

Preparation and application of hybrid silica particle for the removal of formaldehyde at room temperature

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Hybrid silica particles were successfully prepared using a simple process. Silica particles were made through the self-hydrolysis and condensation. Because the silica particles have a many reaction site, useful polymer can be easily attached on the surfaces. To remove the formaldehyde, polymers attached on the surface of silica particles. Concentration of polymer and their properties affected to formaldehyde. Especially, using hybrid silica particles, formaldehyde was efficiently removed at room temperature. Detailed characterization of the hybrid and their application were investigated by scanning electron microscopy (SEM), transmission electron microscopy, UV-vis spectrophotometer, and FT-IR.