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Unprecedented Molecular Architectures by the Controlled Self-Assembly of β -Peptide Foldamer

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During past decades, several types of peptide-based scaffolds, ranging from simple aromatic dipeptide to small protein fragments, have been studied to understand the underlying mechanism and mimic to create artificial nano/microstructures. However, a limited number of design principles have still been reported in peptidic scaffolds allowing well-defined self-assembled structure formation, presumably due to the intrinsic large conformational flexibility of natural peptides. In this presentation, we report the first example of highly homogeneous, well-defined and finite architectures by the β -peptide self-assembly.

Keywords: Foldamer, Self-assembly, β -Peptide, Nanostructure