

Supplementary Materials

The Emission Mechanism of Gold Nanoclusters Capped with 11-Mercaptoundecanoic Acid, and the Detection of Methanol in Adulterated Wine Model

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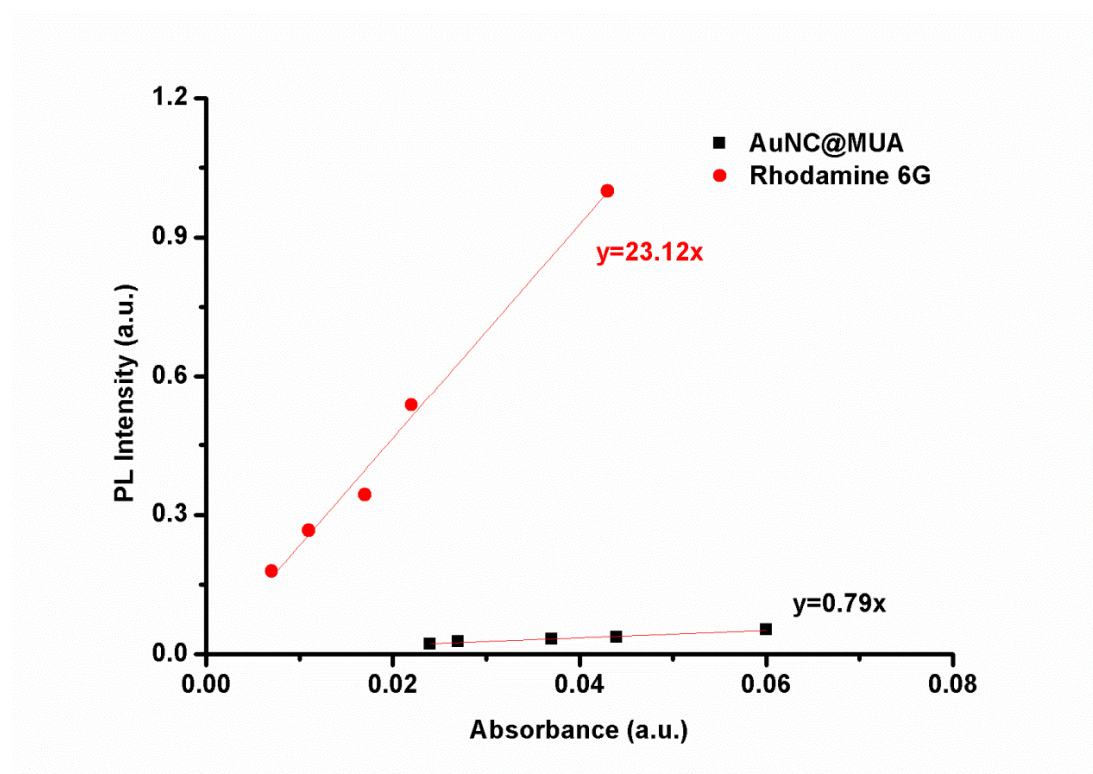


Figure S1. measurement of QY of AuNC@MUA.

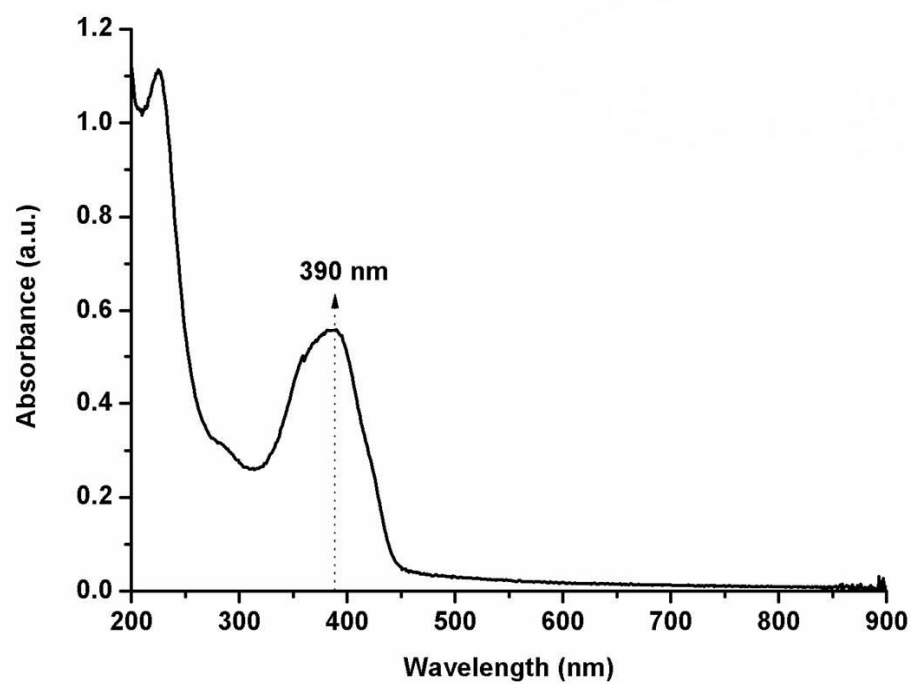


Figure S2. absorption spectrum of as-synthesized AuNC@MHA.

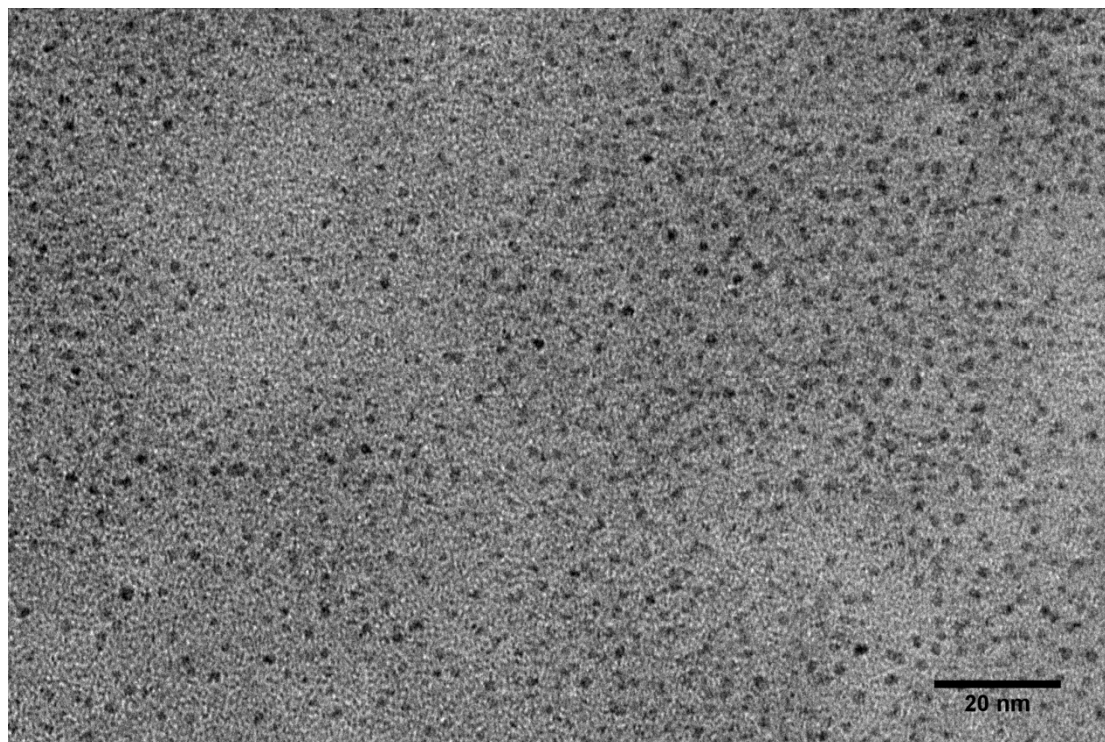


Figure S3. TEM image of as-synthesized AuNC@MHA.

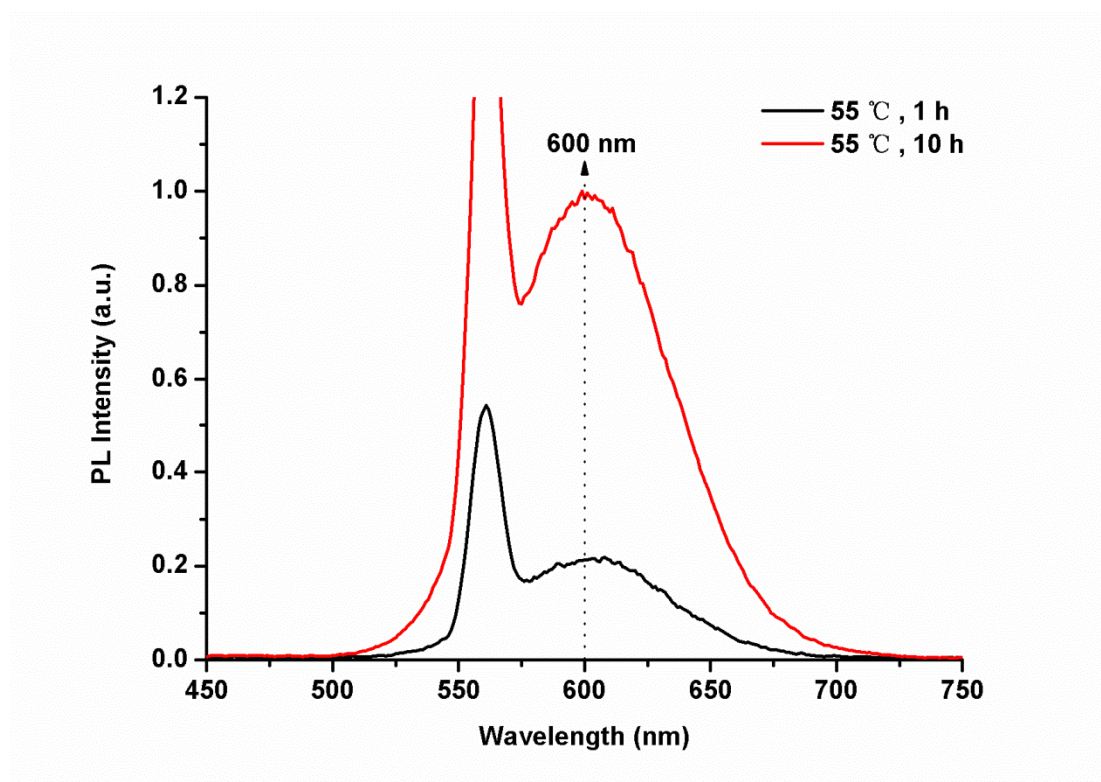


Figure S4. PL variations of AuNC@MHA_{im}, the sharp peak at 560 nm was from the scattering of the light source.

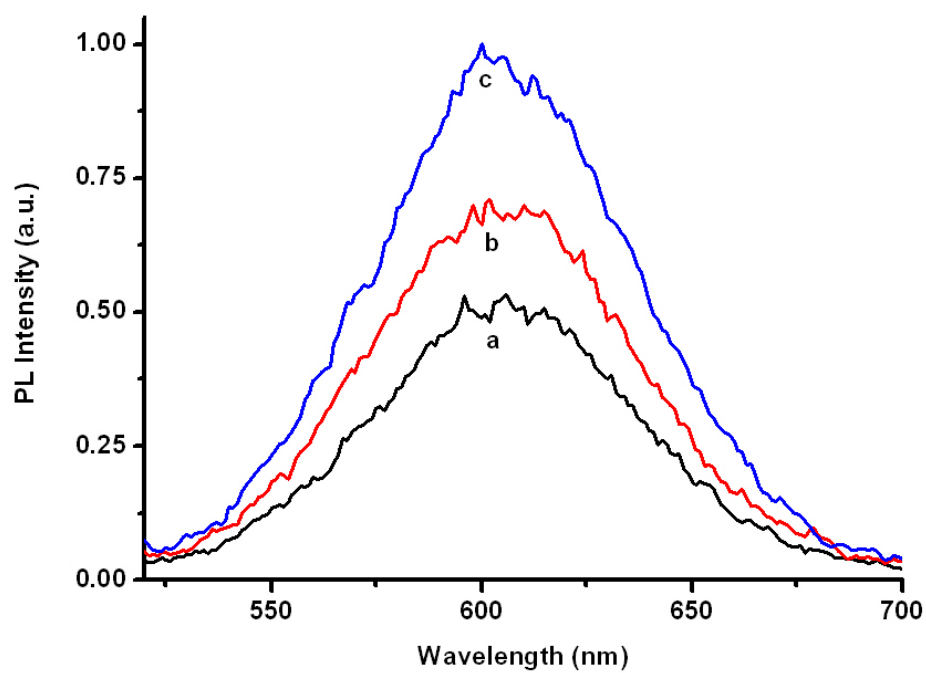


Figure S5 PL intensities under different solvents according to Table S1.

Table S1. AuNC@MUA solution dispersed in water, methanol and ethanol.

Unit (μL)	a	b	c
AuNC@MUA	100	100	100
Methanol	0	0	500
Ethanol	0	500	0
Ultrapure water	900	400	400

Table S2 Recalculated volume and concentration of methanol according to the methanol and ethanol reagents used in this study.

Unit (μL)	A	B	C	D	E	F	G
AuNC@MUA	500	500	500	500	500	500	500
Methanol	2	5	20	50	100	200	300
Ethanol	498	495	480	450	400	300	200
Total volume of methanol	2.24	5.22	20.14	49.98	99.70	199.15	298.60
Concentration of ethanol (% v/v)	49.776	49.478	47.986	45.002	40.030	30.085	20.140
Concentration of methanol (% v/v)	0.224	0.522	2.014	4.998	9.970	19.915	29.860

Table S3 The PL integral area, the average value, and standard deviation under different concentrations of methanol measure three times.

Concentration of methanol (% v/v)	0.224	0.522	2.014	4.998	9.970	19.915	29.860
PL integral area 1	29176.75	29903.28	30616.88	30905.03	33413.48	38622.26	44569.67
PL integral area 2	29735.00	30071.32	30258.05	32017.42	33998.03	39129.52	43932.59
PL integral area 3	29813.75	30452.69	30047.84	32069.56	33987.74	38923.12	44481.75
Average value	29575.50	30142.43	30307.59	31664.01	33799.75	38891.63	44328.00
Standard deviation	283.74	229.86	234.94	537.10	273.17	208.28	281.89