

# Growth and Characterization of CsPbX<sub>3</sub> Perovskite Semiconductor Crystals for Room Temperature Gamma-Ray Detectors

**E. Ariesanti**<sup>1</sup>, L. Matei<sup>1</sup>, J. Stewart<sup>1</sup>, A. Piro<sup>1</sup>, V. Buliga<sup>1</sup>, H. Parkhe<sup>1</sup>, A. Burger<sup>1</sup>, R. Hawrami<sup>1</sup>

<sup>1</sup> *Fisk University, Life and Physical Sciences (Physics), Nashville, Tennessee, United States of America*

## Abstract

In this paper we will present the latest growth and characterization of CsPbX<sub>3</sub> crystals for room temperature gamma-ray detection and imaging. Material purification, synthesis, crystal growth from 16-mm to 35-mm diameter, sample preparation, and detector characterization will be presented. We have managed to grow single crystals, free of polarized planes, with resistivity  $> 6.0 \times 10^9 \Omega\text{-cm}$  and  $mt_h > 2.0 \times 10^{-4} \text{ cm}^2/\text{V}$ .

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