Abstracts

The Outside Vapor Deposition Method of Fabricating Optical Waveguide Fibers

M.G. Blankenship and C.W. Deneka. "The Outside Vapor Deposition Method of Fabricating Optical Waveguide Fibers." 1982 Transactions on Microwave Theory and Techniques 30.10 (Oct. 1982 [T-MTT] (Special Issue on Optical Guided Wave Technology)): 1406-1411.

The outside vapor deposition (OVD) process for fabricating high performance glass optical waveguide fibers is reviewed. Starting metal halide chemicals, porous soot preform fabrication, sintering steps, and fiber drawing are discussed. Preform target size and its effect in obtaining deposition rates to 4 g/min is presented. Data comparisons of OVD fiber performance with other vapor deposited techniques are presented for attenuation, hydroxyl content, and strength (0.7 GPa / M² for 49.5 km of fiber). Single-mode fiber results including excellent geometric concentricity are also discussed.

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