

Ring-opening polymerization of Glycidyl methacrylate (GMA) with boron trifluoride ethyl etherate ( $\text{BF}_3 \cdot \text{OEt}_2$ ) in compressed liquid dimethyl ether (DME)

오경실, 조동우, 배 원<sup>1</sup>, 김화용\*  
서울대학교; <sup>1</sup>미원상사주식회사  
(hwayongk@snu.ac.kr\*)

Poly(glycidyl methacrylate) (PGMA) was synthesized through ring-opening polymerization with boron ethyl etherate ( $\text{BF}_3 \cdot \text{OEt}_2$ ) as a catalyst in compressed liquid dimethyl ether (DME). Optimized conditions allow the direct synthesis of well defined spherical PGMA particles at 40°C and 20 bar. The results of FT-IR indicated that the reactivity of the epoxy groups was higher than that of the double bonds in the bifunctional monomer GMA under the polymerization conditions.