

研究论文

嵌段序列对线型ABC三嵌段高分子微相分离动力学的影响

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摘要 用动态密度泛函理论研究了嵌段序列对线型ABC三嵌段高分子微相分离动力学机理的影响. 针对一个典型的线型ABC三嵌段高分子, 通过系统地改变各嵌段的体积分数, 我们给出了嵌段序列为ABC和BAC时, 关于微相分离机理的三元相图. 发现除各嵌段的平均组分、相互作用能外, 嵌段序列也影响其微相分离的机理和最终的相结构. 此外, 嵌段序列的变化还导致了三元相图对称性的破缺.

关键词 [线型三嵌段高分子](#) [微相分离机理](#) [动态密度泛函理论](#)

分类号

Sequence Effect on Ordering Mechanism of Linear ABC Triblock Copolymers

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Abstract The sequence effect on ordering mechanism of linear ABC triblock copolymers has been investigated by using dynamic density functional theory. By systematically varying the composition, triangle phase diagrams were constructed for the ABC and BAC triblock copolymers. It was found that in addition to the composition and the interaction energies, the block sequence also affected the ordering mechanism of the triblock copolymers. Furthermore, the symmetry of the triangle phase diagram was broken when the sequence of triblock copolymer was varied from ABC to BAC.

Key words [linear triblock copolymer](#) [mechanism of microphase separation](#) [dynamic density functional theory](#)

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