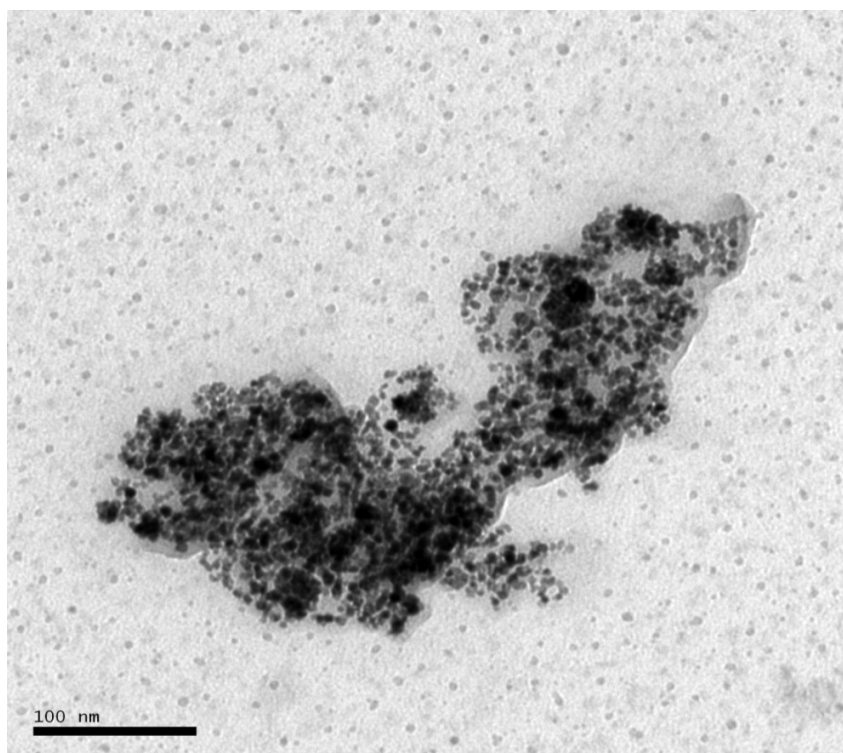
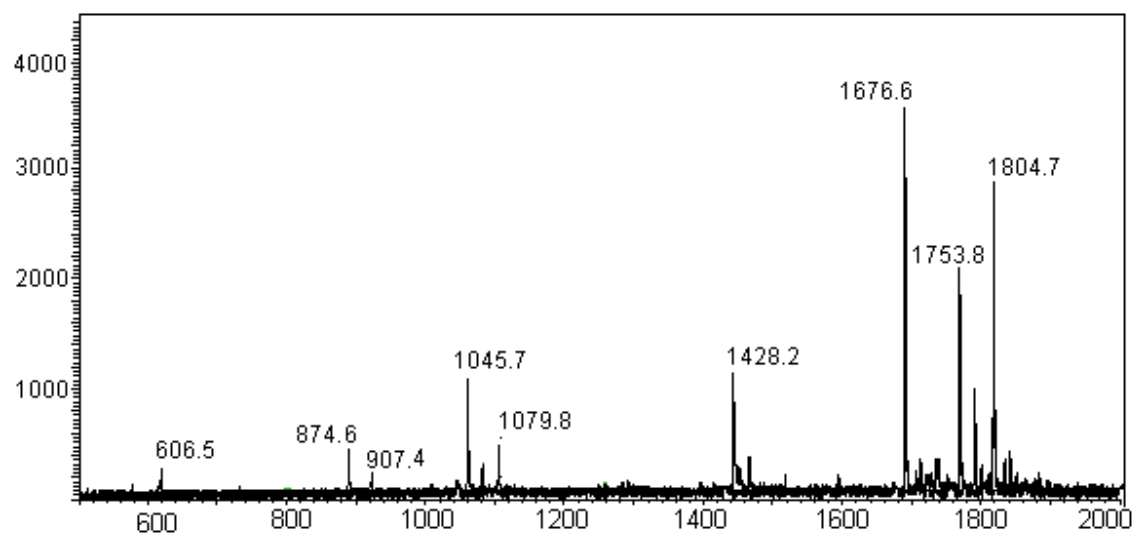


**Figure S1.** UV-Visible spectra of PtNPs



**Figure S2.** TEM images of PtNPs



**Figure S3.** MALDI-MS spectra of overnight in-solution tryptic digestion of lysozyme without PtNPs and enzyme-to-protein ratio 1:30 (w/w).

**Table S1.** Peptide sequence for microwave-assisted digested lysozyme protein using PtNPs in MALDI-TOF-MS, shown in figure 5.

Observed ( $m/z$ ) [M+H] <sup>+</sup>	Peptide sequence
606.5	KVFGR
874.4	HGLDNYR
907.5	CELAAAMK
923.5	CELAAAMK
1045.8	GTDVQAWIR
1079.8	CELAAAMKR
1428.1	FESNFNTQATNR
1505.7	WWCNDGRTPGSR
1676.5	IVSDGNGMNAWVAWR
1753.8	NTDGSTDYGILQINSR
1804.6	KIVSDGNGMNAWVAWR

**Table S2.** Peptide sequence for microwave-assisted digested BSA protein using PtNPs in MALDI-TOF-MS, shown in figure 6.

Observed ( $m/z$ ) [M+H] <sup>+</sup>	Peptide sequence
927.5	YLYEIAR
1001.4	ALKAWSVAR
1042.7	KQTALVELLK
1163.6	LVNELTEFAK
1195.5	CASIQKFGER
1249.6	FKDLGGEENFK
1479.8	LGEYGFQNALIVR
1559.4	EYEATLEECCA
1692.9	AEFVEVTKLVTDLTK
1730.8	QEPERNECFLSHK
1880.9	RPCFSALTPDETYVPK
2247.9	ETYGDMADCCEKQEPER
2472.5	QNCDQFEKLG EYGFQNALIVR