

SUPPORTING INFORMATION

Multifunctional inhibitors of β -amyloid aggregation based on MoS₂/AuNRs nanocomposites with high near-infrared absorption

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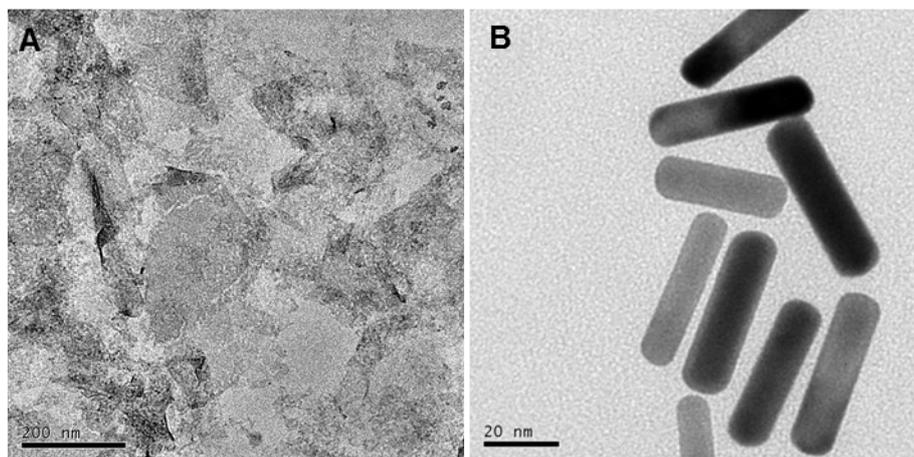


Fig.S1 TEM images of MoS₂ nanosheets (A) and AuNRs (B).

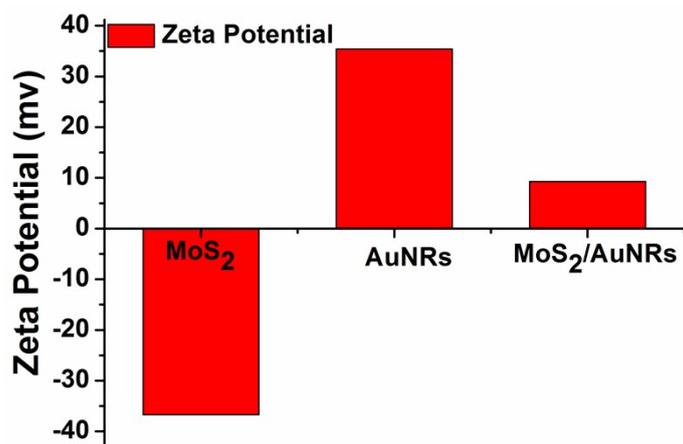


Fig.S2 Zeta Potentials of MoS₂, AuNRs and MoS₂/AuNRs.

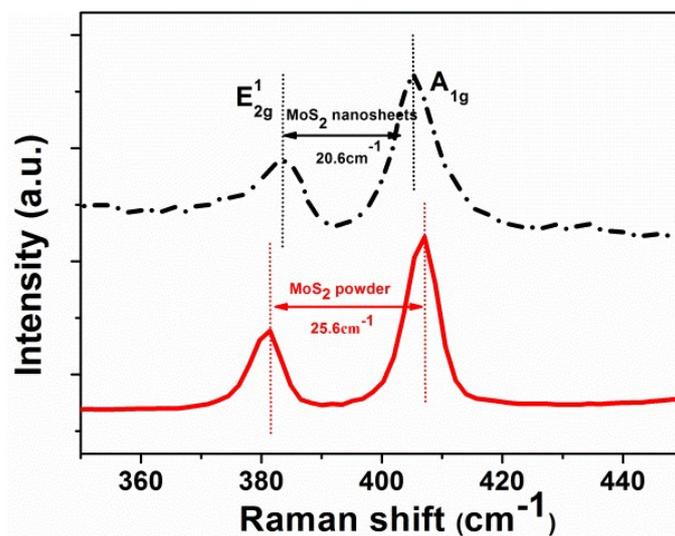


Fig.S3 Raman spectra of MoS₂ powder and nanosheets.

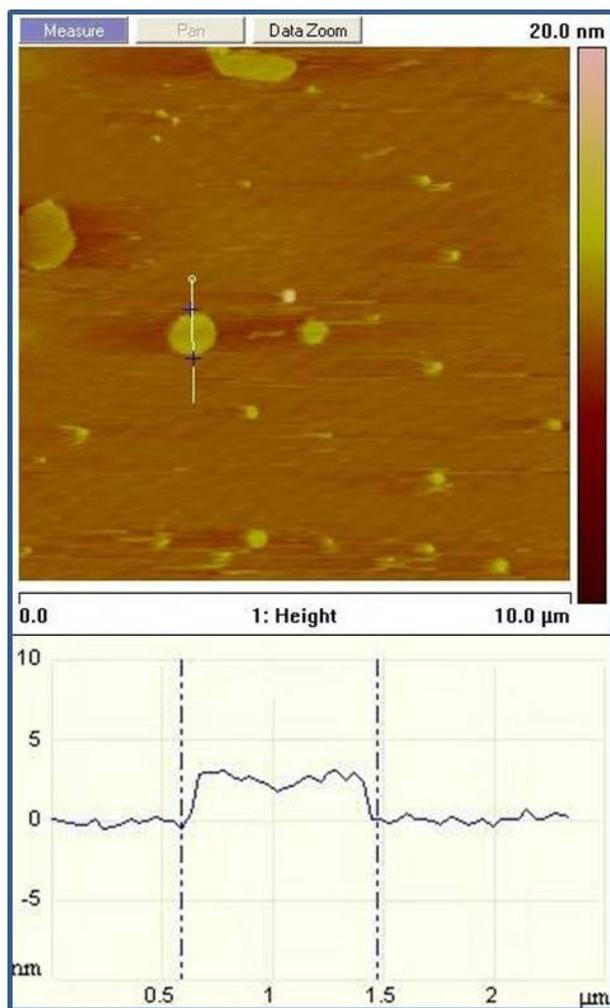


Fig.S4 AFM image of MoS₂ nanosheets.

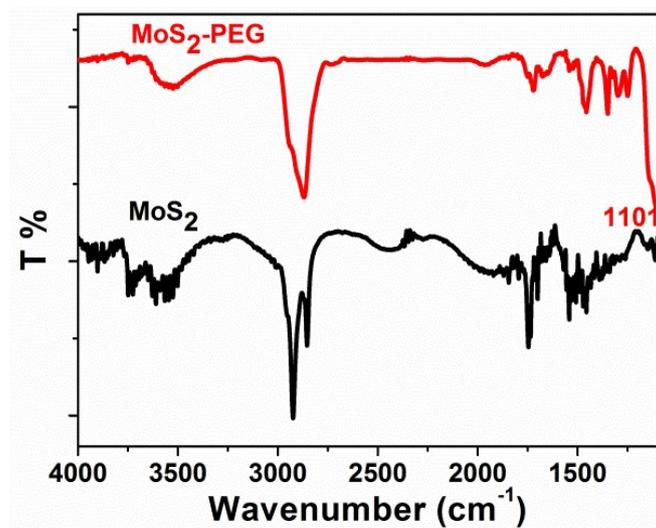


Fig.S5 FT-IR spectra acquired in MoS₂ nanosheets before and after PEGylation.

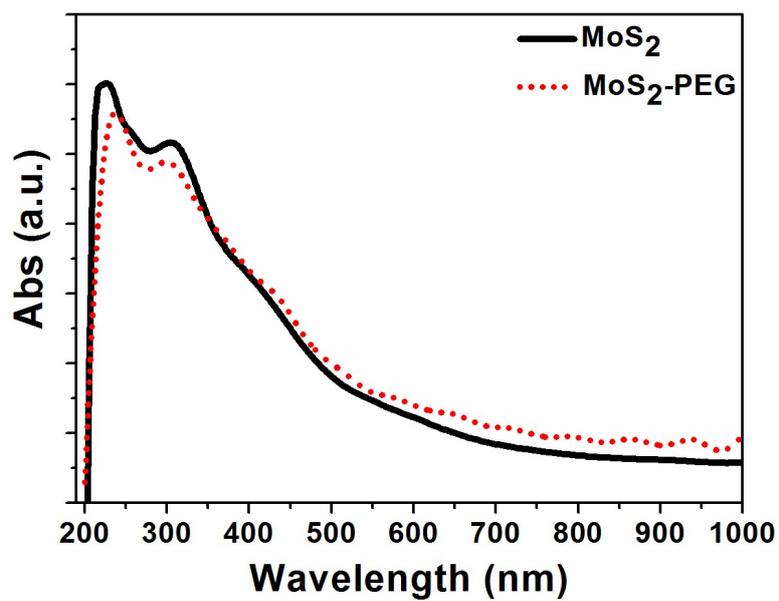


Fig.S6 UV-vis-NIR spectra of MoS₂ nanosheets before and after PEGylation

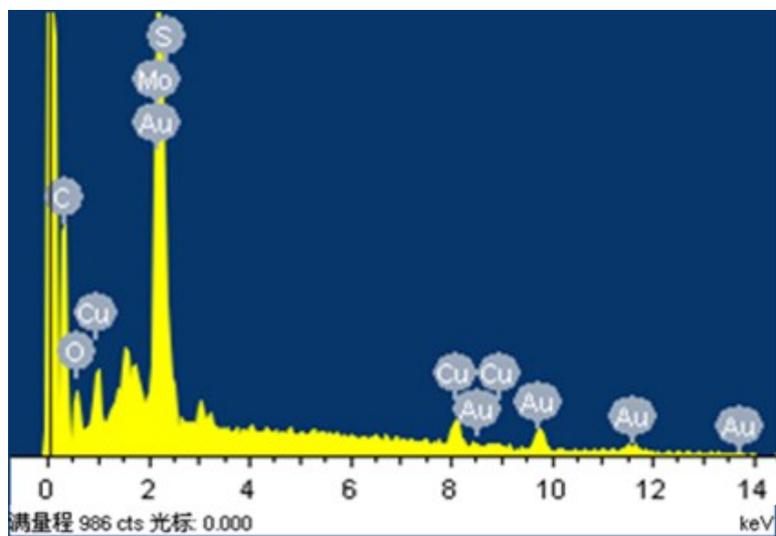


Fig.S7 EDX spectrum of MoS₂/AuNRs.

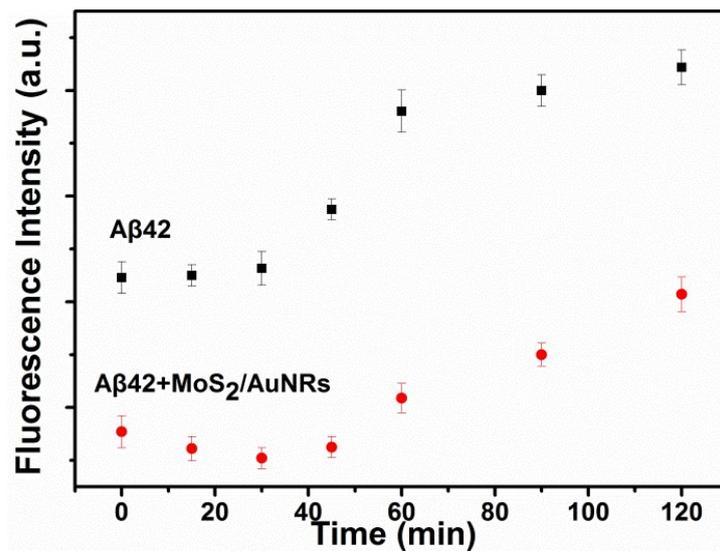


Fig.S8 ThT fluorescence spectra of Aβ42 in the absence and presence of MoS₂/AuNRs nanocomposites

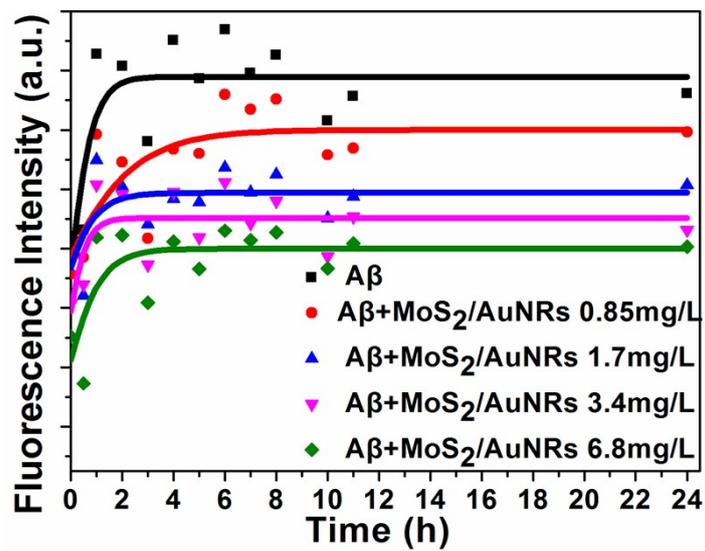


Fig.S9 ThT fluorescence spectra of Aβ peptides incubated with different concentration of MoS₂/AuNRs.

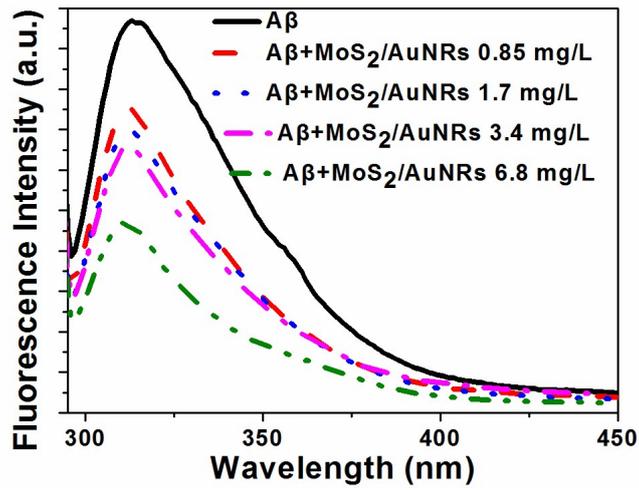


Fig.S10 Tyrosine spectra of A β monomers incubated with different concentration of MoS₂/AuNRs for 48 h.

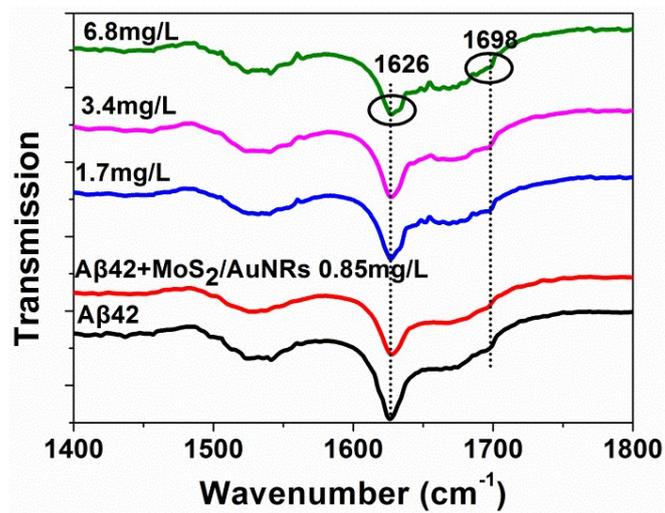


Fig.S11 FT-IR spectra of A β monomers incubated with different concentration of MoS₂/AuNRs for 48 h.

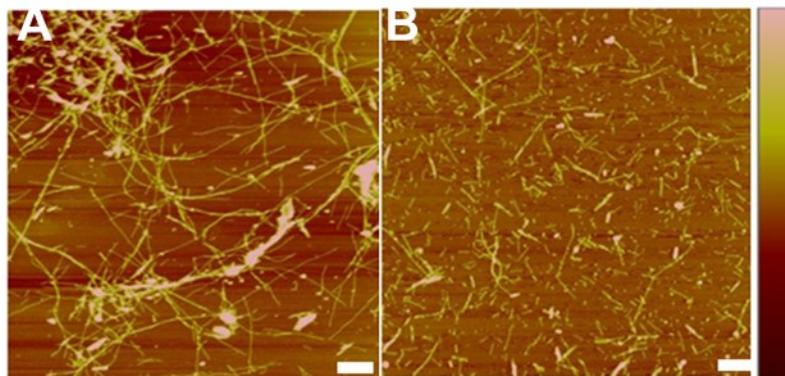


Fig.S12 AFM images of A β fibrils alone (A) and in the presence of MoS₂/AuNRs, respectively. The scale bar is 2 μ m.

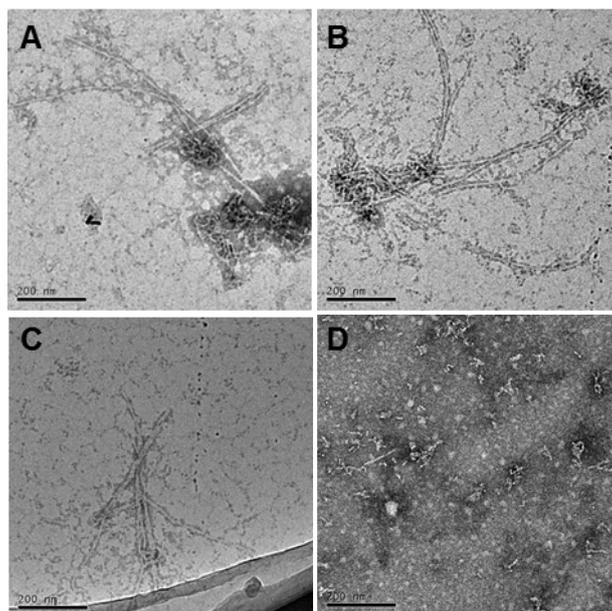


Fig.S13 TEM images of A β fibrils after 7 day-incubated with A β 42 monomers with different concentration of MoS₂/AuNRs. (A) 0.85 mg L⁻¹ (B) 1.7 mg L⁻¹ (C) 3.4 mg L⁻¹ (D) 6.8 mg L⁻¹

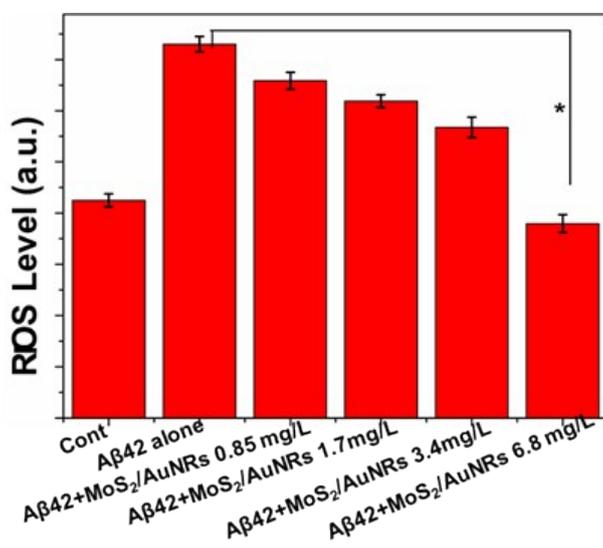


Fig.S14 ROS level of A β monomers incubated with different concentrations of MoS₂/AuNRs for 48 h.

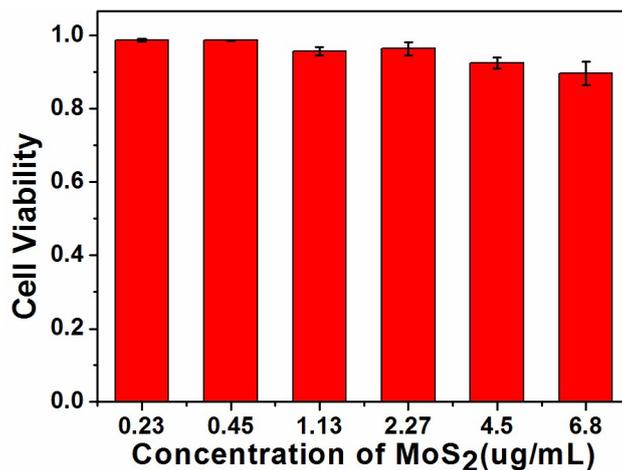


Fig.S15 Viability of SY5Y cells measured via MTT assay after incubation with different concentration of MoS₂ nanosheets.

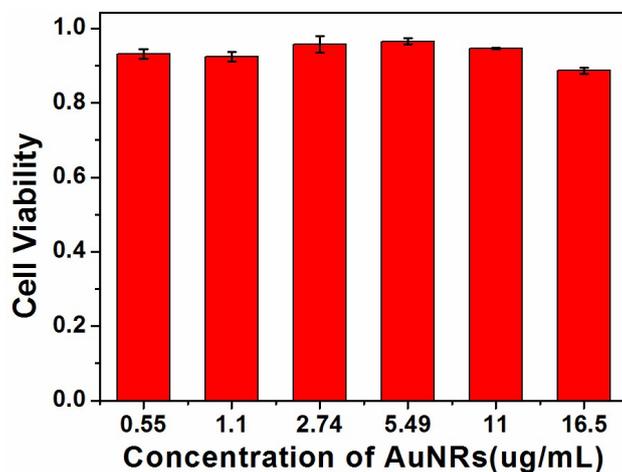


Fig.S16 Viability of SY5Y cells measured via MTT assay after incubation with different concentration of AuNRs.

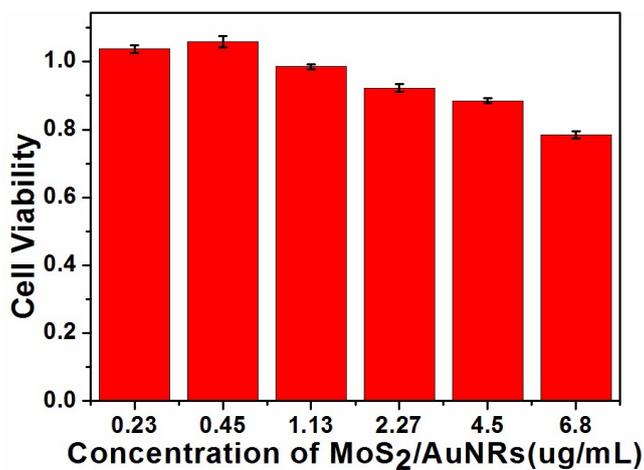


Fig.S17 Viability of SY5Y cells measured via MTT assay after incubation with different concentration of MoS₂/AuNRs nanocomposites.

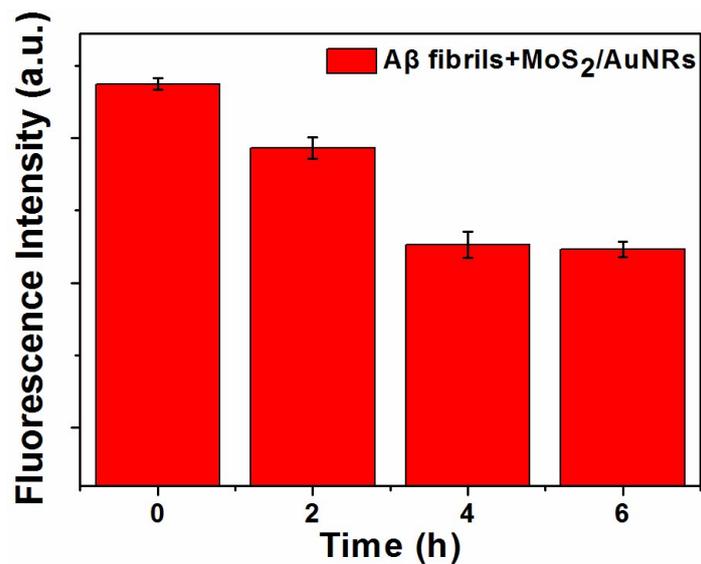


Fig.S18 Disaggregation effects of Aβ fibrils in the presence of MoS₂/AuNRs with incubation time increasing.

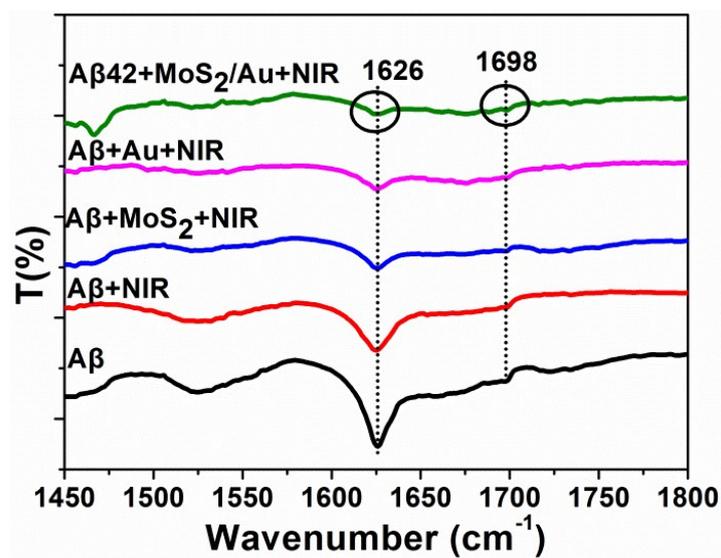


Fig.S19. FT-IR spectra of Aβ₄₂ fibrils after 2 h incubation with AuNRs, MoS₂ or MoS₂/AuNRs with or without 10 min NIR irradiation. The Aβ₄₂ fibrils have been incubated for 48 h.

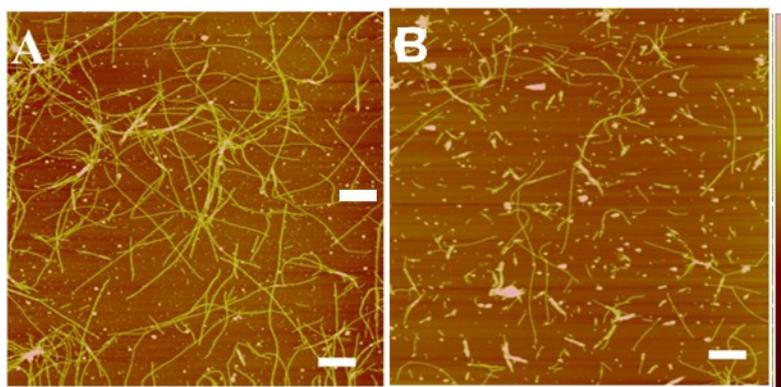


Fig.S20. AFM images of the Aβ42 fibrils alone (A) and treated with MoS₂/AuNRs (B). Both samples were then irradiated by NIR for 10 min. The scale bar is 2 μm.

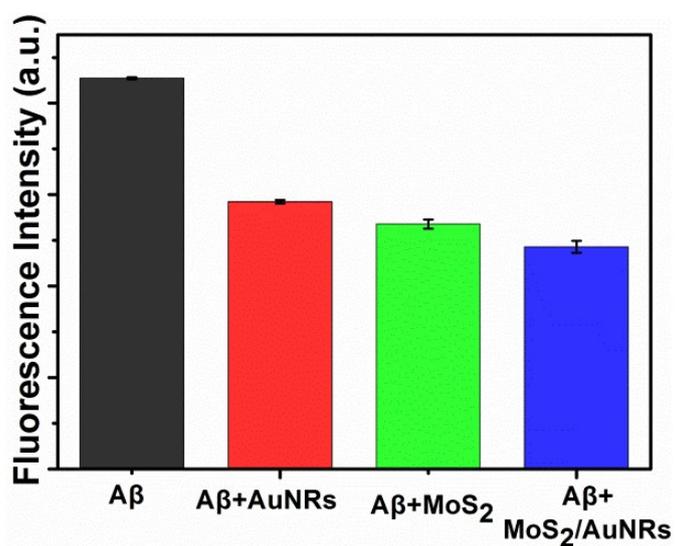


Fig.S21. Tyrosine spectra of Aβ42 fibrils after 2 h incubation with AuNRs, MoS₂ or MoS₂/AuNRs. The Aβ42 fibrils have been incubated for 48 h.