

The effect of morphology of copolymers on the interfacial tension in incompatible polymer blend

유지호, 김소정, 이원보^{1,†}
서강대학교; ¹서울대학교
(wblee@snu.ac.kr[†])

The effect of morphological differences of copolymers on the interfacial tension, between thermodynamically incompatible polymer blend, was investigated using molecular dynamics (MD) simulation. The diblock copolymer and grafted copolymer are used in our simulation for comparison of efficiency in reducing interfacial tension as compatibilizer with different weight percent of copolymers. The Kremer and Grest coarse-grained model is used for describing our polymer system with Weeks-Chandler-Andersen (WCA) and finite extensible non-linear elastic (FENE) potentials. The simulation results show that interfacial tension is reduced more efficiently by grafted copolymer than diblock copolymer at string segregation regime and become more distinct with the increase of weight percent.