

# Fabrication, Deposition, Morphology and Composition of Perovskite $\text{CsPb}(\text{Br}_{1-x}\text{I}_x)_3$

U. Turavets<sup>1</sup>,

A. Poznyak<sup>1</sup>,

A. Hoha<sup>1</sup>,

A. Pligovka<sup>1</sup>

2024

<sup>1</sup>Belarusian State University of Informatics and Radioelectronics, 6 P. Brovki Street, Minsk 220013 Belarus

Keywords: photovoltaic systems, scanning electron microscopy, phase measurement, morphology, photoluminescence, crystals, X-ray diffraction.

Abstract: In this work,  $\text{CsPb}(\text{Br}_{1-x}\text{I}_x)_3$  perovskite crystals with simple and affordable deposition technique under ambient condition is proposed to be formed. Thus, synthesis of safe inorganic perovskites on glass substrates and bilayer anodic Al/WTi system films was developed by Ligand-Assisted Reprecipitation method immediately on target substrates. Their composition, morphology and photoluminescent characteristics have been studied. Photoluminescence peaks  $\text{CsPbBr}_2$  and  $\text{CsPbI}_3$  are 535 and 550 nm respectively and X-ray diffraction analysis show the resulting crystals have an orthorhombic phase. Scanning electron microscopy showed the rod structure of perovskite.

Fabrication, Deposition, Morphology and Composition of Perovskite  $\text{CsPb}(\text{Br}_{1-x}\text{I}_x)_3$  / U. Turavets, A. Poznyak, A. Hoha, A. Pligovka // IEEE International Conference on Nanotechnology (NANO) : 24th International conference, Gijon, Spain, July 8-11, 2024. – USA : IEEE, 2024. – P. 297–301.