

Preparation and Characterization of Janus
PEG-silica particles by PDDA trapping Layer

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In this research, Janus polymer-silica particles were prepared by PDDA/glass as template. The template was prepared by electrostatic attraction self-assembly (SA) between (-) charge of glass and (+) charge of PDDA, and then silica/PDDA/glass were prepared through array of the silica particles by the SA process. After the coating of silica particles, the introduction of chloro-propyl groups on the untrpped surface of the silica particles were performed from the CTPES in the ethanol solution. The introduction of PEG was performed through the nucleophilic substitution reaction between chloro groups of the surface modified silica particles and hydroxyl groups of the PEG. After the reaction, Janus PEG-silica particles were separated from the PDDA/glass. The characterization of Janus PEG-silica particles were performed by ATR-FTIR, XPS, and FE-SEM.