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Self-Assembled nanomaterials for fragrance delivery

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Abstract

Fragrance is incorporated in a broad variety of products such as foods, cosmetics, and fabrics. Therefore, the development of materials and systems for the effective encapsulation of fragrances and fine control of their release rate to prolong their lifetime is interesting for many industries. Several polymeric systems based on PLA and PEG have been studied for fragrance delivery. Several polymeric systems based on PLA and PEG have been studied for fragrance delivery. In this project we focus on the study of materials—nanoparticles and gels—self-assembled both from polymeric and small-molecule amphiphiles. Currently, we are using surface tensiometry and fluorescence to study the self-assembly of commercially available EO-PO-PO block copolymers (Pluronics F-68 and F-127). We have also designed a library of squaramide-based amphiphiles which self-assembly will also tested for the encapsulation of fragrances.

Keywords

Self-assembly, nanoparticles, Pluronics, block copolymers, squaramide, amphiphiles, fragrance encapsulation.