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Guanning Zhang*, Phillips Hall 801 22nd St. NW, Washington, DC 20052. *Lattice Structures in Interacting Physical Systems.*

A two species interacting system is motivated by the triblock copolymers. The system admits disc-disc type stationary points, which is related to the Green's function of the Laplace equation. The resulting shape of the optimal lattice could be rectangle, square, or hexagon. We also study the energy functional of condensates in Mueller and Ho's paper and look for the critical points and the shape of the optimal lattice. (Received September 21, 2021)