

Supplementary Materials

Enhancing Catalytic Performance With Ni Foam-Coated Porous Ni Particles via 1-Butene Hydrogenation

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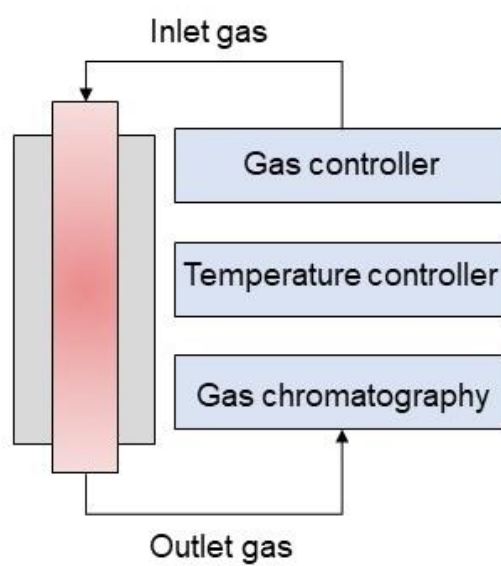


Figure S1. Schematic of the reactor and reaction procedure.

Table S1. BET surface areas and density values.

	BET (m²/g)	Density (g/cm³)	BET (m²/L)
Ni foam	0.133	0.333	44.300
Porous Ni / Ni foam	0.245	0.361	88.583

Table S2. Applications of metal foams as catalysts.

Foam type	Reaction type	Performance	Reference
Copper foam (Cu foam)	CO ₂ electroreduction	High selectivity for hydrocarbon production	[1]
Iron foam (Fe foam)	Fischer–Tropsch synthesis	Improved syngas conversion efficiency	[2]
Platinum-coated metal foam (Pt foam)	Ammonia oxidation	High catalytic activity and stability	[2]
Cobalt foam (Co foam)	Oxygen evolution reaction	Enhanced oxygen evolution efficiency	[3]
Aluminum foam (Al foam)	Hydrocarbon cracking	Superior cracking efficiency with thermal stability	[2]
Titanium foam (Ti foam)	Hydrogen storage	Increased hydrogen uptake capacity	[4]
Stainless-steel foam (SS foam)	Desulfurization of fuels	Effective sulfur removal under harsh conditions	[2]
Zinc foam (Zn foam)	Zn–air Batteries	High energy density and rechargeability	[2]
Palladium-coated foam (Pd foam)	Hydrogenation reactions	Selective hydrogenation with high conversion rates	[5]

References

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