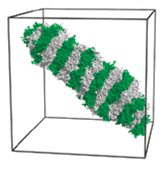
1. **Description**

The model is many linear chains connected to a center bead to form a star-like block copolymer (Ax)y(Bx)yC (the testing system is (A10)20(B10)20C), where both A and B are solvophobic beads, and C is the center bead. We can use GALAMOST to simulate the self-assembly of incompatible star-like block copolymers in dilute solution with the Brownian dynamics. More detailed information can be seen in “Bin Li, You-Liang Zhu, Hong Liu and Zhong-Yuan Lu, Brownian dynamics simulation study on the self-assembly of incompatible star-like block copolymers in dilute solution, Phys. Chem. Chem. Phys., 2012, 14, 4964”.



The formed structure will be worm-like lamellar structure shown in the following picture.



1. **Parameters**

The simulations are performed in an NVT ensemble in a cubic box under periodic boundary conditions. We set the box side length as 100, and control the number density of coarse-grained beads at 0.05, so the number of coarse-grained beads in the simulation box is . We fix εAA =εBB = 1.0 to describe the effective interactions between the beads of the same type, and εAC =εBC = 1.0 to describe the interaction between the center bead and the arm beads. The only parameter that can be varied in our BD simulations is εAB, which takes a value smaller than 1.0 for representing unfavorable interactions between A and B type beads. A time step of dt = 0.01 is used, and the total simulation steps are

1. **Commands**
2. Run the simulation by:

python multiarm.gala--gpu=0 >a.log&

1. The initial configuration can be generated by self with the command python multiarm.molg
2. The PBC conditions can be removed by:

galaTackle filename.xml; select the function of 9 and enter; a new “filename. reimage.xml” will be generated.