Fabrication of anisotropic hexagram particles with controllable patch position

심규락, 염수진, 김종민, 정성근, 이창수†
충남대학교
(rhadum@cnu.ac.kr†)

Anisotropic patch particles are materials widely used in target-detected drug delivery system and directional self-assembly. However, since anisotropic patch particles in which the position of the patch is not controlled randomly move, there is a limit to studying related research fields. Thus, we need to control the patch position at anisotropic patch particles.

Herein, this study represents a process for controlling the patch position at anisotropic hexagram particles. This process is used in combination with a micromolding technique and selective localization of patches. In order to prevent diffusion of the hydrophobic material into the micromold and obtain the morphological stability of patches, the perfluoropolyether micromold is used to the micromolding technique. And, the patch position could be finely controlled by using selective localization of patches. Finally, by fabricating 12 hexagram particles with different patch position, we proved the availability of this process.