



Fabrication of Network Mesostructures

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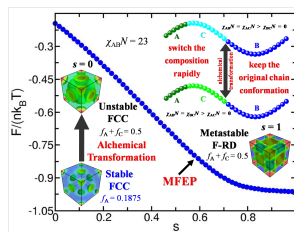
- Block copolymers can separate into a variety of three-dimensional (3D) network mesostructures
- Self-consistent field theory (SCFT) is an accurate mean-field theory for polymer systems and can be solved numerically
- Minimum free-energy path (MFEP) directly from generated highly unstable state to metastable network mesostructures using the SCFT-based string method (cf. Figure)

Your Challenges

- Theoretically understanding the SCFT and SCFT-based string method
- High-Performance-Computing (HPC) programming (C or Fortran) using MPI, OpenMP, and combination of MPI and OpenMP
- Numerical implementations of HPC calculations

What We Can Offer You

- Insights into the latest topics for directed self-assembly (DSA) of block copolymers, especially for network mesostructures
- Supervision in theoretically understanding the SCFT and SCFT-based string method and their numerical implementations



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