

### Synthesis of silica aerogel monolith using polyurethane composites

이명연, 최진규, 심상은<sup>†</sup>  
인하대학교  
(seshim@inha.ac.kr<sup>†</sup>)

Silica aerogel has a unique material because of its properties such as low conductivity, low density, and low dielectric constant. For these properties, it has a high potential to apply industrial fields. Yet, its fatal characteristic, fragility, prevent usage from many fields. Many researchers display improve its mechanical properties by adding carbon materials, polymers, fibers, co-precursors. On the other hand, polyurethane has good elasticity which could supplyment fragility of silica aerogel. In this study, silica aerogel and polyurethane are used to composites for decrease their weakness. To characterzed synthesizing composites, silica aerogel's pores, and thermal conductivity, FT-IR, SEM, Thermal Conductivity Instrument were used.