

Application of Organic Copolymer based Semiconductor for Direct Ionizing Radiation Detection

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Abstract

Organic based semiconductors have been extensively studied and have found uses in solar cells, LED's, detectors, and transistors. The proposed research involves the fabrication of an organic based copolymer semiconductor for direct ionizing radiation detection. Several advantages are possible with the use of organic based semiconductors including low-cost fabrication, flexible material, and approximate water equivalence for dosimetry purposes. A brief picture of the proposed structure is shown below for reference with the P3HT:PCBM as the copolymer film that represents the active region.

