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

Inexpensive polymer-based radiation sensor for sterilization monitoring and disaster response.

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 expsure for a population in natural disasters

Publication: Printed Low-Cost PEDOT:PSS/PVA Polymer Composite for Radiation Sterilization Monitoring. ACS Sens. 2022, 7, 4, 960â€“971.

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

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Category
Biotechnology & Life Sciences/Analytical & Diagnostic Instrumentation

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