

# Electronic Supplementary Information

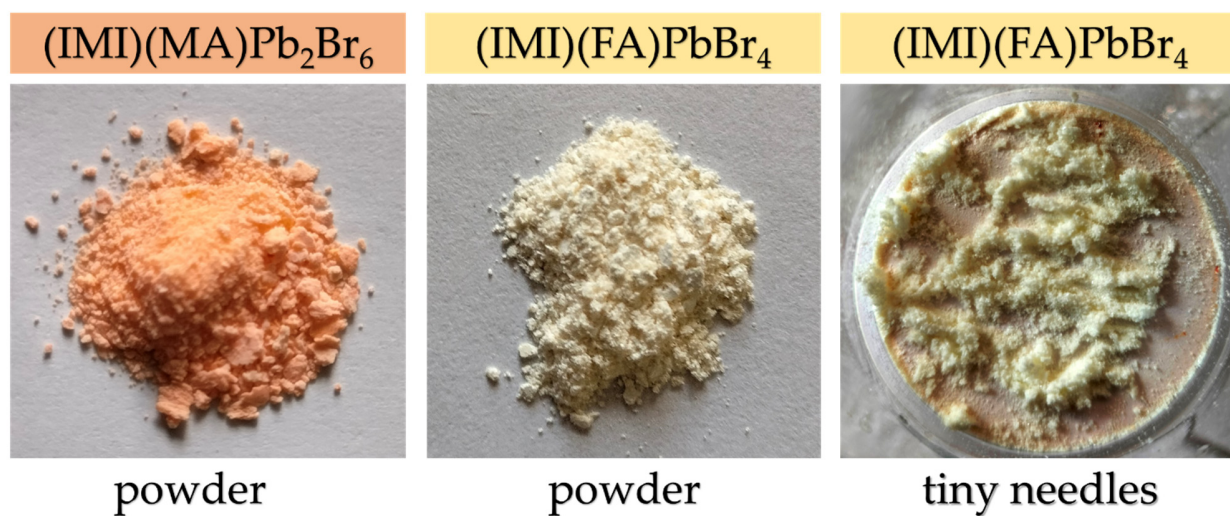
## Using imidazolium in the construction of hybrid 2D and 3D lead bromide pseudoperovskites

Gonzalo García-Espejo <sup>1</sup>, Konstantis F. Konidaris, <sup>1,\*</sup> Antonietta Guagliardi <sup>2</sup>, and Norberto Masciocchi <sup>1,\*</sup>

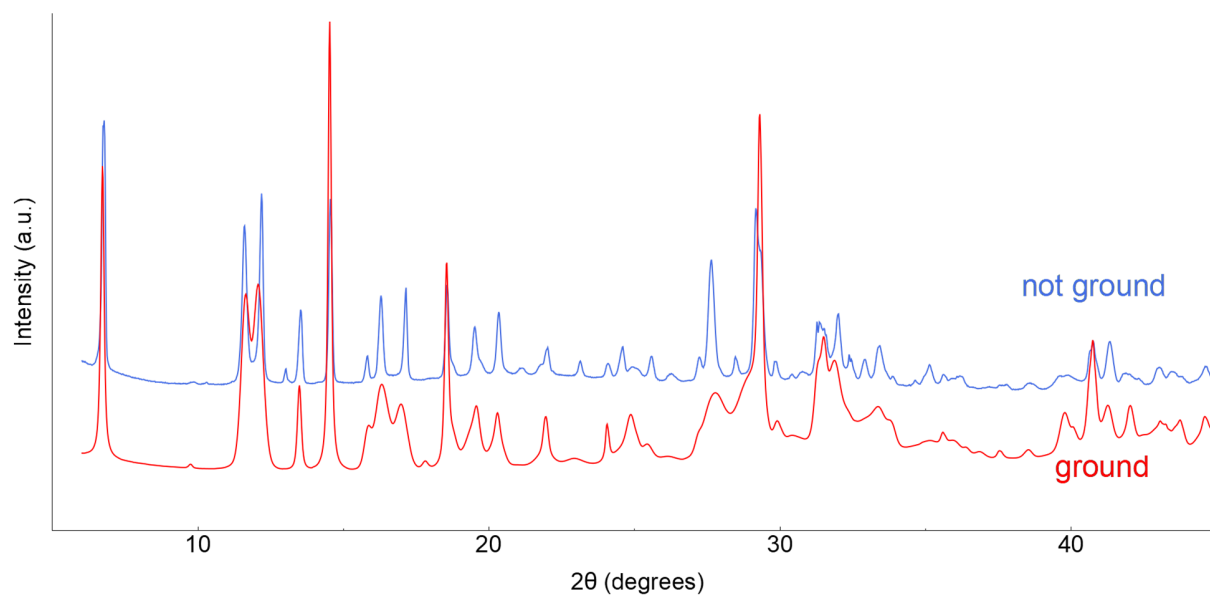
<sup>1</sup> Dipartimento di Scienza e Alta Tecnologia and To.Sca.Lab, Università dell'Insubria, via Valleggio 11, 22100 Como (Italy)

<sup>2</sup> Istituto di Cristallografia and To.Sca.Lab, Consiglio Nazionale delle Ricerche, via Valleggio 11, 22100 Como (Italy)

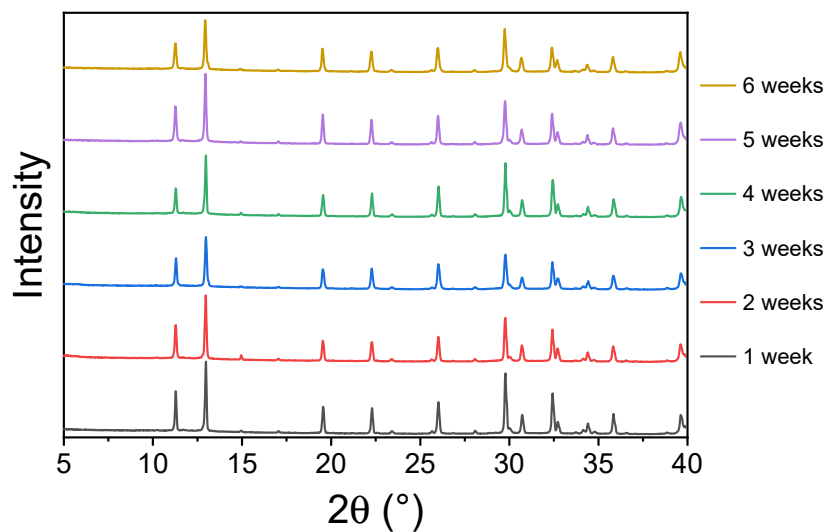
\* Authors to whom correspondence should be addressed.



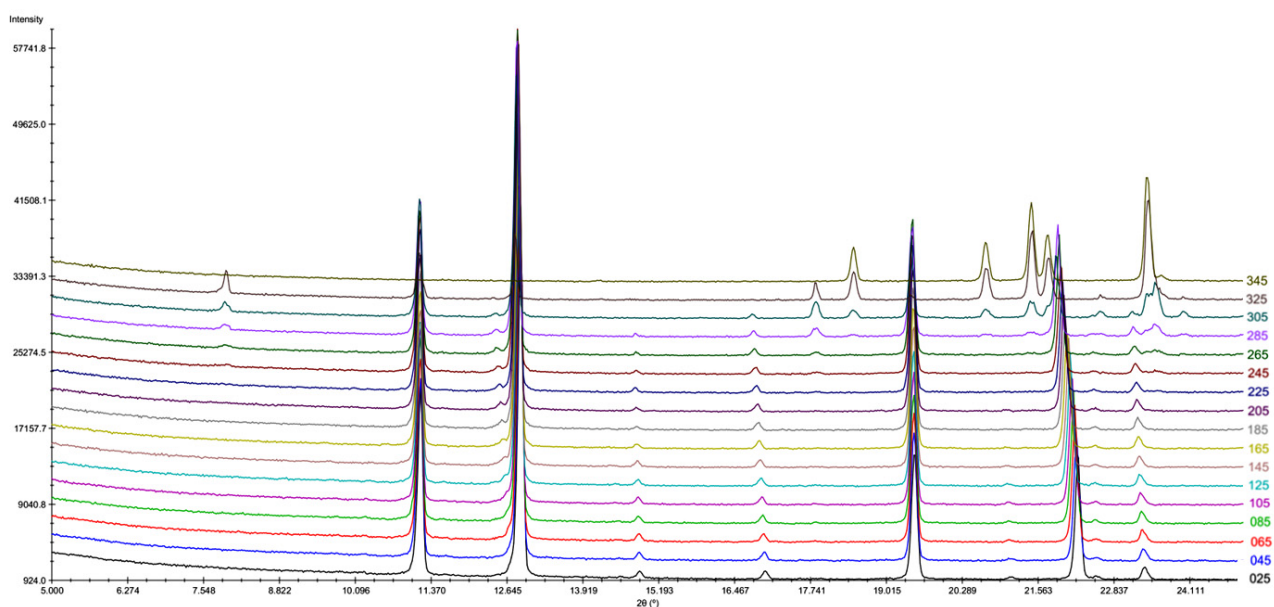
**Figure S1.** Optical images of the prepared samples.



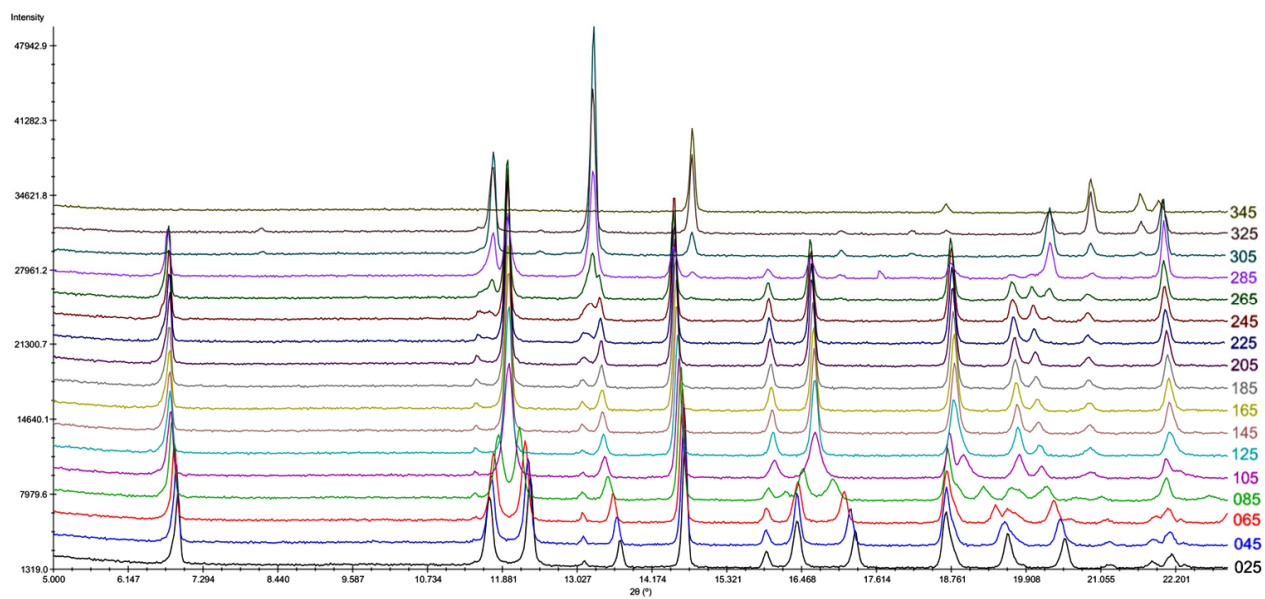
**Figure S2.** XRPD pattern of pristine (blue) and gently ground (red)  $(\text{IMI})(\text{FA})\text{PbBr}_4$  (2) showing partial and anisotropic degradation of the crystals.



**Figure S3.** XRPD measurements of a powder sample of (IMI)(MA)Pb<sub>2</sub>Br<sub>6</sub> (**1**) exposed to environmental air, humidity and light, in the course of 6 weeks.



**Figure S4.** VT-XRD patterns for (IMI)(MA)Pb<sub>2</sub>Br<sub>6</sub> (**1**) in the 25 – 345 °C range.



**Figure S5.** VT-XRD patterns for (IMI)(FA)PbBr<sub>4</sub> (2) in the 25 – 345 °C range.