

고농도 영역 봉상 고분자의 초기 배향 완화

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Synopsis

The initial relaxation time of a perfectly oriented rod-like macromolecules in concentrated solution is deduced by a detailed calculation of the distance between a given rod and its nearest neighbor rod following the method of Doi and Edwards. The initial relaxation time of rod-like molecules in a perfectly aligned system is proportional to $c^{2/3}L^5$ where c is the concentration and L is the length of constituting molecules. The initial decay of molecular orientation is of exponential type and much faster than that of the final stage which has relaxation time proportional to c^2L^9 .