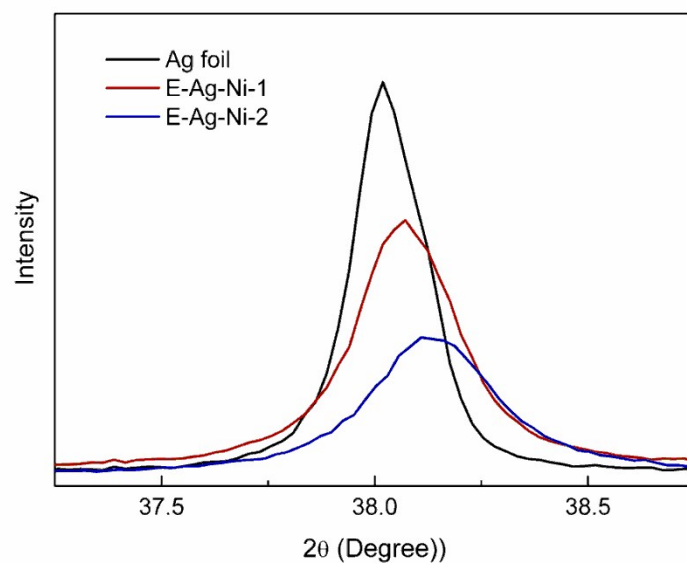


Figure S2. Enlarged (111) diffraction peaks of Ag foil, E-Ag-Ni-1 and E-Ag-Ni-2.

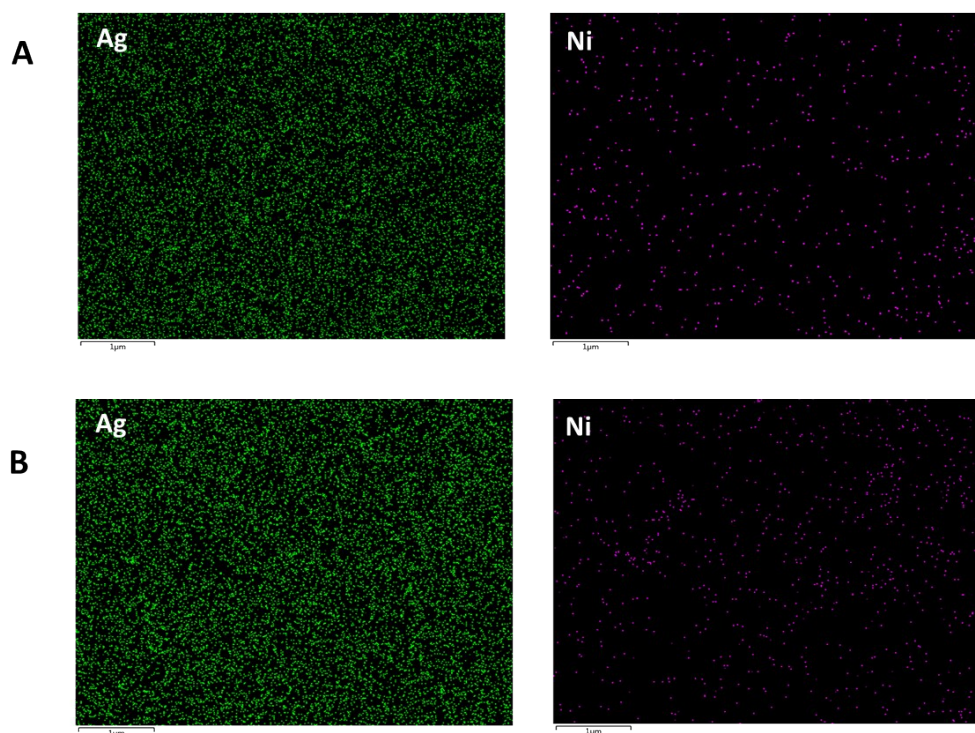


Figure S3. EDS mapping analysis on elements of Ag and Ni for (A) E-Ag-Ni-1 and (B) E-Ag-Ni-2. The elements concentrations of Ag and Ni in E-Ag-Ni-1 are determined to be 95.7 At% and 4.3 At%, respectively. In E-Ag-Ni-2, Ag is 92.9 At% and Ni is 7.1 At%.

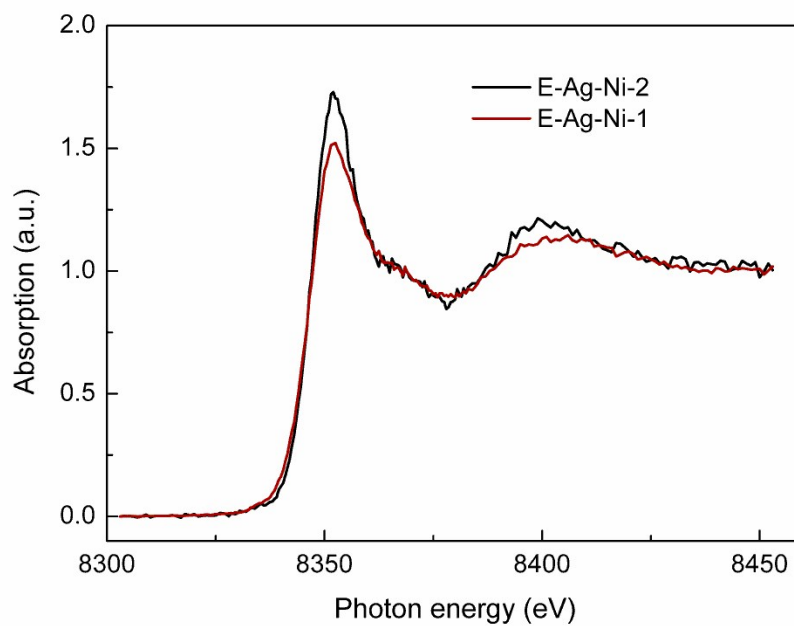


Figure S4. Ni *K*-edge XANES spectra of E-Ag-Ni confirm that the co-deposited Ni is uniformly distributed in Ag matrix.

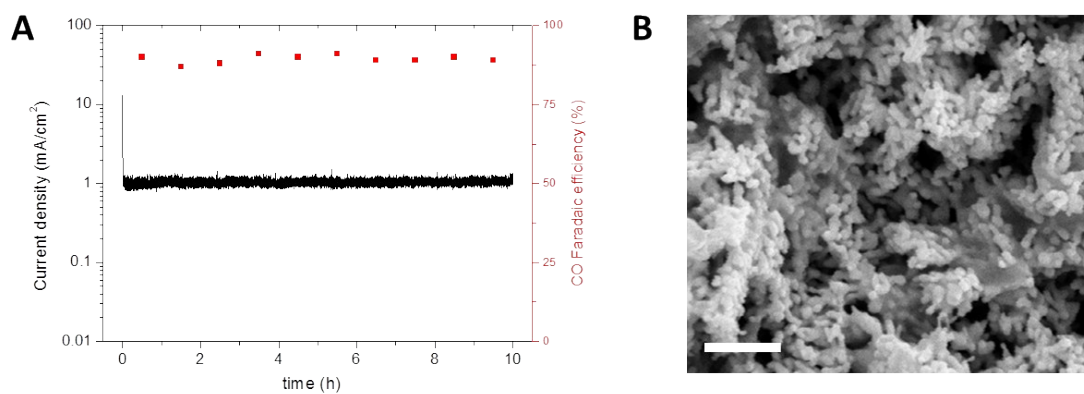


Figure S5. (A) Total current density vs time and FE for CO vs time at -0.8 V vs RHE for An-red-Ag; (B) SEM image of the An-red-Ag electrode after 10-hour electrolysis. The scale bar is 500 nm.