壓克力高分子-奈米金奈米複合材料之製備以及性質研究

This work focuses on the preparation of polymer-nanogold nanocomposites which protected and stabilized by acrylic copolymers. The radical chain polymerization was used to synthesize poly(MMA-co-AA) and poly(MMA-co-SA) copolymers, and HAuCl4 was reduced in the polymer solutions by Super-Hydride in this study. This study also confirms that sodium acrylate on the copolymer chain can reduced/stabilized gold to synthesize nanogolds. The .lambda.max of the prepared nanocomposites were at 520~570 nm, and red shift as the gold particles grow up. The glass transition temperatures are increasing in the prepared nanocomposites, but the degradation temperatures are not decreasing in the prepare nanocomposites.