

We studied the fluorescence excitation spectra of peptideAuNCs. When the excitation wavelength is 560 nm, the peptideAuNCs has strong fluorescence (Fig. 1). Compared with the fluorescence spectra of peptide and AuNCs at 560 nm excitation wavelength, peptide and AuNCs have no fluorescence emission peak at this excitation wavelength, only peptide-AuNCs show the excellent fluorescence property at 560 nm. Therefore, this results demonstrate that the peptide-AuNCs were successfully synthesized.

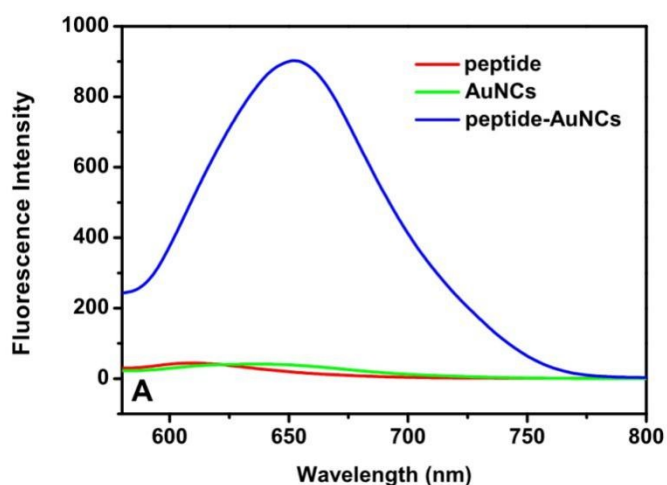


Fig.1 The fluorescence spectra of peptide, AuNCs and peptide-AuNCs when the excitation wavelength was at the 560 nm

Then the decreased value of Zeta potential implies that peptide with negative charge are incorporated on the AuNCs (Fig. 2). The binding affinity of coordination covalent interaction between peptide and AuNCs on the AuNCs surfaces leads to the formation of peptide-AuNCs, which can be identified by the decreased of Zeta potential of AuNCs.

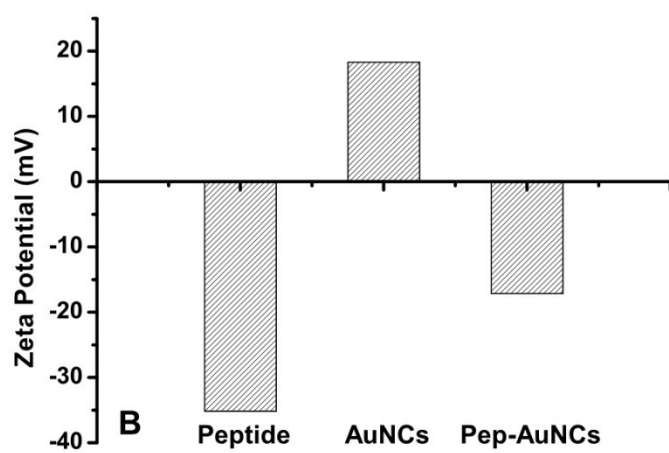


Fig.2 Zeta potential of the peptide, AuNCs and peptide-AuNCs