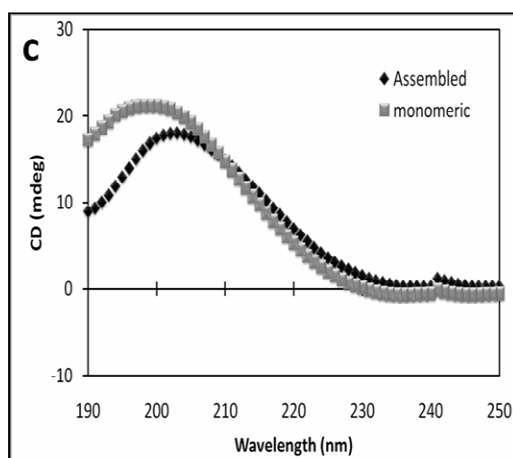
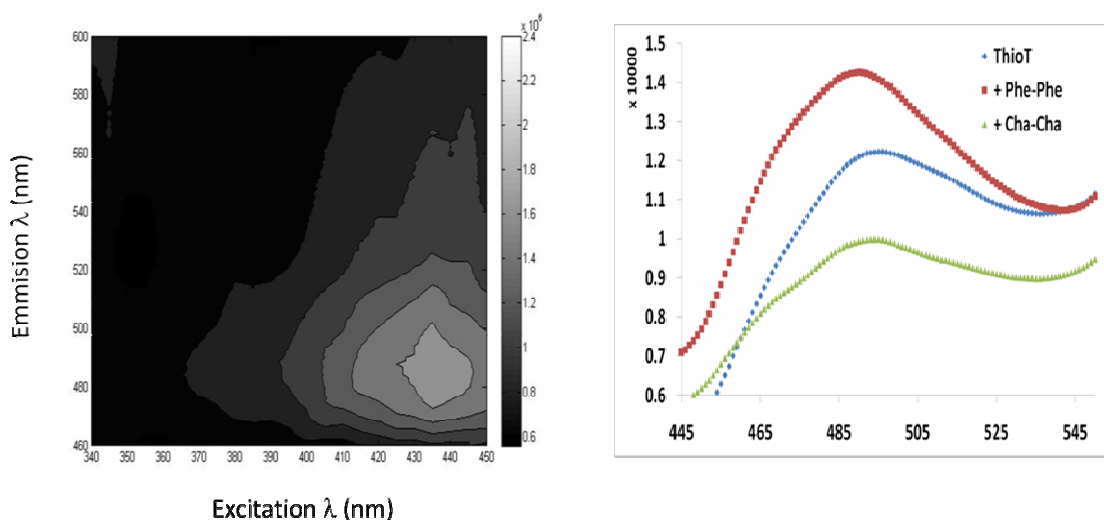


Supplementary Material

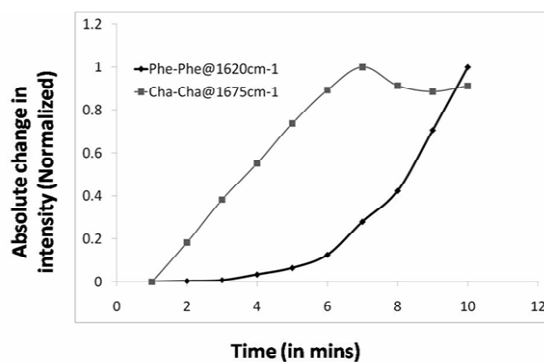
Sup 1: CD spectra of Ile-Ile in assembled and non-assembled states



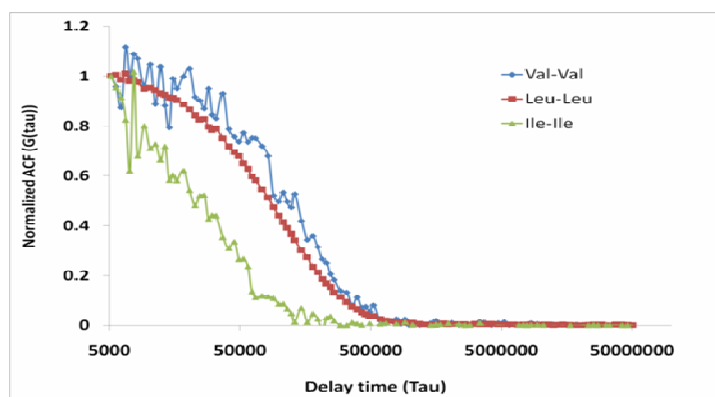
Sup 2: (Left) Excitation-Emission map of Thioflavin T bound to Phe-Phe and (Right) graph showing the enhancement of Thioflavin T fluorescence bound to Phe-Phe when excited at 420nm.



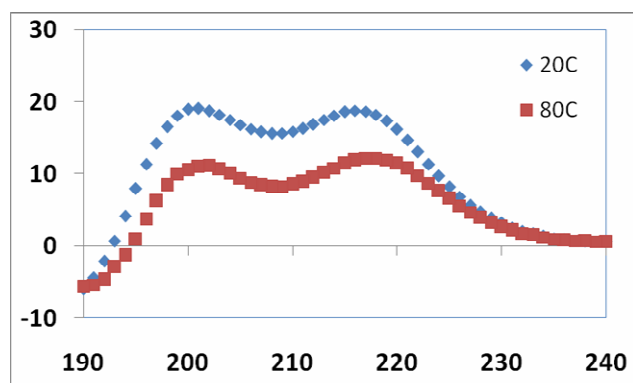
Sup 3: Kinetics of H-D exchange of the Amide I band monitored by FTIR



Sup 4: Correlation curves obtained from DLS experiments of self-assemblies of Val-Val, Leu-Leu and Ile-Ile dipeptides (1mg/ml in DDW).

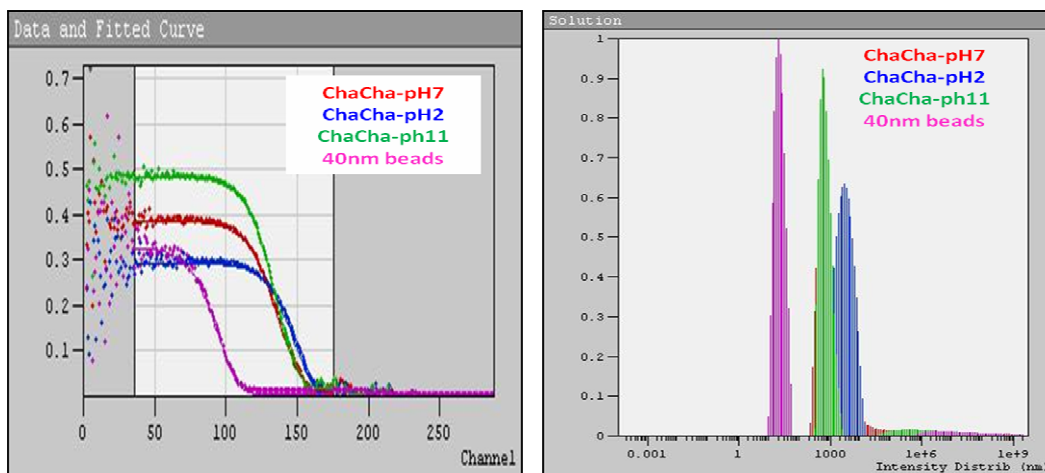


Sup 5: CD of Phe-Phe assemblies at 20°C and 80°C



(CD spectra of monomeric Phe-Phe dipeptide lacks the 200nm band. See Figure 3a)

Sup 6: Effect of pH on the stability of Cha-Cha nanovesicles

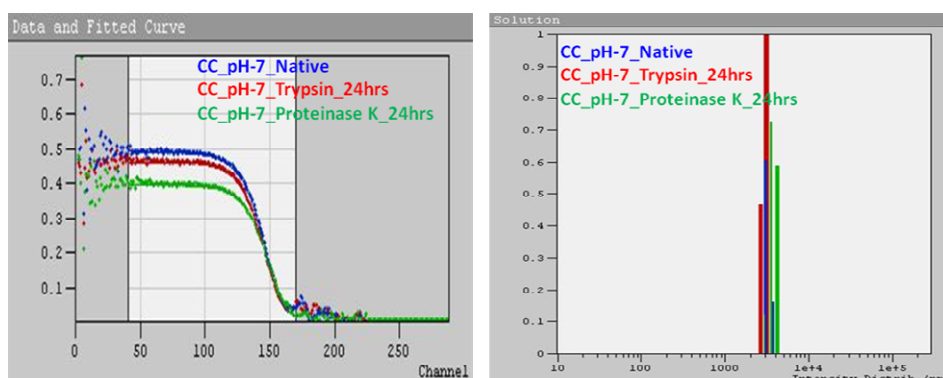


(Left)

Correlation curves and (Right) Distribution of hydrodynamic radius (R_H) calculated with cumulant analysis.

(Note: Cluster size distribution of Cha-Cha nanovesicles at alkaline and neutral pH overlap).

Sup 7: Effect of Proteinase K and trypsin on Cha-Cha nanovesicles after 24hrs treatment at 37°C



No proteolytic degradation of Cha-Cha nanovesicles was observed upon incubation with Trypsin (100ug/ml) and Proteinase K (20ug/ml) even after 24hrs of treatment.