

Supplementary Information

Ultra-Small Biocompatible Jujube Polysaccharide Stabilized Platinum Nanoclusters for Glucose Detection

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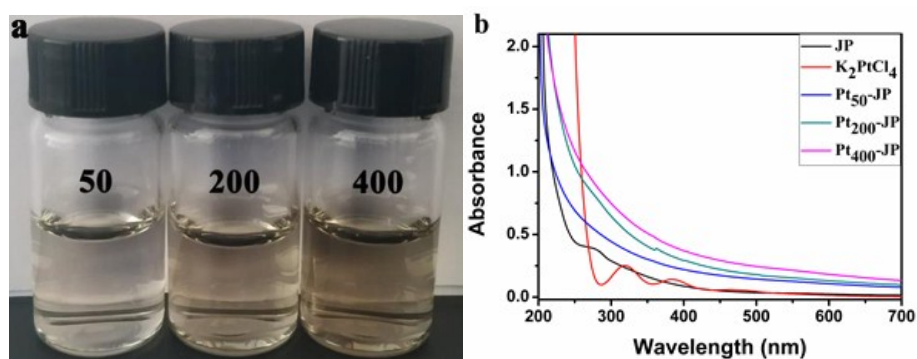
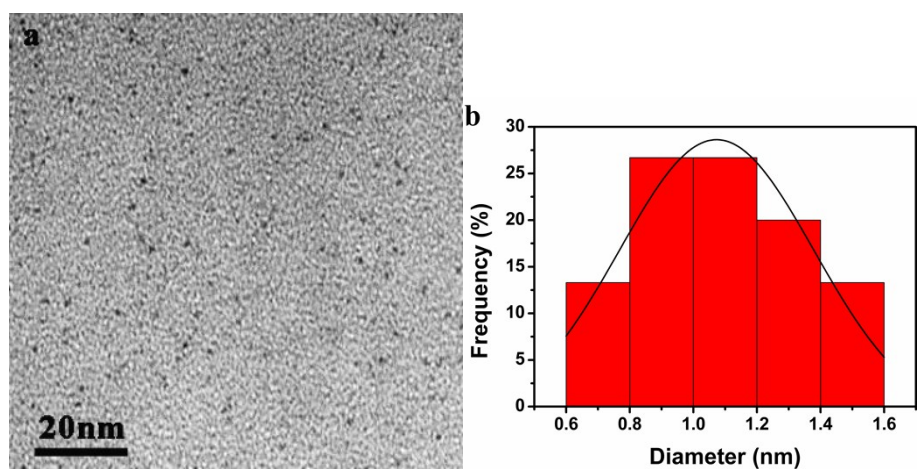


Fig. S1 (a) The photos of Pt_n-JP solution and (b) UV-Vis spectra of Pt_n-JP, JP and K₂PtCl₄.



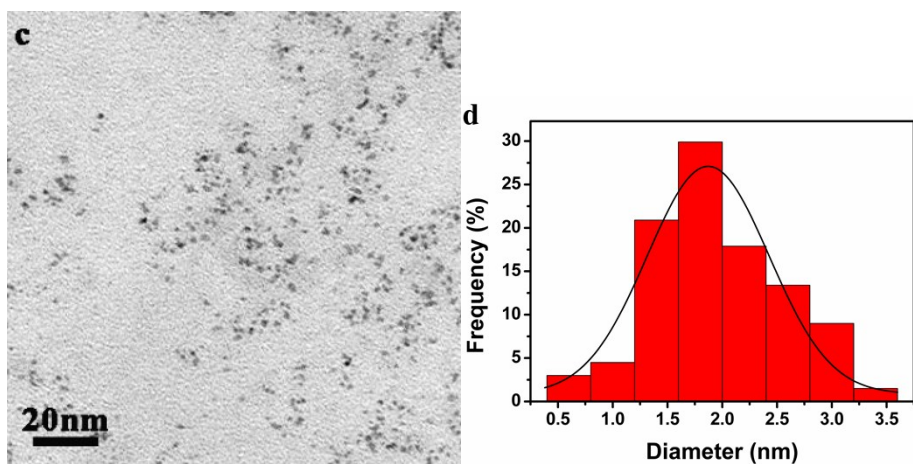


Fig. S2 TEM images and size distribution histograms of (a,b) Pt₅₀-JP NCs and (c,d) Pt₄₀₀-JP NCs.

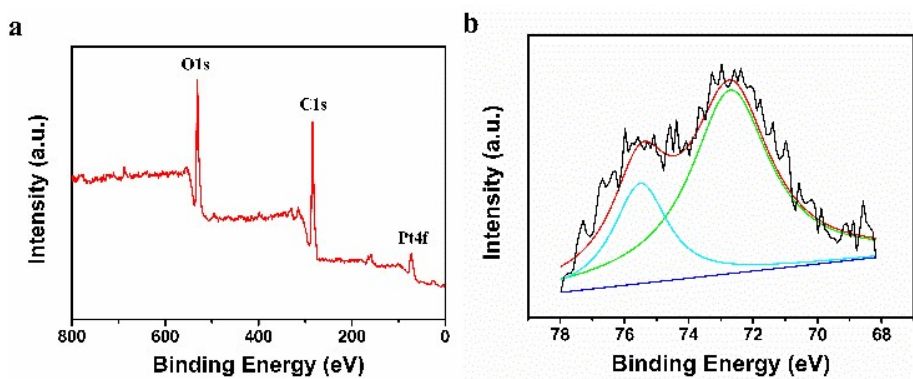


Fig. S3 (a) XPS spectrum of Pt₂₀₀-JP NCs and (b) the binding energy of Pt4f.

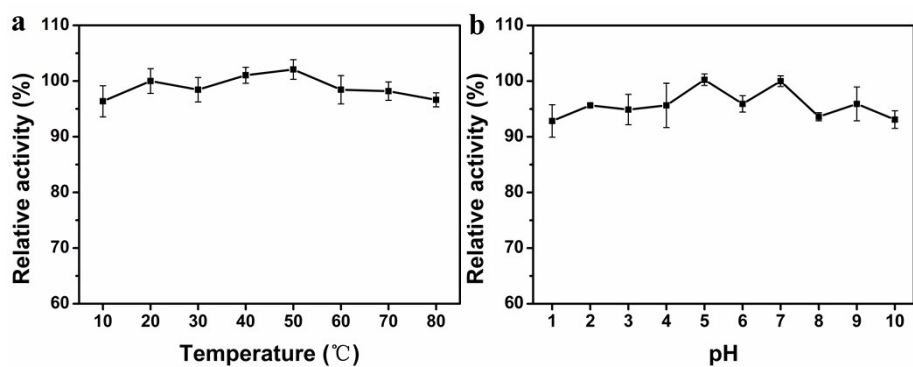


Fig. S4 The catalytic activity of Pt₂₀₀-JP NCs after incubation at different (a) temperature and (b) pH for 24h.

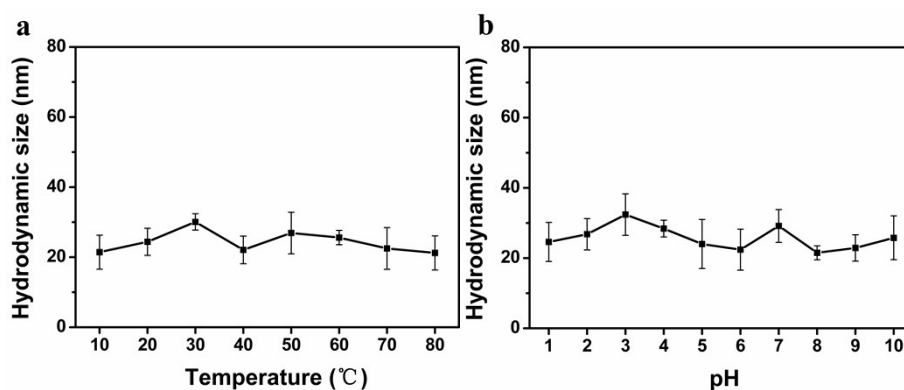


Fig. S5 The hydrodynamic size of Pt₂₀₀-JP NCs after incubation at different (a) temperature and (b) pH for 24h.

Table S1. Comparison of kinetic parameters of K_m and V_{max} .

Catalyst	Substrate	K_m [mM]	V_{max} [10^{-8} M s ⁻¹]	Reference
Pt ₂₀₀ -JP	TMB	0.719	51.33	this work
Pt ₂₀₀ -JP	H ₂ O ₂	9.344	12.49	this work
Pt/PCN	TMB	1.056	23.12	1
Pt/PCN	H ₂ O ₂	7.362	25.20	1
Pt NPs/GO	TMB	0.1864	10.02	2
Pt NPs/GO	H ₂ O ₂	221.4	12.45	2
HRP	TMB	0.434	10.00	3
HRP	H ₂ O ₂	3.70	8.71	3

Table S2. Detection of the Content of Glucose in real samples

Sample	experimental result (mM)	glucose	RSD	Sample	experimental result (mM)	RSD	normal range(mM)
		meter (mM)	(n = 3) (%)			(n = 3) (%)	
Human serum	9.2	9.1	1.10	Human saliva	0.12	2.74	0.008–0.21 ⁴
	4.9	5.1	3.14		0.17	1.35	
	6.5	6.3	2.37		0.20	3.29	

References

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