

타이로신을 포함하는 생체모방 분자 자기
조립체의 크기 조절 및 응용

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The self-assembly structures fabricated from biomimetic molecules attract increasing attention because of their biocompatibility. Size control of the assembly is important because the size of suprastructure does a key role for applications. For controlling size, a variety of environmental parameters can influence the self-assembly behavior. This study, a tyrosine functional group-containing bolaamphiphile, bis(N-alpha-amido-tyrosine)-1,7-heptane dicarboxylate is synthesized which also has other functional groups like peptide bonds and carboxyl acid at both sides of molecule. This molecule self-assembles to spherical structures immediately in aqueous solution regardless of pH with sizes of 150~180nm. For controlling assembly sizes, we change the solvent with various polarity then the sizes of assembly become small nearby 30nm with higher uniformity. Result of this study might contribute to other applications such as microfluidics or template techniques.