

Hydrogenation production from ammonia borane over PtNi alloy

nanoparticles immobilized on graphite carbon nitride

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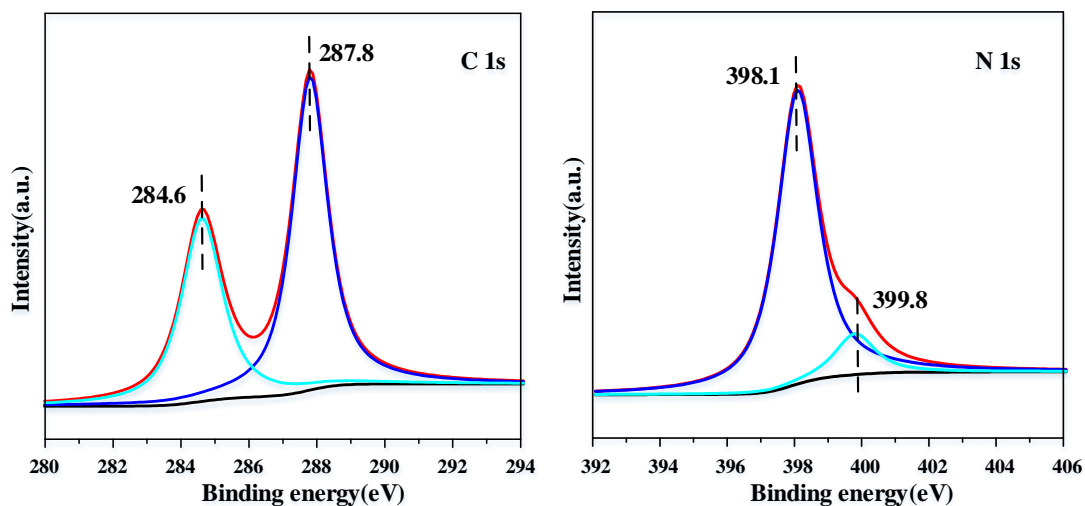


Figure S1. XPS spectra for Pt_{0.5}Ni_{0.5}/g-C₃N₄ showing C 1s, N 1s.

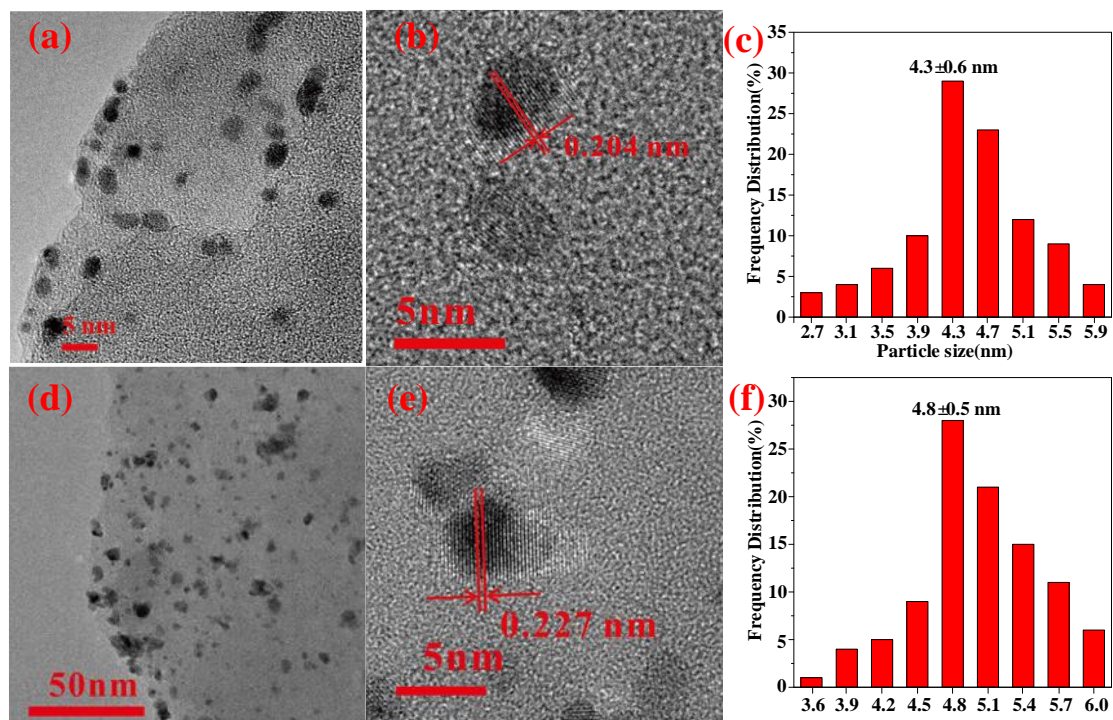


Figure S2. (a) TEM images of Ni/g-C₃N₄, (b) amplified HRTEM image of Ni/g-C₃N₄, (c) Particle size distribution of Ni/g-C₃N₄, (d) TEM images of Pt/g-C₃N₄, (e) amplified HRTEM image of Pt/g-C₃N₄, (f) Particle size distribution of Pt/g-C₃N₄.

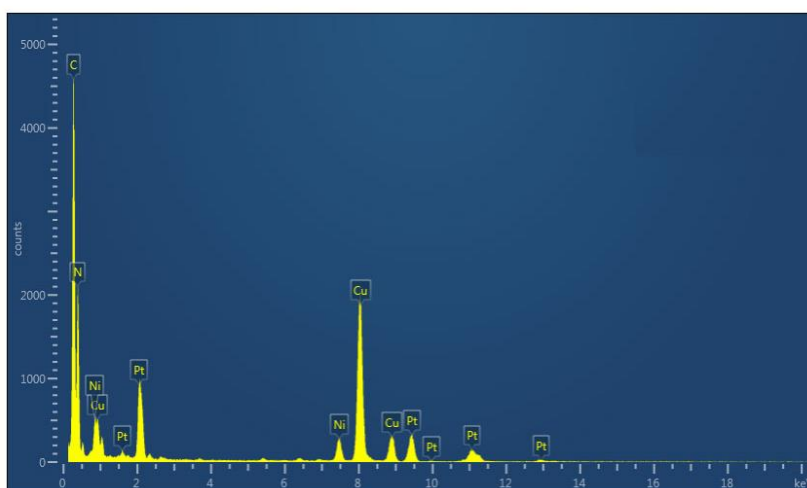


Figure S3. SEM-energy-dispersive X-ray spectroscopic (EDS) spectrum of Pt_{0.5}Ni_{0.5}/g-C₃N₄.

Table S1. ICP-AES results of PtNi/g-C₃N₄ catalysts

Catalyst	Pt (wt%)	Ni (wt%)	PtNi initial composition (molar ratio)	PtNi final compositio n (molar ratio)	Final Metals/Catalys t (mmol/100 mg)	S _{BET} (m ² g ⁻¹)
Pt _{0.8} Ni _{0.2} /g- C ₃ N ₄	14.9	1.1	80:20	81:19	0.113	12.3
Pt _{0.6} Ni _{0.4} /g- C ₃ N ₄	10.6	2.2	60:40	59:41	0.116	10.4
Pt _{0.5} Ni _{0.5} /g- C ₃ N ₄	8.8	2.9	50:50	48:52	0.106	8.4
Pt _{0.4} Ni _{0.6} /g- C ₃ N ₄	7.3	3.4	40:60	39:41	0.122	9.3
Ni _{0.2} Pt _{0.8} /g- C ₃ N ₄	3.9	4.2	20:80	22:78	0.104	6.5