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Properties of CdZnTe films deposited on polyimide substrates by close-spaced sublimation

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As an II-VI semiconductor material, Cadmium zinc telluride (CdZnTe) compound which has wider band-gap and higher atomic number than Si, Ge and GaAs, is excellent for radiation application. CdZnTe-based devices are widely used in healthcare field, nuclear detection system, security checks and space science. Because of high cost and the difficulties of high quality CdZnTe single crystal growth, CdZnTe films are a promising choice for large-area radiation detector application [1, 2].

Polyimide (PI) materials are lightweight, flexible, resistant to heat and chemicals. It's the ideal substrate for flexible electronic devices and optoelectronic devices. So far, there has been no report about the preparation of CdZnTe films on PI substrates. In this work, CdZnTe films were deposited on PI substrates by close-spaced sublimation. The surface morphology, structural, electrical and optical characteristics of CdZnTe films was investigated in detail.

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