

Preparation of Phthalimido Group-containing Ladder-like Polysilsesquioxane

Shunya MIYAUCHI,¹ Takuo SUGIOKA,² Yasutaka SUMIDA,²
Toshiaki ENOKI,³ Joji OHSHITA,³ and Yoshiro KANEKO¹

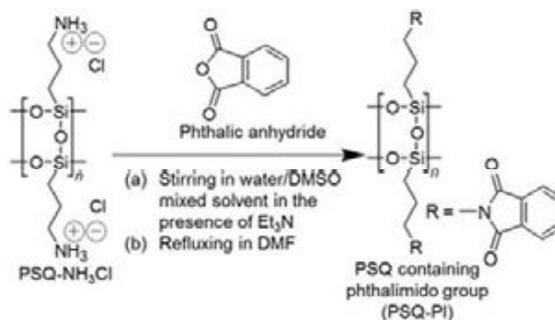
¹Graduate School of Science and Engineering, Kagoshima University

²Nippon Shokubai

³Graduate School of Engineering, Hiroshima University

Abstract

We prepared a polysilsesquioxane (PSQ) containing phthalimido groups (PSQ-PI) by reaction of phthalic anhydride with amino group-containing ladder-like PSQ, which was prepared by the hydrolytic polycondensation of 3-aminopropyltrimethoxysilane monomer using HCl aqueous solution as a catalyst (Scheme 1)¹⁾. PSQ-PI was soluble in chloroform, DMF, and DMSO. In addition, this polymer showed a high thermal stability, which was confirmed by TGA.



Scheme 1. Preparation of PSQ-PI.

Reference

1) Y. Kaneko et al., Chem. Mater., 2004, 16, 3417.; Polymer, 2005, 46, 1828.; Z. Kristallogr., 2007, 222, 656.; Kobunshi Ronbunshu (Japanese), 2010, 67, 280.; Int. J. Polym. Sci., 2012, 684278.