Electronic Supplementary Information (ESI) for Nanoscale

Ultrafast Colorimetric Determination of Predominant Protein Structure Evolution with Gold Nanoplasmonic Particles

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Supporting Information

Table of Contents

- Supplementary Figures S1-S5
Fig. S1. Real-time monitoring and kinetic profiles of the Aβ concentration- and type-dependent aggregation with ultraviolet-visible (UV-Vis) spectroscopy. (A) Aβ (1-40) peptide. (B) Aβ (1-42) peptide. Real-time spectral changes in the mixture solution of Aβ peptides and gold nanoplasmonic particles (GNPs) were measured under acidic conditions. Various concentrations of the peptides were tested from 100 nM to 10 μM. The UV-Vis spectra were collected every min for 10 min. The arrows indicate the trends in the real-time spectral shift at the two plasmon bands of the intrinsic peak of GNPs (around 520 nm) and a newly formed larger aggregation indicator peak (around 650 nm). (C) Aβ (1-40) peptide. (D) Aβ (1-42) peptide. The concentration-dependent kinetic profiles for Aβ aggregation that were described by the changes in relative absorbance ratios ($A_{650\text{nm}}/A_{520\text{nm}}$).
Fig. S2. The real observed color transition and its conceptual illustration for protein aggregation under different pH conditions. (A) Acidic conditions (pH 2~3). (B) Basic conditions (pH 11~12).
**Fig. S3.** Plots for colorimetric responses showing the different protein aggregation kinetics according to the size of nanoparticles. (A) 5-nm GNPs, (B) 10-nm GNPs, (C) 17-nm GNPs, (D) 50-nm GNPs, (E) 100-nm GNPs, and (F) Corresponding color changes observed after 2 minutes.
Fig. S4. Plots for colorimetric responses showing the different protein aggregation kinetics according to the incubation temperature. (A) 25 °C, (B) 36.5 °C, (C) 45 °C, and (D) Corresponding color changes observed after 7 hours.
Fig. S5. Plots for colorimetric responses showing the different protein aggregation kinetics under different pH levels. (A) pH 2, (B) pH 5, and (C) Corresponding color changes observed after 2 minutes.