

SERS-Active Metal-Organic Frameworks with Embedded Gold Nanoparticles

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	BET surface area(m ² /g)	Pore volume (cm ³ /g)	Pore size (Å)
MOF-199	795	1.20	14.23
Uio-66	600	0.39	13.72
Uio-67	500	0.20	14.16

Table S1. Surface Area Measurement of the Pure MOF-199, Uio-66, Uio-67 and AuNPs/MOFs

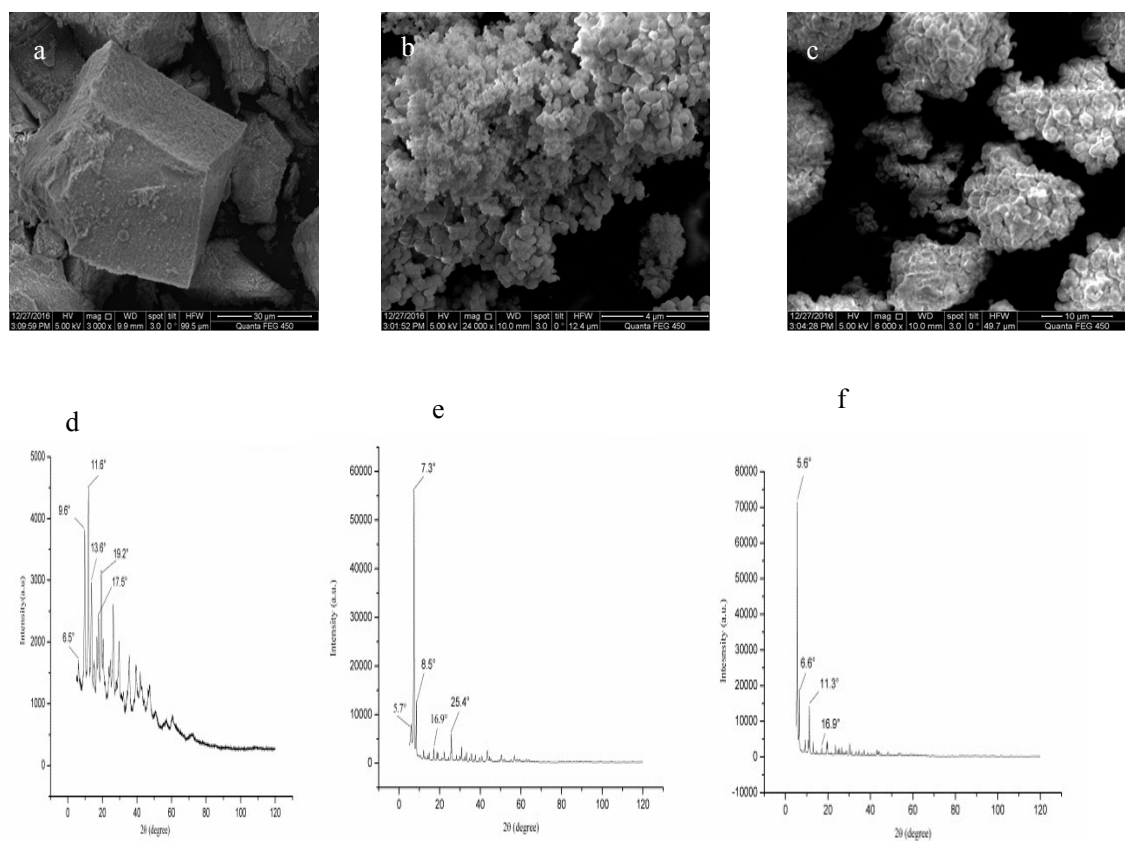


Figure S1. SEM and XRD of MOF-199(a,d), Uio-66(b,e), Uio-67(c,f)

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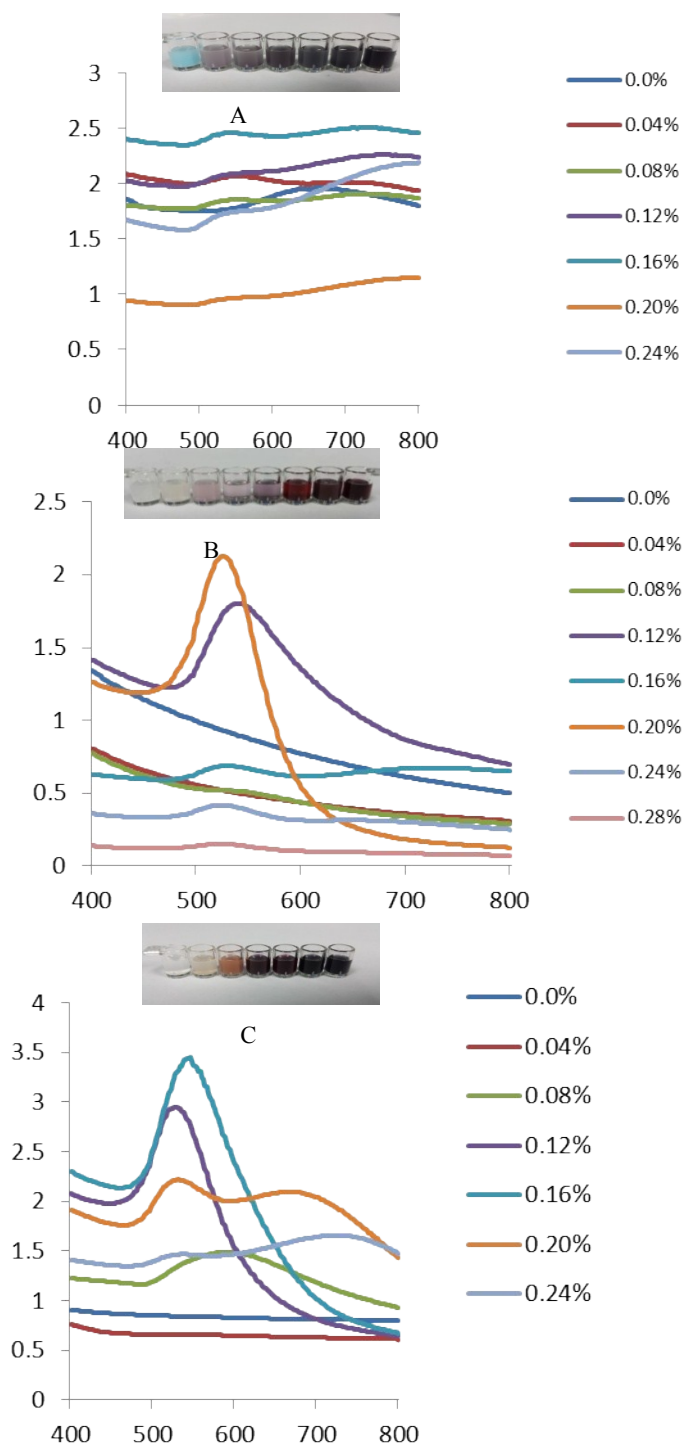


Figure S2. The UV-vis absorption spectra of the aqueous dispersion of MOF-199 and AuNPs/MOF-199 (A), Uio-66 and AuNPs/Uio-66, Uio-67 and AuNPs/Uio-67 with the increase of sodium citrate concentrations (0.04%, 0.08%, 0.12%, 0.16%, 0.20%, 0.24%), (0.04%, 0.08%, 0.12%, 0.16%, 0.20%, 0.24%, 0.28%), (0.04%, 0.08%, 0.12%, 0.16%, 0.20%, 0.24%), (w/v), respectively

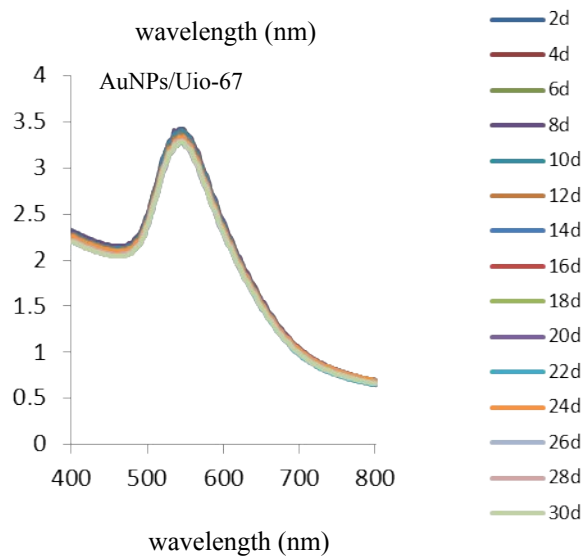
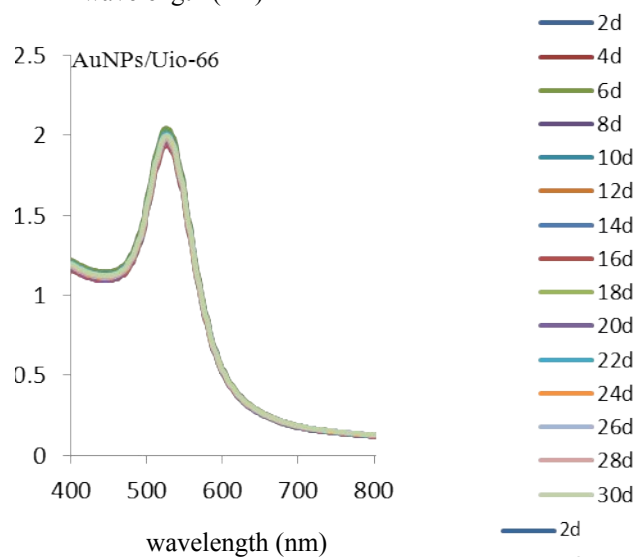
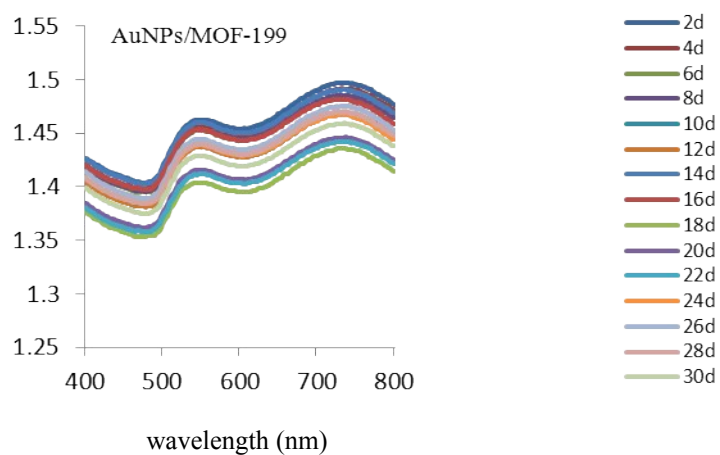


Figure S3. UV-vis absorption spectra of the aqueous dispersion AuNPs/MOFs within one month (once detection every two days)

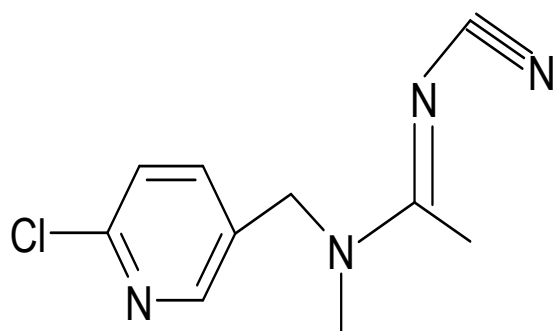


Figure S4. The molecule structure of acetamiprid

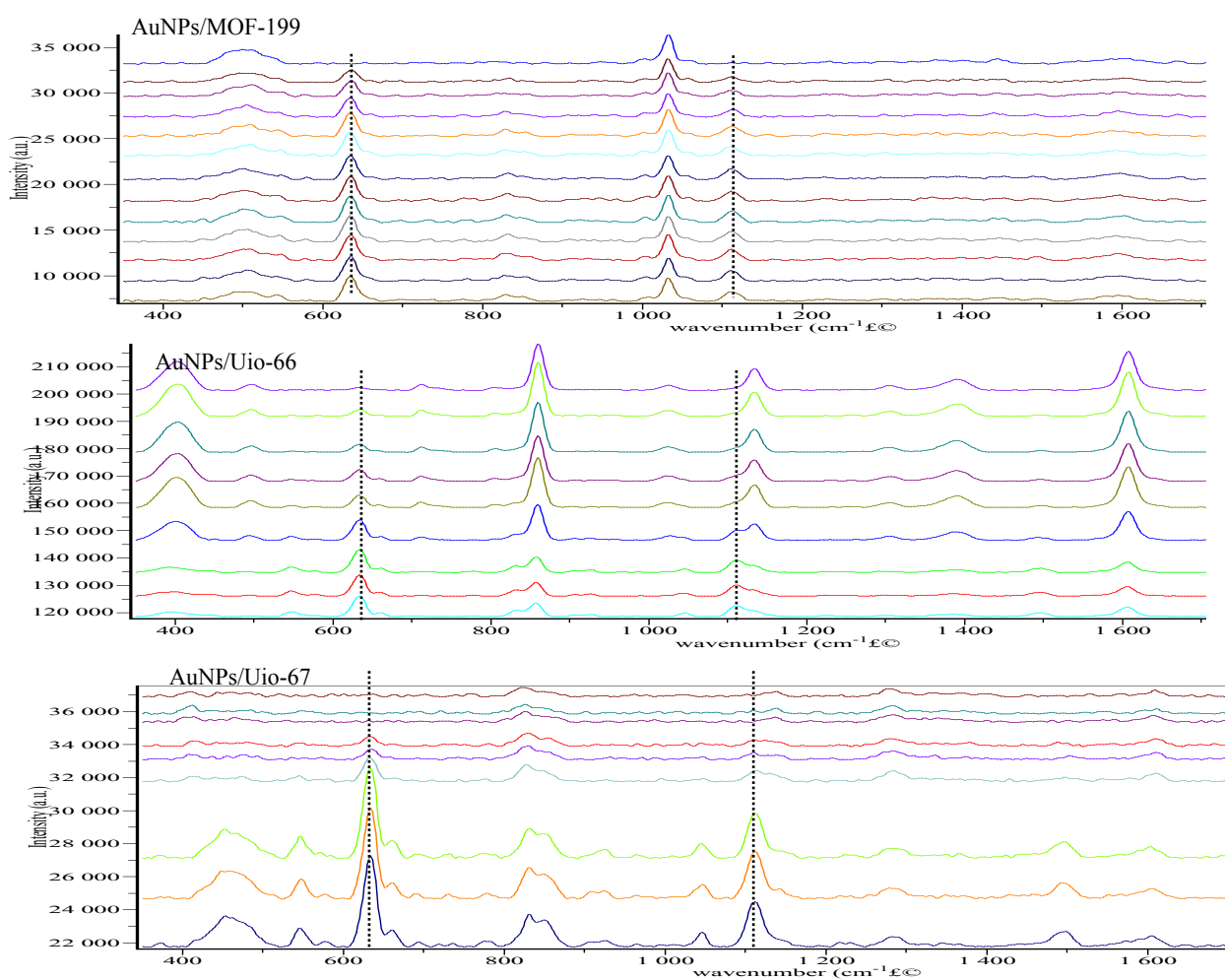


Figure S5. The spectral intensity of characteristic peaks within 65min for AuNPs/MOF-199, 140min for AuNPs/Uio-66 and 180min for AuNPs/Uio-67 (the detection was performed every 5 mins, 15mins and 20 mins for AuNPs/MOF-199, AuNPs/Uio-66, and AuNPs/Uio-67, respectively)

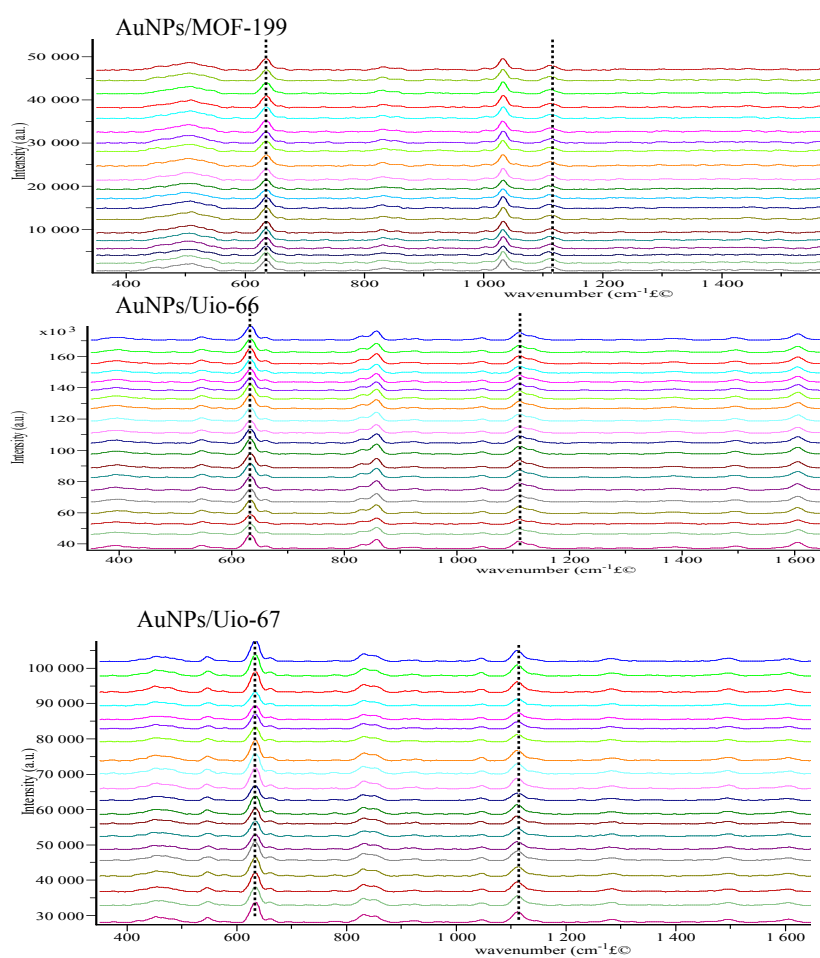


Figure S6. The spectral intensity of characteristic peaks within 40 days (from top to bottom: 2d, 4d, 6d, 8d, 10d, 12d, 14d, 16d, 18d, 20d, 22d, 24d, 26d, 28d, 30d, 32d, 34d, 36d, 38d, 40d)