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**Phase Equilibria in Ternary Blends of Two Linear Homopolymers and A Ring Gradient Copolymer** DACHUAN SUN, JUNHAN CHO, Dankook Univ — Phase equilibria in a ternary blend of linear A/B homopolymers of equal sizes and a symmetric A-co-B ring gradient copolymer as an amphiphile with  $\alpha$  as the ratio of their chain sizes are investigated in the mean-field picture. The monomer sequence on the copolymer chain is taken as either a step gradient or a fully linear gradient, to which a gradient number  $\lambda = 0$  or  $1$  is assigned, respectively. Along the isopleth of equal homopolymer amounts, the resultant phase diagrams for the blends are to be built from multicritical points such as Lifshitz or bulk tricritical point depending on  $\alpha$  and  $\lambda$ . The stabilization of lamellar mesophase or its equilibrium with A and B-rich bulk phases is accordingly controllable by the pair of  $\alpha$  and  $\lambda$ .

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