

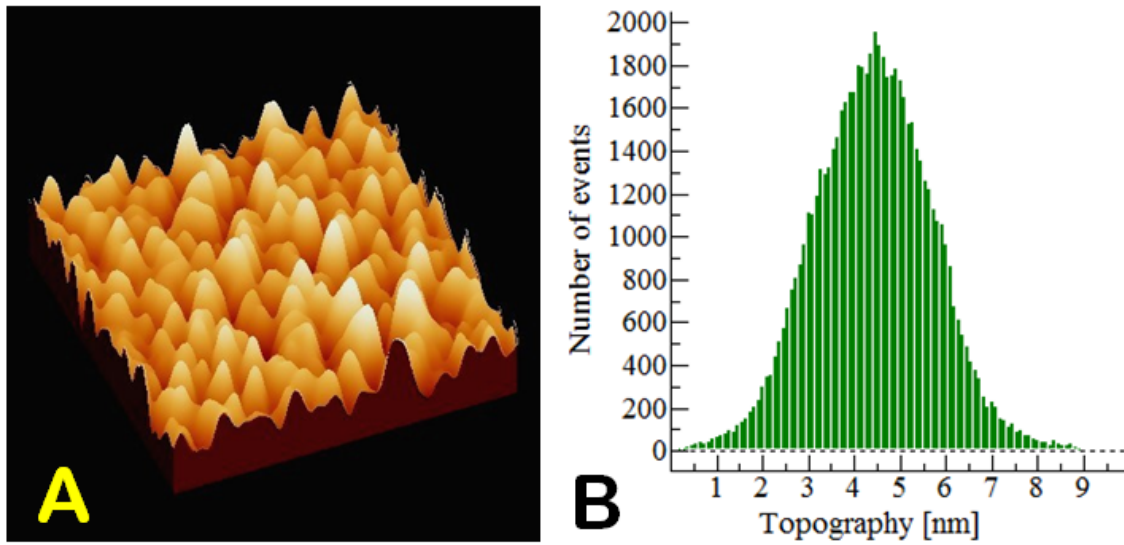
*Supplementary Information*

**Self Assembly of Stable Oligomeric and Fibrillar  
Aggregates of A $\beta$  Peptides Relevant to  
Alzheimers' Disease: Morphology Dependent  
Cu/Heme Toxicity and Inhibition of PROS  
Generation**

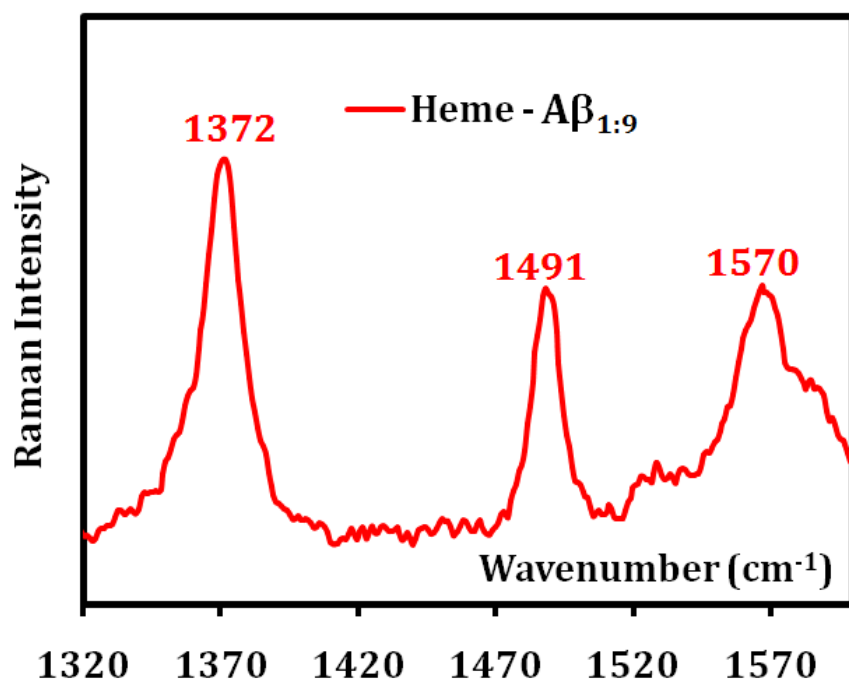
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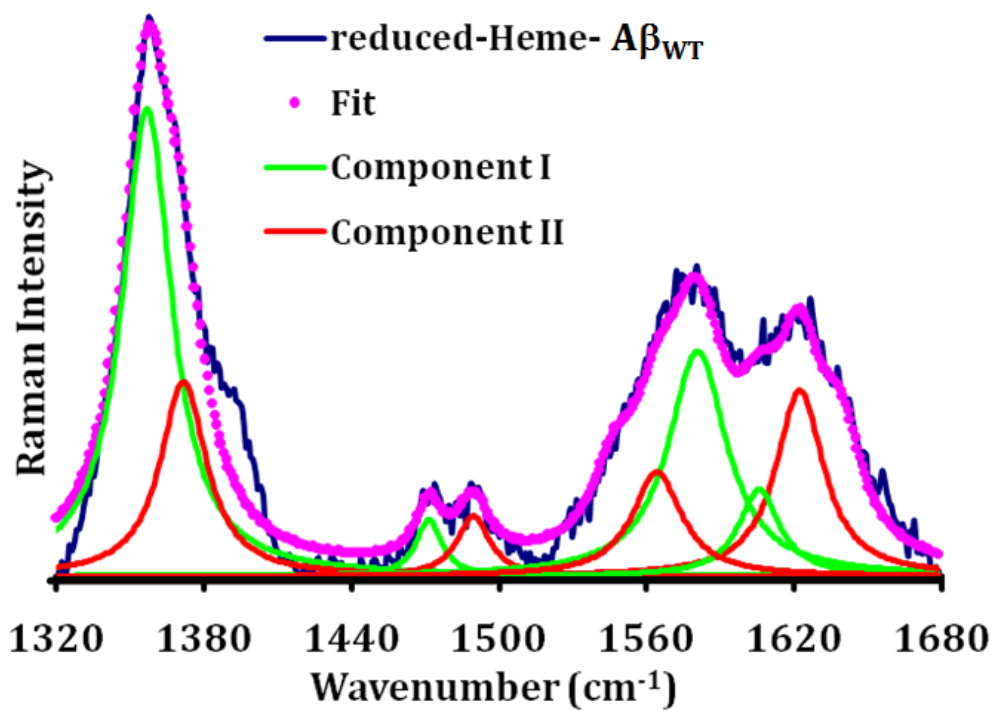
## Figures



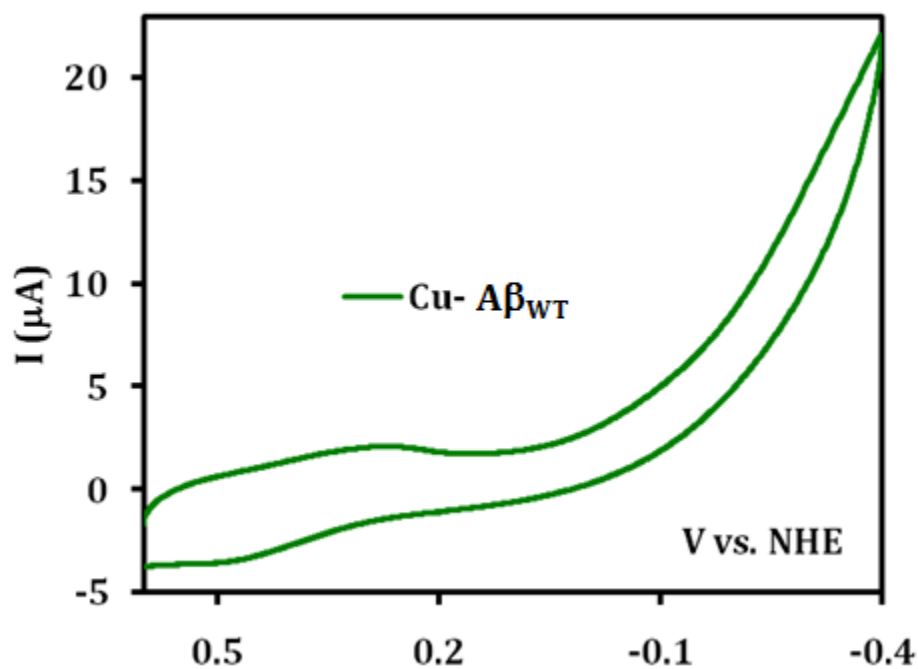
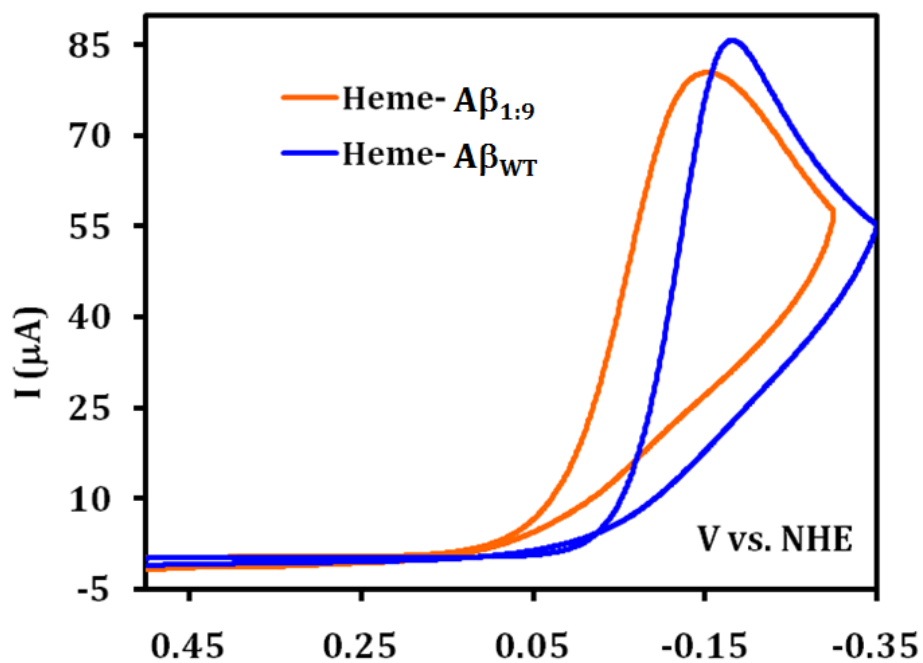
**Supplementary Figure S1.** (A) AFM image of  $A\beta_{Cys}$  assembled on Au electrode showing isolated structures of the  $A\beta_{Cys}$  peptides in presence of  $C_8SH$  as diluent ( $A\beta_{C_8SH}$ ). (B) is the height distribution profile diagram of the same.



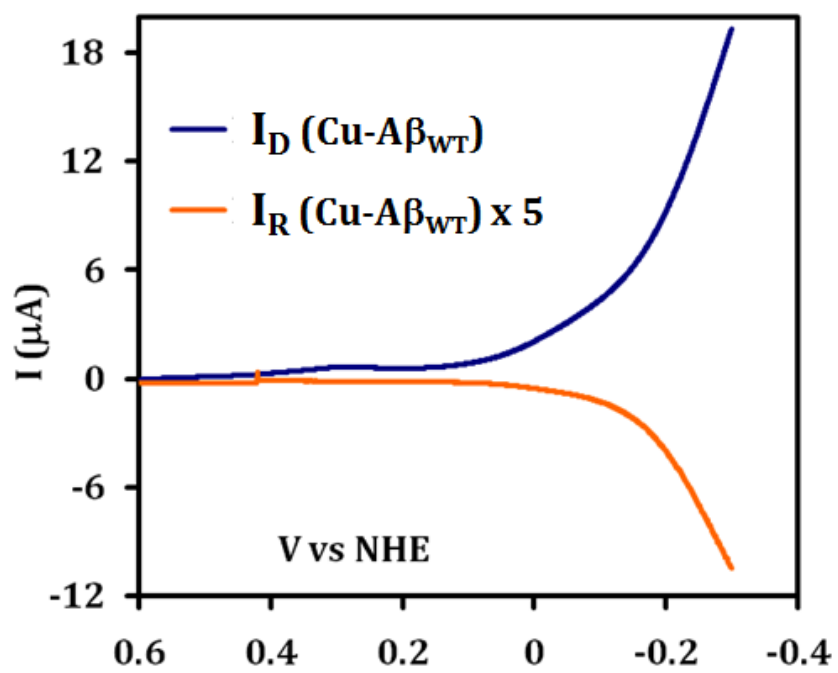
**Supplementary Figure S2.** SERRS-RDE data of heme-Aβ<sub>1:9</sub> modified electrodes in pH 7 buffer under oxidizing potential (i.e. resting state).



**Supplementary Figure S3.** SERRS-RDE data of heme-A $\beta_{WT}$  at a reducing potential of -0.3 V vs. NHE. The Lorentzian fits of the marker bands show the two components, HS Fe<sup>II</sup> (green) and residual HS Fe<sup>III</sup> (red) species.



**Supplementary Figure S4.** CV data of heme- $A\beta_{WT}$  (blue) and heme- $A\beta_{1:9}$  (orange) (top), and Cu- $A\beta_{WT}$  (bottom) modified electrodes in air saturated pH 7 buffer at a scan rate of 50 mV/s using Ag/AgCl as reference and Pt wire as counter electrodes respectively.



**Supplementary Figure S5.** RRDE plots of Cu bound species showing the disc ( $I_D$ ) and ring ( $I_R$ ) currents.