View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by Universiti Putra Malaysia Institutional Repository

Effect of $GeCl_4/SiCl_4$ flow ratio on germanium incorporation in MCVD process

ABSTRACT

Germanium and Silica co-deposition in MCVD process is studied with varying the flow ratio of $GeCl_4/SiCl_4$ at high temperature without phosphorus. The range of ratio is from 0.1 to 0.6 with temperature deposition 2100°C. The incorporation of germanium in silica matrix is deduced from the EPMA SEM-EDX. The experimental result is compared to theory such as thickness deposited layer and mole fraction of germanium in silica.

Keyword: MCVD; Thermophoretic; Chloride oxidation; Silica preform; Germanium doped silica; EPMA