University of Gdańsk
Technology Transfer Office

physics

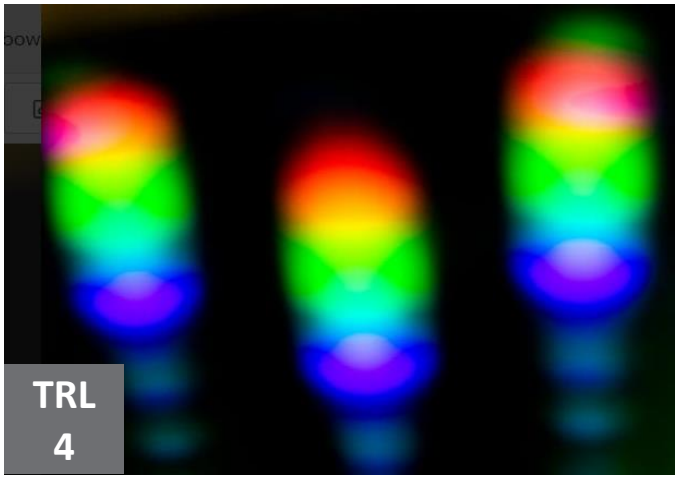
Thermoluminescent dosimetric material for detection of beta radiation

About technology

Ionizing radiation is readily absorbed by tissues of living organisms, with the degree of absorption depending on both the type of tissue and the radiation involved. Absorption of high doses of ionizing radiation can lead not only to tissue damage as a result of physical effects of radiation, but primarily to damage to the genetic material within cells, which may result in cancer even many years after exposure.
Means of **protection against ionizing radiation** vary depending on the type of radiation and its source. The most basic measures include wearing protective clothing and equipping personal dosimeter, in order to determine the amount of radiation absorbed and discontinue further exposure should recomended values be exceeded.

Novell **thermoluminescent dosimetric material** developed by University of Gdańsk scientists exhibits a very high sensitivity to beta radiation. This new dosimetric material demonstrates a linear dependence in intensity of its thermoluminescence upon dose of radiation it has been exposed to.

The material can be used in **detectors of ionizing radiations**, both stationary and mobile, as well as **personal dosimeters** for personnel expected to handle radioactive materials or work with radiation sources in **industry** (nuclear power industry), **healthcare** (radiotherapy) or **research centers**.



Research Team

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IP Protection

- Polish patent granted nr 233311

Implementation progress

TRL 4 -Technology validated in laboratory conditions.

Cooperation opportunities

- Sale of property rights
- Licence
- Partnership for further research and commercialisation

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