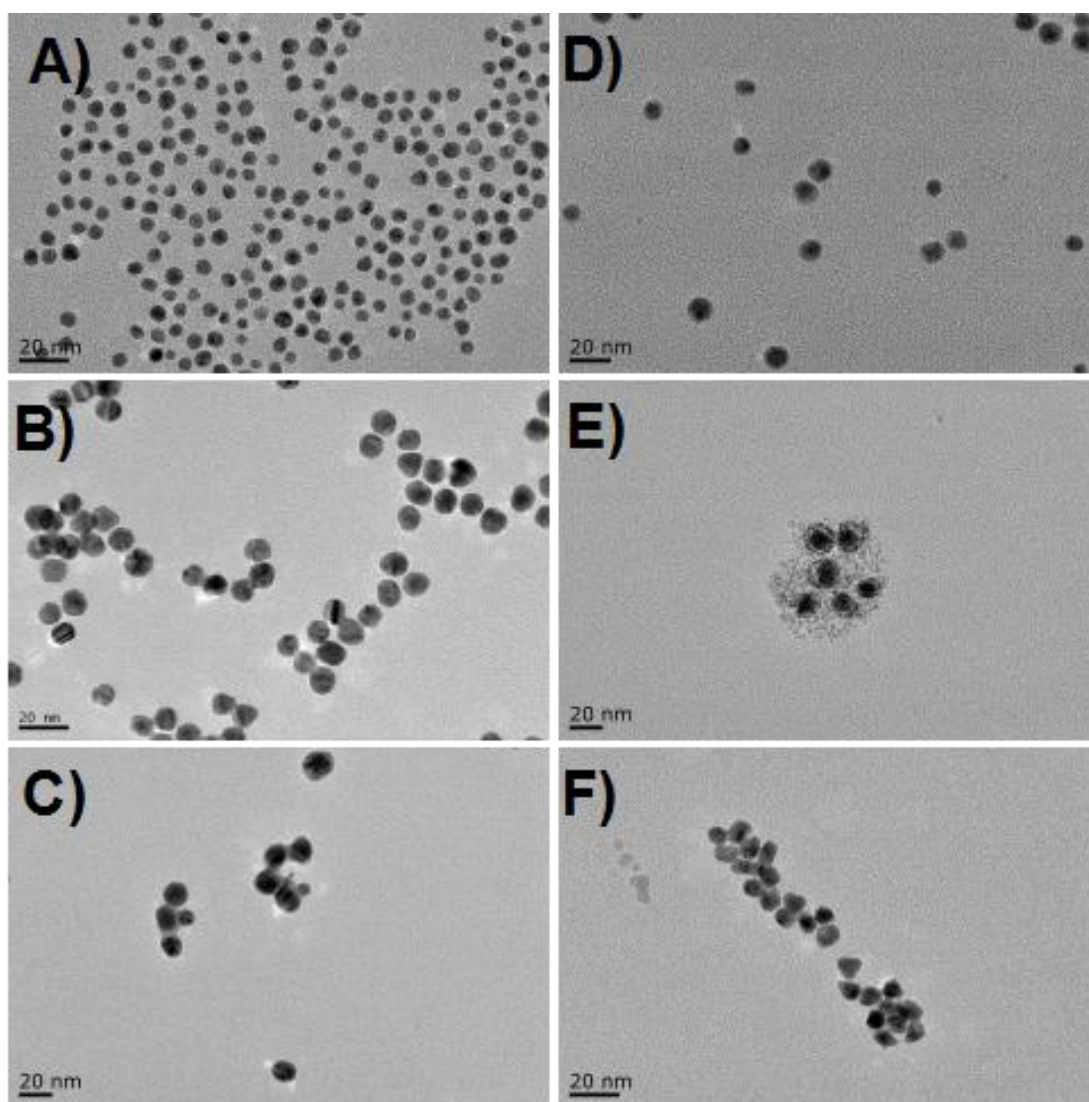


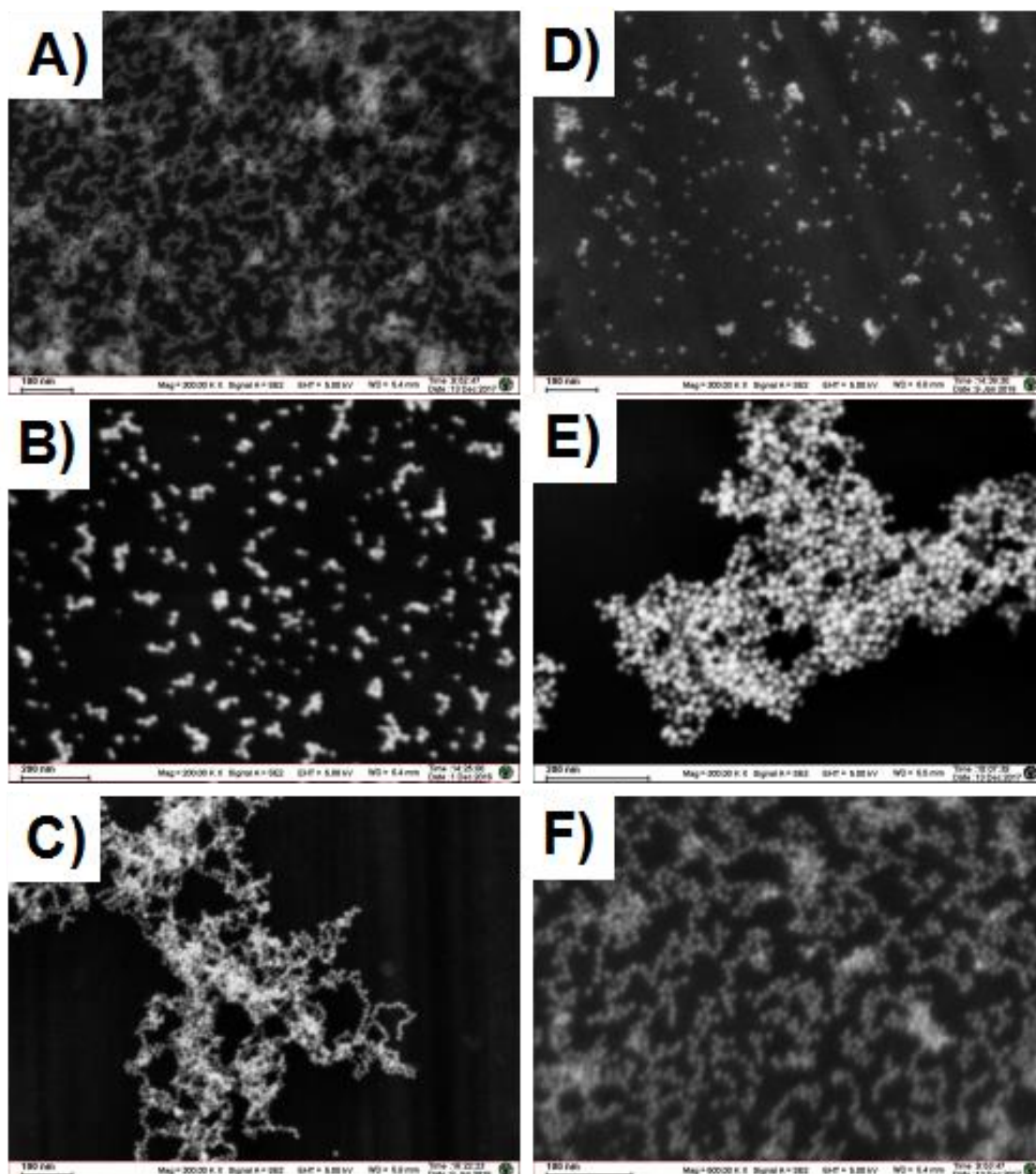
Supplementary Materials

Catalytic Gold-Platinum Alloy Nanoparticles and a Novel Glucose Oxidase Mimic with Enhanced Activity and Selectivity Constructed by Molecular Imprinting

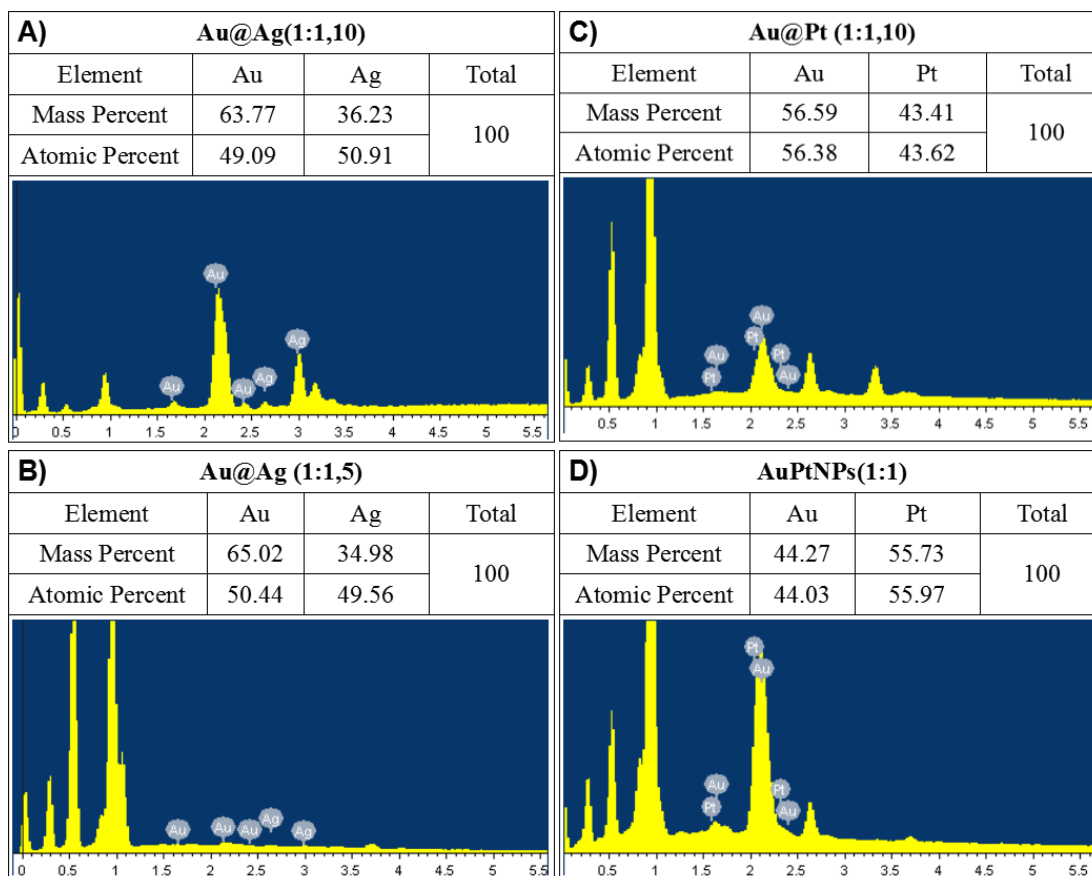
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Supplementary Figure 1. TEM images of AuNPs and different Au-based nanoparticles. (A) 5 nm AuNPs, (B) 10 nm AuNPs, (C) Au@Ag (1:1,10), (D) Au@Ag (1:1,5), (E) Au@Pt (1:1,10) and (F) AuPtNPs (1:1).



Supplementary Figure 2. SEM images of AuNPs and different Au-based nanoparticles. (A) 5 nm AuNPs, (B) 10 nm AuNPs, (C) Au@Ag (1:1,10), (D) Au@Ag (1:1,5), (E) Au@Pt (1:1,10) and (F) AuPtNPs (1:1).



Supplementary Figure 3. EDX results of different Au-based nanoparticles. (A) Au@Ag (1:1,10), (B) Au@Ag (1:1,5), (C) Au@Pt (1:1,10) and (D) AuPtNPs (1:1).

Supplementary Table 1. The average diameters and hydrodynamic sizes of AuNPs and different Au-based nanoparticles.

Nanoparticles	5 nm AuNPs	10 nm AuNPs	Au@Ag (1:1,10)	Au@Ag (1:1,5)	Au@Pt (1:1,10)	AuPtNPs (1:1)
Average Diameter/ nm	5.85	9.81	15.92	10.00	16.71	7.90
Hydrodynamic Size/ nm	14.36	16.74	37.42	16.46	60.07	16.35

Supplementary Table 2. Michaelis-Menton kinetics parameters of 10 nm AuNPs, AuPtNPs (1:1) and MIP (AuPt) for oxidation of Glu.

GOD Mimic	K_m (μM)	V_{max} ($\mu\text{M}\cdot\text{min}^{-1}$)	k_{cat} (s^{-1})	k_{cat}/K_m ($10^{-3}\mu\text{M}^{-1}\cdot\text{s}^{-1}$)	Fold of Enhancement
AuNPs	415.4423	0.5222	0.6858	1.6508	1
AuPtNPs	333.1740	1.2158	1.5967	4.7924	2.90
MIP (AuPt)	108.4592	27.7008	36.3814	335.4386	203.20