

Conversion of CO₂ Hydrogenation to Methanol over K/ Ni Promoted MoS₂/MgO Catalyst

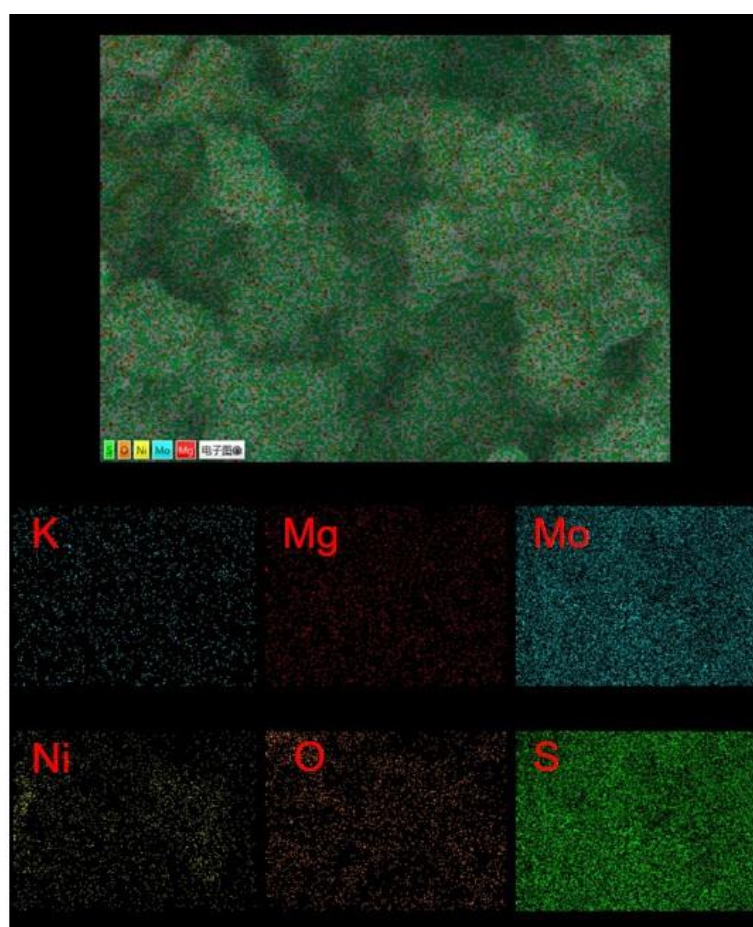


Figure S1 elemental mapping of the 10%K-NiMoS₂/MgO catalyst

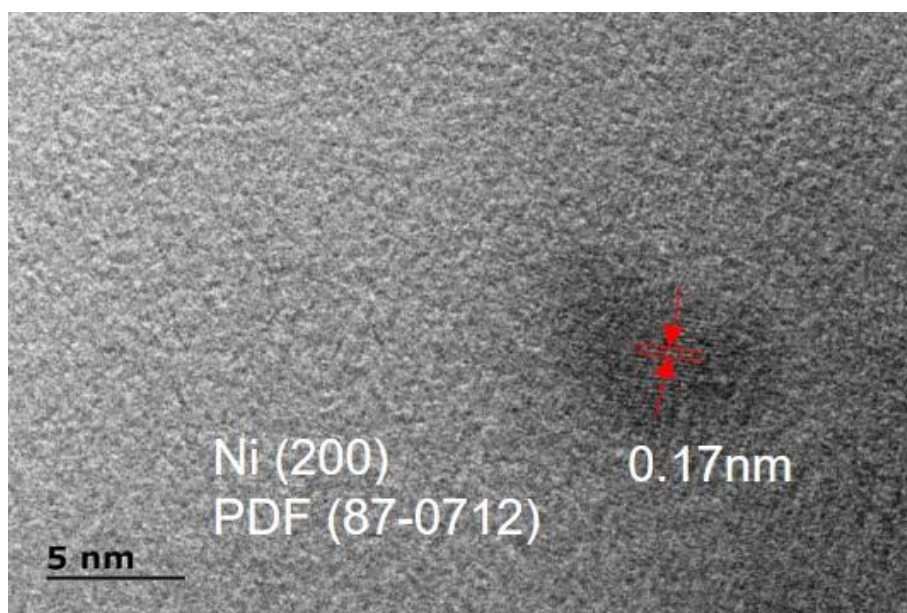


Figure S2 The Ni HRTEM images of the 10%K-NiMoS₂/MgO catalysts

Table S1. BET data of each catalyst

Catalyst	BET Surface Area (m ² /g)
MoS ₂	160.08
Ni-MoS ₂	83.79
Ni-MoS ₂ /MgO	6.22
6% K-Ni-MoS ₂ /MgO	4.12

Table S2. Catalytic performance data of MoS₂ catalyst

Temp.	CO ₂ Conversion %	STY _{ROH} (g/kg/h)	Product Selectivity (%)			Alcohols Distributions (%)		Hydrocarbon Distributions (%)	
			ROH	RH	CO	C ₁ OH	C ₂₊ OH	CH ₄	C ₂ H ₆
320 °C	45.14	0.008	1.1	86.0	12.9	96.2	3.8	96.8	3.2