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Organic photosensors for detection of VUV scintillation light

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Organic semiconductors have gained considerable attention in recent years for use in a wide range of applications from OLEDs, OFETs, to optical sensors. They can be prepared on rigid as well as flexible substrates over large areas through low-cost fabrication techniques with performance rivaling low-noise silicon photodiodes. These properties make them a potentially attractive option for future large-area noble element detectors. In this talk, we will address the feasibility of using organic semiconductors for vacuum ultraviolet (VUV) scintillation light detection. The prospects and challenges of using organic semiconductor technologies will be discussed. We will present first measurements on cryogenic operation of organic photodiodes and ongoing R&D into making these devices sensitive to VUV scintillation light.

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