

## **PRODUCTION OF PHOTONIC CRYSTAL FIBER BASED ON HEAVY OXIDE GLASSES.**

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Photonic crystal fiber (PCF) or microstructured fibers, has been studied widely, either to obtain a high nonlinearity, because the enhancement of optical nonlinearity in PCF is achieved by high confinement of light. High nonlinearity fibers achieved by the synergism between the fiber microstructuration and glass composition. In the present work, vitreous samples have been prepared and characterized in the system  $\text{TeO}_2\text{-GeO}_2\text{-Bi}_2\text{O}_3\text{-(K}_2\text{O-Li}_2\text{O)}$ . Preform of PCF have been obtained from this system with 15 mm in diameter and 50 mm in length for the most stable composition. Microstructural performs with 18 holes of 0.8 mm were prepared by drilling technique. Photonic crystal fiber have been obtained and the nonlinearity value have been determined.