Supporting information for

Promoting water splitting by transforming its presence status for enhanced hydrogen evolution

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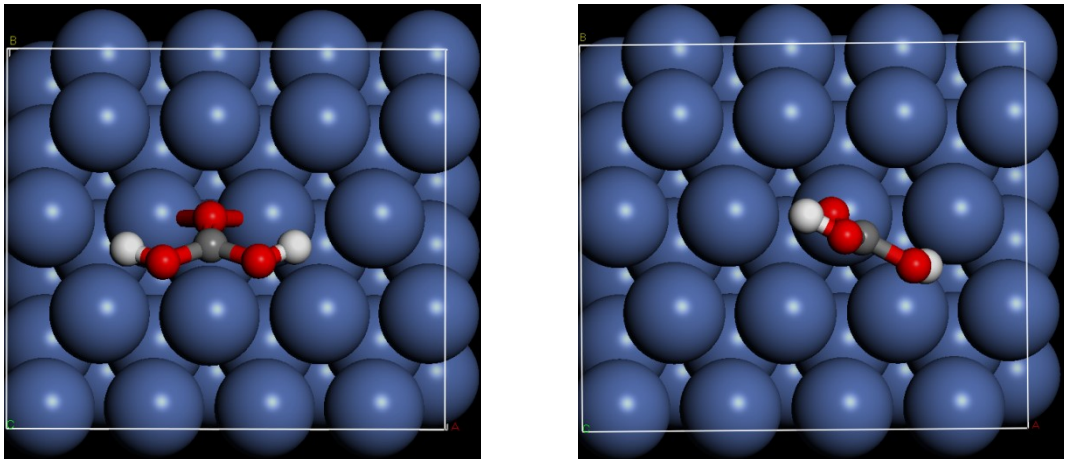

(A) (B)

Fig. S1 Optimized geometries of H_2CO_3 adsorbed by bri (A) and top site (B) of Ni(111) surface; the calculated energies of geometries showed in (A) and (B) are -291.13780474 and -291.31539211 eV, respectively.

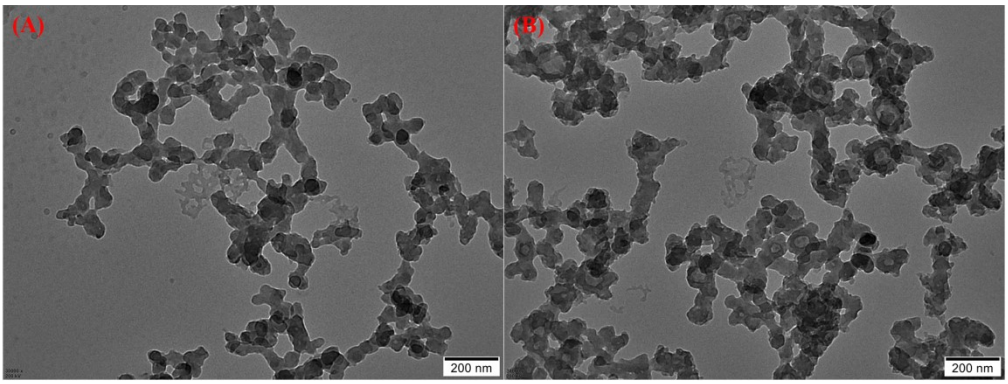

Fig. S2 TEM images of Ni from EY-Ni (A) and EY-Ni/CO_2 (B) systems

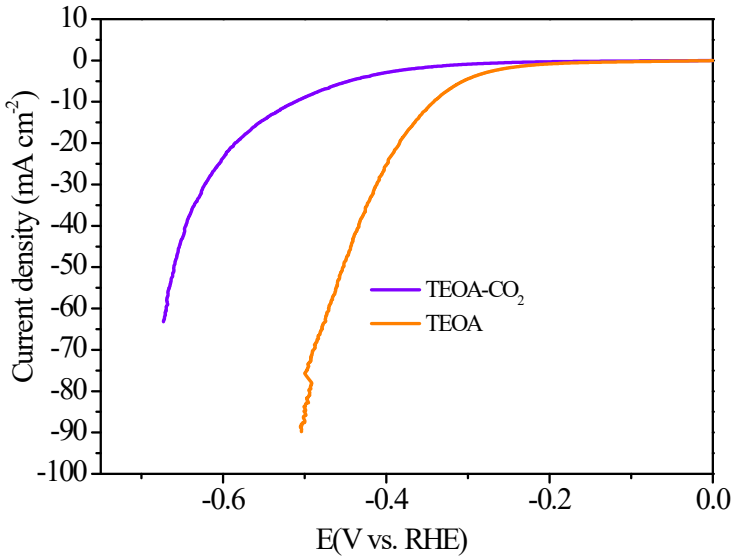

Fig. S3 LSV curves of nickel foam (NF) in TEOA and TEOA-CO_2 solutions.

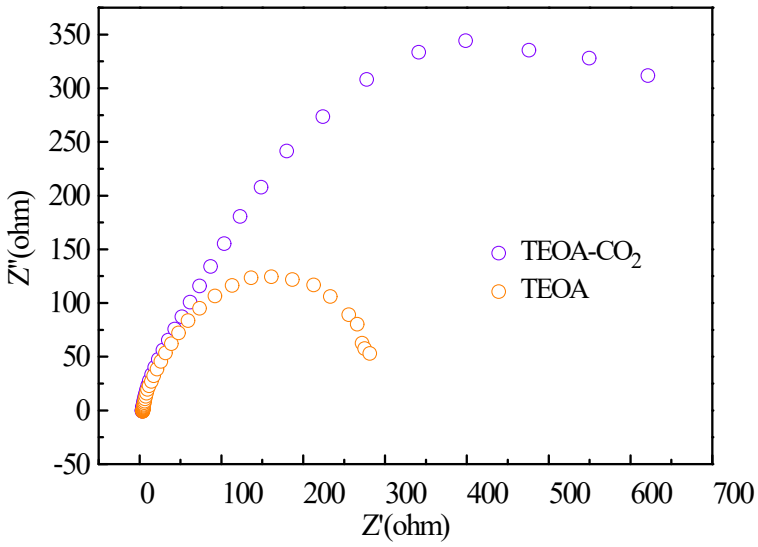

Fig. S4 The Nyquist plots of NF in TEOA and TEOA-CO_2 solutions.