

## OPTICAL FIBER BASED IONIZING SENSORS PREPARATION

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We present construction development of new ionizing radiation sensors based on silica optical fibers. Optical fiber based ionizing sensors can be prepared from silica optical fibers by adding a scintillation material. Scintillation material can be in liquid, powdered or crystalline structure. Then the sensor construction has to be prepared with focus to the scintillation material structure and to efficiency of ionizing radiation to scintillation radiation conversion. The best conversion efficiency is usually for the crystalline or powdered types of scintillation material structure. The liquid scintillation material has smaller efficiency conversion and can be used in combination with microstructure fiber mainly. Our first set-ups of silica optical fiber based ionizing radiation sensors with powdered and crystalline structure of the scintillation material are presented.