

On the fabrication of aluminum doped silica preform using MCVD and solution doping technique

ABSTRACT

This paper provides detailed discussions on the fabrication of aluminum doped silica preform using solution doping technique and modified chemical vapor deposition (MCVD). The porous core layer was deposited at 1750°C with 30cm in deposition length. The soot formed at the inlet and outlet segment of the deposited length is analyzed using SEM for soot size and BET for pore size distribution. Refractive index profile of the doped preform is measured using preform analyzer. The refractive index difference obtained at the outlet and inlet segments shows uniform distribution of Al₂O₃, in agreement with the pore size distribution.