

## **OPTICAL FIBERS FORMING TO IONIZING RADIATION SENSORS PREPARATION**

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We present development of new methods and techniques of splicing and forming optical fibers with focusing on development new ionizing radiation sensors. Optical fiber based ionizing sensors can be prepared by combination of scintillation material and optical fibers. The type of optical fiber forming depends on the scintillation material structure. The type of optical fiber to ionizing radiation preparation which can be used primary depends on the efficiency of ionizing radiation to scintillation radiation conversion. The standard types of optical fibers with different core diameters can be used for powdered or crystalline structure of scintillation material. On the other side the liquid scintillation material can be used in combination with microstructure fiber mainly. We prepared techniques to splicing and closing special hollow core Photonic Crystal Fibers (PCF) and theirs cross splicing methods with standard optical fibers to using with this liquid scintillation materials. To powdered scintillation materials we prepared forming technology to optical fibers narrowing, etching etc. These techniques of fiber forming are presented.