

# Inorganic perovskites ( $\text{CsPbBr}_3$ ) as high-Z sensor materials for hybrid detectors

*Friday, 16 January 2026 10:00 (30 minutes)*

I would also like to take this opportunity to propose a contribution for the workshop, based on a project we have been developing at the Brazilian Synchrotron Light Laboratory. Our work focuses on inorganic perovskites ( $\text{CsPbBr}_3$ ) as high-Z sensor materials for hybrid detectors. We recently published our first results [1], covering material synthesis, characterization, and detection simulations. We have also had an approved contribution to the Allpix-Squared simulation framework by adding  $\text{CsPbBr}_3$  as an active material [2]. For the workshop, we would like to present our hybridization attempts and share our ongoing efforts to experimentally probe the detection behavior of these sensors.

References:

[1] Campanelli, R. B., et al. "Evaluation and synthesis of perovskite crystals as high-Z sensors for hybrid pixel detectors." *Scientific Reports* 14.1 (2024): 27430.

[2] <https://gitlab.cern.ch/allpix-squared/allpix-squared/-/commit/42af0d779df43e8cec62f7ab6434d6be0fdae147>

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