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## Real time dosimeter based on a scintillation fiber operating in single photon counting for medical applications

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Brachytherapy is a radiotherapy modality where the radioactive material is placed close to the tumor, being a common treatment for skin, breast and prostate cancers. In order to provide the best treatment possible and minimize risks for patients, dose verification and quality assurance in radiotherapy needs to be assessed in real-time and with as much precision as possible. Notwithstanding, due to technical constraints in certain treatments (brachytherapy), there is no such tool capable to perform real-time dose measurement. On the other hand, interventional radiology involves the exposure of both patients and health professionals to ionizing radiation. Because of that, it is necessary to establish practices of radiation protection for the professionals involved in order to reduce the levels of exposure. Thus, a dosimeter capable to provide a real time response of the dose in strategic areas of the professionals, allow them to take protection actions.

## Minioral

Yes

## **IEEE Member**

Yes

Are you a student?

No

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