

Chirality-dependent growth of self-assembled diphenylalanine microtubes.

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Streszczenie

The difference in the crystal structure and growth kinetics of microtubes formed from l- and d-enantiomers of diphenylalanine dipeptide is investigated both experimentally and theoretically by computer simulation. The microtubes of l- and d-enantiomers grown simultaneously and under identical experimental conditions possess different crystallographic space groups, have essential difference in sizes, and demonstrate different growth kinetics. Computer simulation by molecular mechanics methods revealed a fundamental difference in the interaction between structural units of microtubes of different chiralities. A model describing chirality-dependent growth of microtubes is proposed.

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