

Supporting Information

A facile one-pot strategy for the preparation of porous polymeric microspheres via UV irradiation-induced polymerization in emulsions

Junjie Tao, Kaiyun Wu, Yaxin Chen, Wei Li, Yao Gu, Ren Liu, Jing Luo[✉]

*The Key Laboratory of Synthetic and Biological Colloids, Ministry of Education,
School of Chemical and Material Engineering, Jiangnan University, Lihu Street 1800,
Wuxi 214122, China*

1. The effect of emulsification conditions on the size of the polymeric porous microspheres.

1.1 The oil-water ratio

The sizes of microspheres were observed using an ultra-deep field microscope and characterized by laser diffraction particle size analyzer. As shown in Fig. S1, the average size of the microspheres decreased from 19.89 μm to 13.56 μm as the decreasing oil-water ratios (1:1 to 1:9).

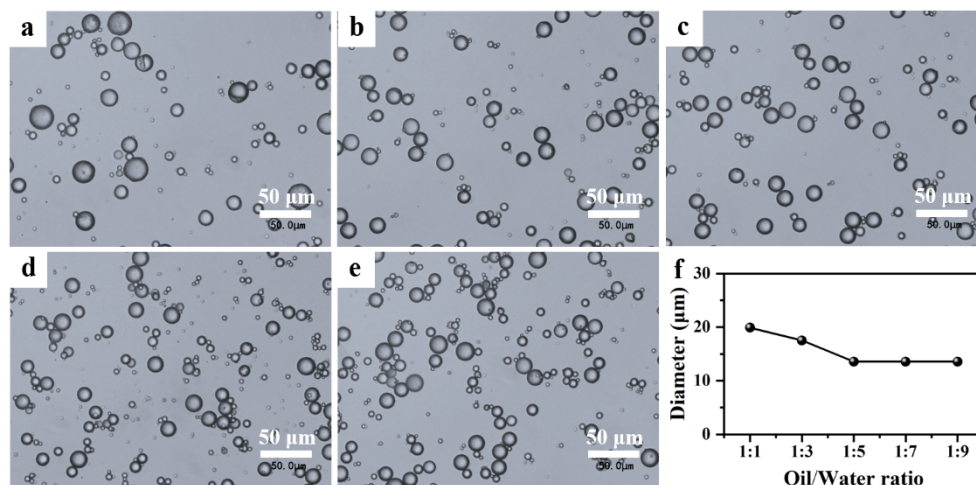


Fig. S1 The micrographs of polymeric porous microspheres prepared by different oil-water ratios (a-e) and the average diameter (f). (a) 1:1, (b) 1:3, (c) 1:5, (d) 1:7, (e) 1:9

1.2 Emulsification speed

Besides, emulsification speed had a great effect on the size of porous microspheres. As shown in Fig. S2, the microsphere size decreased significantly by increasing the emulsification speed and the average size changed from 36.20 μm to 13.56 μm .

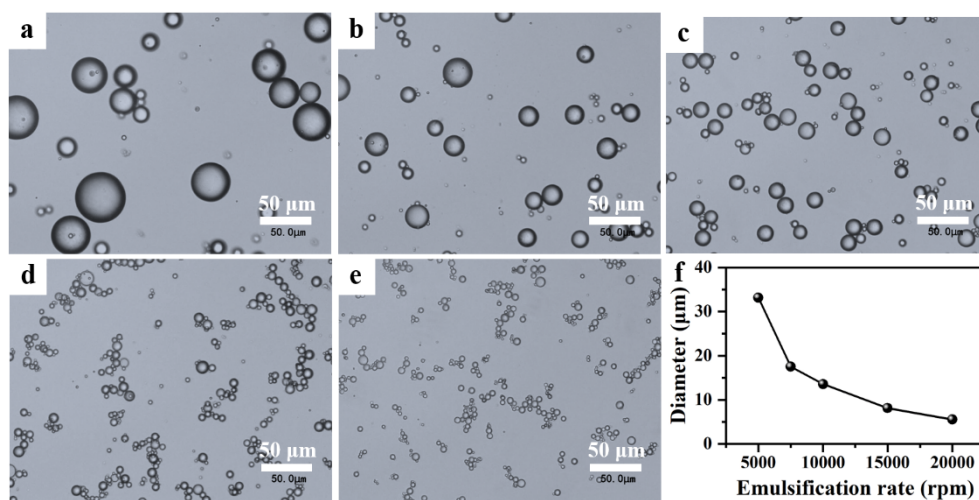


Fig. S2 The micrographs of polymeric porous microspheres prepared by different emulsification speed (a-e) and the average diameter (f). (a) 5000 rpm, (b) 7500 rpm, (c) 10000 rpm, (d) 15000 rpm, (e) 20000 rpm