

Characterization and Application of SMP-10 inorganic polymer for microfluidics

박상희, 김동표^{1,*}

충남대학교; ¹충남대학교 정밀응용화학과

(iris31220@nate.com*)

Interest of chemical synthesis in microreactor has grown rapidly due to improved yields at impressive selectivities and with reduced overall effort. Many kinds of materials like glass, PDMS(Polydimethylsiloxane), Teflon etc. are used to fabricate miniaturized devices, however most of channels made of these materials cannot be used for organic synthesis because of a lack of solvent resistant. SiC which has solvent resistant and high thermal stability is a new material of microreactor.

In this study, we reported on the fabrication of non-oxide ceramic microfluidic channels from preceramic polymers with soft lithographic techniques and simple chemical reaction within microreactor. Comparison of the results obtained with traditional batch techniques enable us to highlight some advantages associated with micro reaction technology.