

## Overview of perovskite detectors research at Surrey

*Thursday, 20 July 2023 11:00 (30 minutes)*

I will present a summary of the perovskite detector research that is currently being carried out at Surrey. Our work is broadly organised into 3 themes, (1) single crystal lead halides for gamma spectroscopy, (2) polycrystalline perovskite thick films for X-ray imaging, and (3) perovskite scintillators. In this talk I will focus on the challenges of single crystal lead halides, and discuss recent results that compare the electronic and charge transport properties of FAPbBr<sub>3</sub> and CsPbBr<sub>3</sub> single crystals. The goal to produce gamma spectroscopy detectors from perovskite single crystals remains a key challenge, and I will present some of the current material problems which limit gamma ray detection performance, and strategies to solve these issues.

**Primary author:** SELLIN, Paul

**Presenter:** SELLIN, Paul

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