

All Printed Low-Cost Gamma Radiation Dosimeter for Sterilization Monitoring Applications

Track Code: 2021-RAHI-69188

Categories:

- Materials and Manufacturing

Keywords:

- Conductive Polymers
- Gama Radiation Monitoring
- Materials and Manufacturing
- Medical/Health
- Sensing and Measurement

Researchers at Purdue university have found an inexpensive way to track the radiation exposure in biomedical devices using existing printed sensor technology that can measure the radiation exposure during the sterilization process. This makes the sterilization process much safer for the users of the biomedical devices. The existing technology is bulky, expensive, and not easily accessible. This technology can be further used by professionals working with radiation and for populations in disaster struck areas to determine radiation exposure.

Advantages:

- Inexpensive
- Easy implementation into the industry
- Uses existing printing technology

Potential Applications:

- Mass production of dosimeters
- Biomedical devices
- Determine radiation exposure for a population in natural disasters

Technology Validation: Efficiency has been testing using PVA being drop casted onto a printed electrode on a PET substrate exposed to gamma radiation rays.

People:

- Rahimi, Rahim (Project leader)

Intellectual Property:

Application Date: January 5, 2022

Type: Utility Patent

Country of Filing: United States

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