

Supplementary Information

Mussel-inspired chemistry for one-step synthesis of N-doped carbon-gold composites with morphology tailoring and their catalytic properties

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Table S1 Properties and synthesis parameters of P-AuNPs

Fig. S1. (A) Photographs of dry composites and that of the composites dispersed in water. (B) The XRD pattern of as-prepared NC-AuNPs, P-AuNPs and Polydopamine.

Fig. S2. EDX spectrum of the surface of prepared catalysts.

Fig. S3. The UV-vis absorbance spectra of the NC-AuNPs-0.3(A) and NC-AuNPs-0.3-ice (B) catalyzed reduction of 4-nitrophenol at different times. Table S1 Properties and synthesis parameters of P-AuNPs

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Sample	H AuCl 4 (mL)	Dopamine mg/mL	Water (mL)	Isopropanol (mL)	Temperature (°C)	AuNPs size (nm)
P-AuNPs-1.5	0.25	1.5	15	0	RT	-
P-AuNPs-1.0	0.25	1	15	0	RT	-
P-AuNPs-0.5	0.25	0.5	15	0	RT	15
P-AuNPs-0.3	0.25	0.3	15	0	RT	8
P-AuNPs-1.5-ipa	0.25	1.5	10	5	RT	-
P-AuNPs-1.5-ice	0.25	1.5	10	5	0°C	-
P-AuNPs-0.3-ice	0.25	0.3	10	5	0°C	5

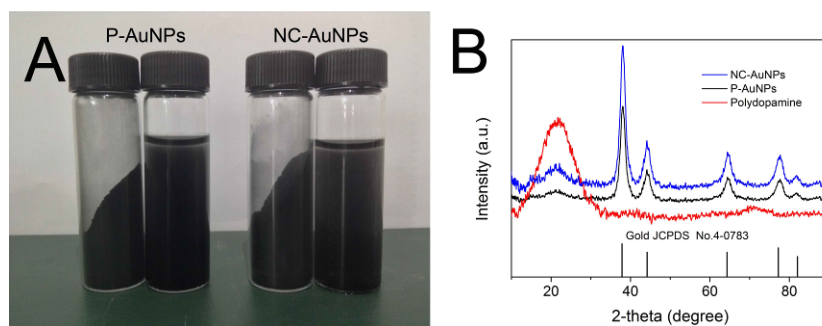


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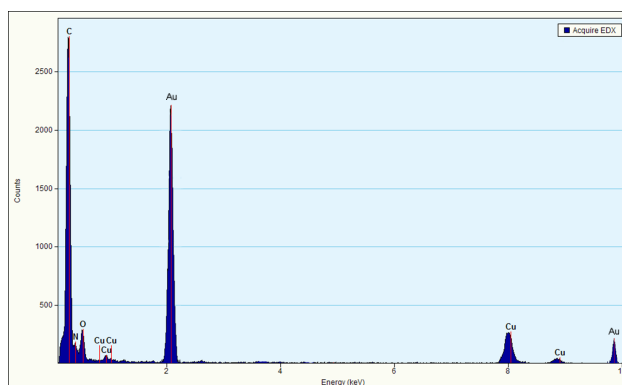


Fig. S2. EDX spectrum of the surface of prepared catalysts.

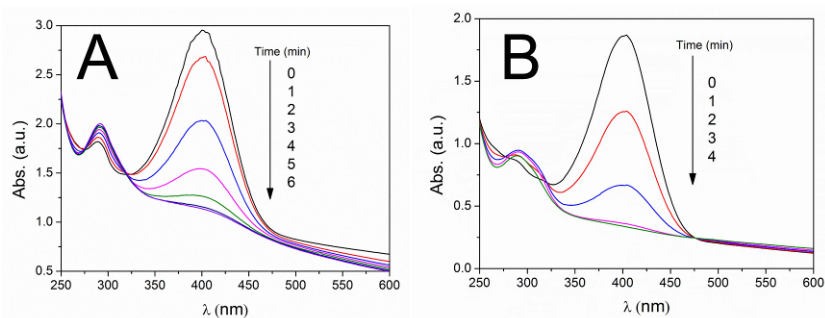


Fig. S3. The UV-vis absorbance spectra of the NC-AuNPs-0.3(A) and NC-AuNPs-0.3-ice (B) catalyzed reduction of 4-nitrophenol at different times.
