

Preparation and damping properties of simethicone PU microspheres

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In this study the microcapsules with polyurethane as the wall material and dimethyl silicone oil as the core material were successfully prepared by interfacial polymerization method, which was incorporated into epoxy resin to improve the damping performance of epoxy resin. The structure and morphology of microcapsules were characterized by infrared spectroscopy (FTIR) and scanning electron microscopy (SEM). The microcapsules had good sphericity and smooth surface. Using dynamic mechanical thermal analysis (DMA), it was found that the incorporation of microcapsules can improve the damping properties of the epoxy resin and the maximum loss factor of simethicone PU/EP composites nearly increased by 50% than pure EP.

Biography

Jun Liu has completed her PhD at the age of 35 year from Yanshan University and is doing her Postdoctoral studies from Liverpool John Moores University. She has published more than 20 papers in reputed journals.

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