Phase Separations and Morphological Evolutions of Polymer Blends under Two Dimensional Confinements

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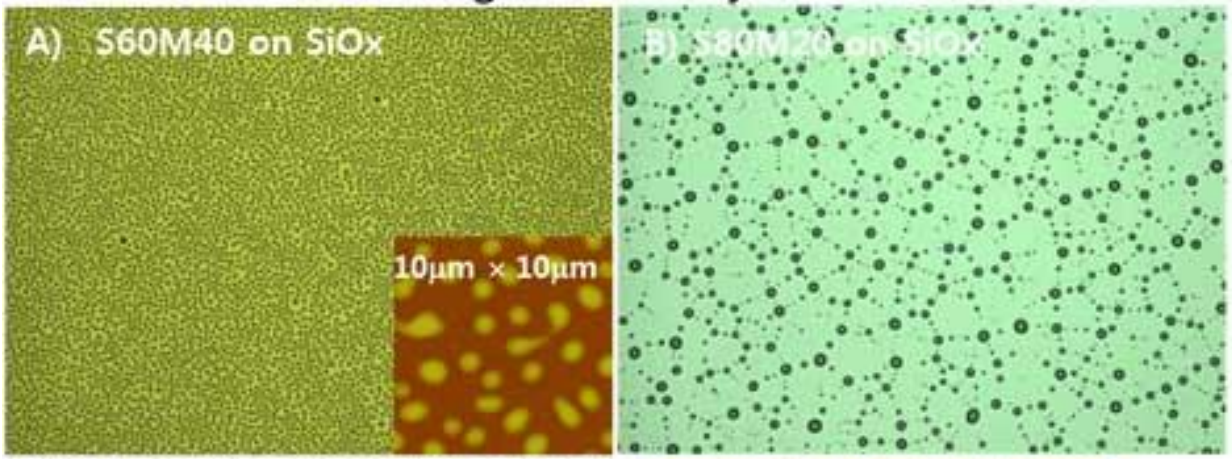
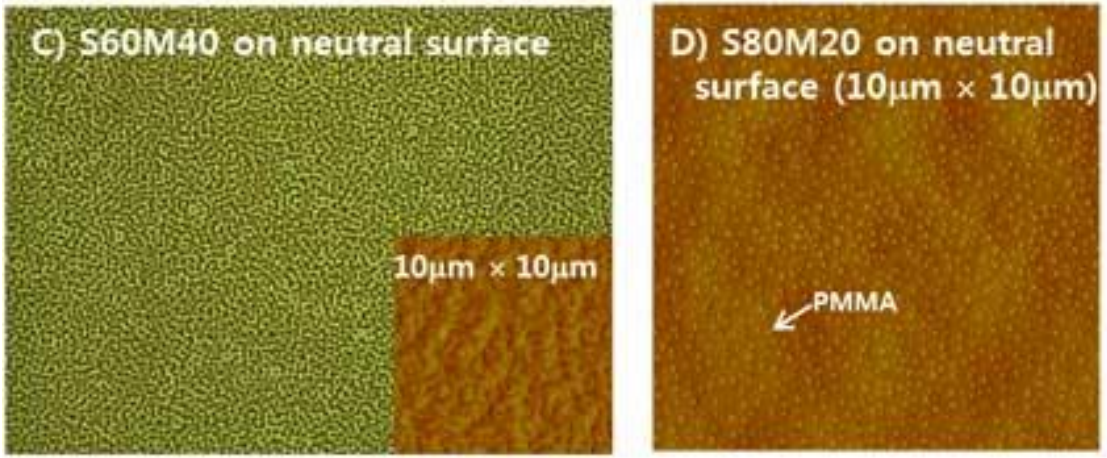


We compared the phase evolution of PS/PMMA on a preferential and a neutral surfaces, with varying composition and film thickness



Left figure shows: S60M40 on a) SiOx surface and c) neutral surface, as well as S80M20 on b) SiOx surface and d) neutral surface.

On a preferential surface, the phase evolution was dictated by the substrate wetting of PMMA, the resulting PS relief structures on the PMMA wetting layer. However, on a neutral surface, the phase evolution is only dictated by the coarsening of PMMA domains without the formation of a PMMA wetting layer.