Electronic Supplementary Material (ESI) for Sustainable Energy & Fuels.

Construction of highly active and water-resistant Ni-based catalyst for HDO reaction of phenol

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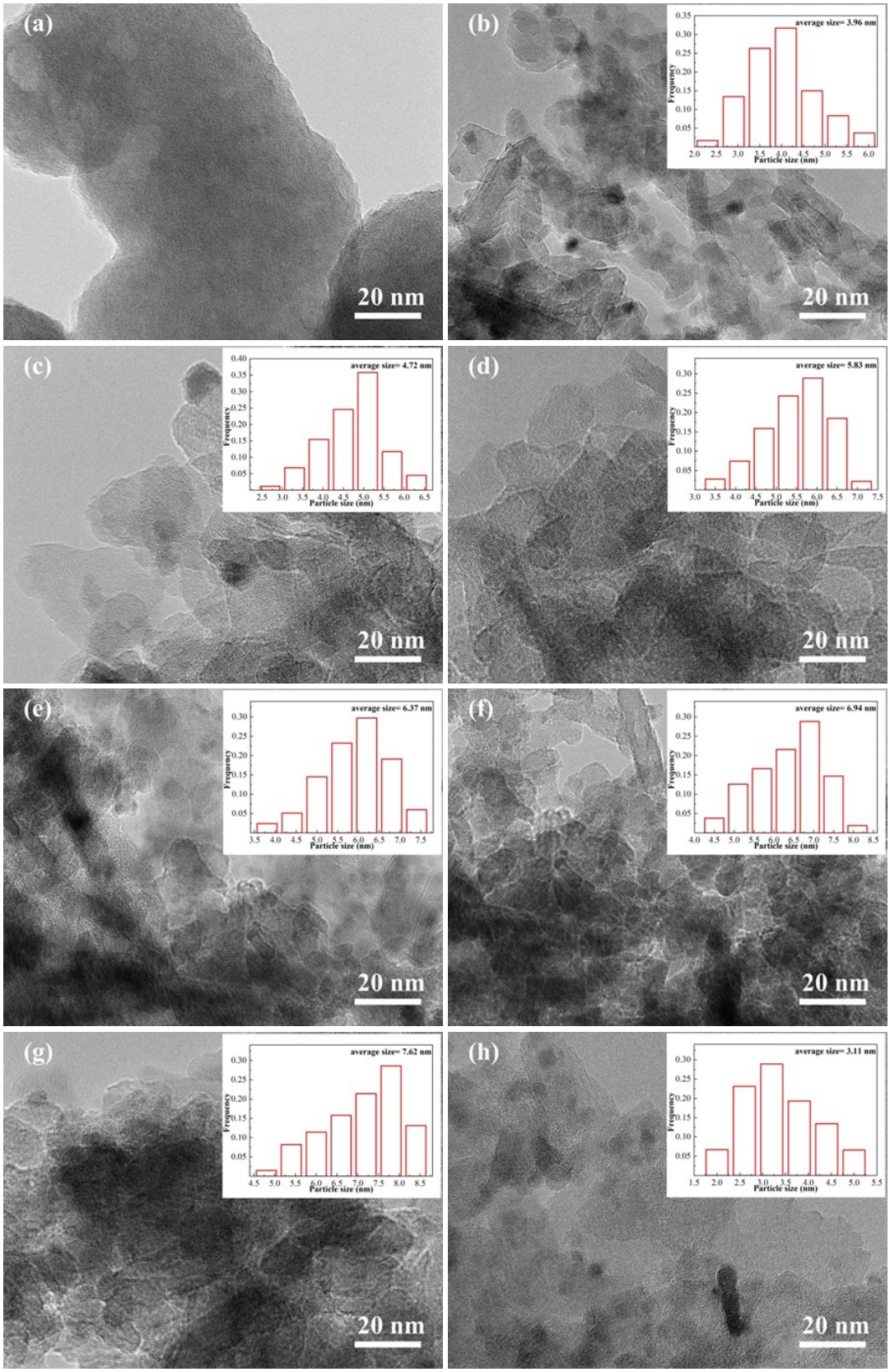

Fig. S1 HRTEM and corresponding particle size distribution of Ni@C/Al_2O_3(1) (a), Ni@C/Al_2O_3(5), Ni@C/Al_2O_3(10), Ni@C/Al_2O_3(20), Ni@C/Al_2O_3(30), Ni@C/Al_2O_3(40), Ni@C/Al_2O_3(50) and Ni@C/Al_2O_3(5)-glucose.

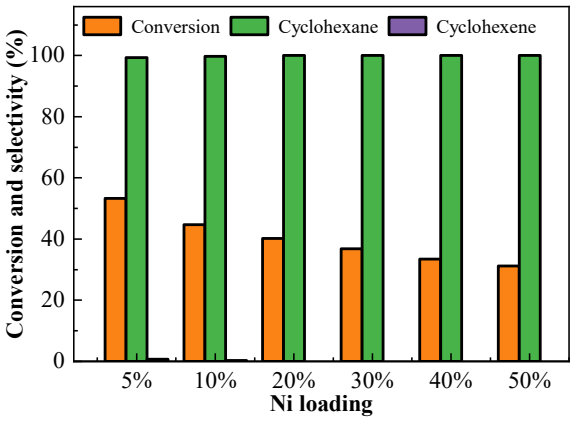

Fig. S2 Dehydration of cyclohexanol over Ni@C/Al_2O_3(x) catalysts. Reaction conditions: T=250 ℃, P=2 MPa, t=2 h

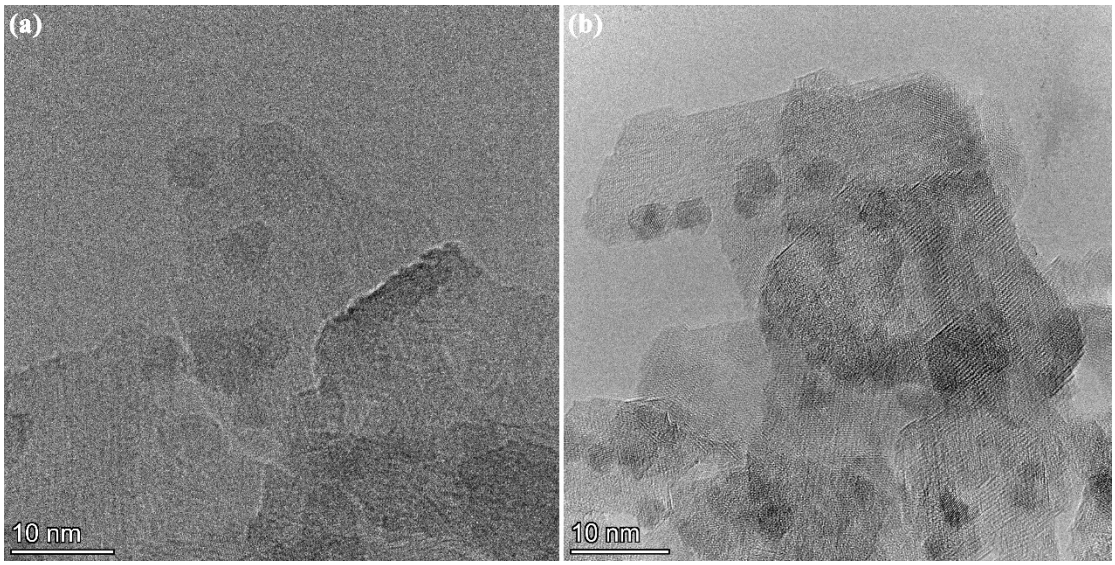

Fig. S3 HRTEM of fresh (a) and spent (b) Ni@C/Al_2O_3-glucose catalyst