

## Supplementary Information for:

### Valence and Conduction Band Densities of States of Metal Halide Perovskites: a Combined Experimental - Theoretical Study

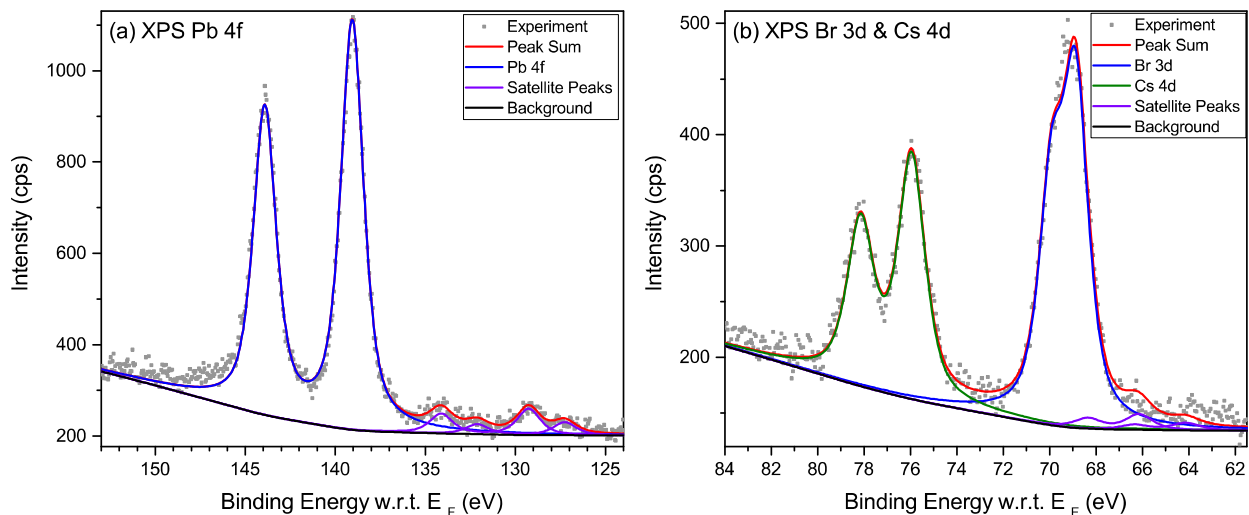
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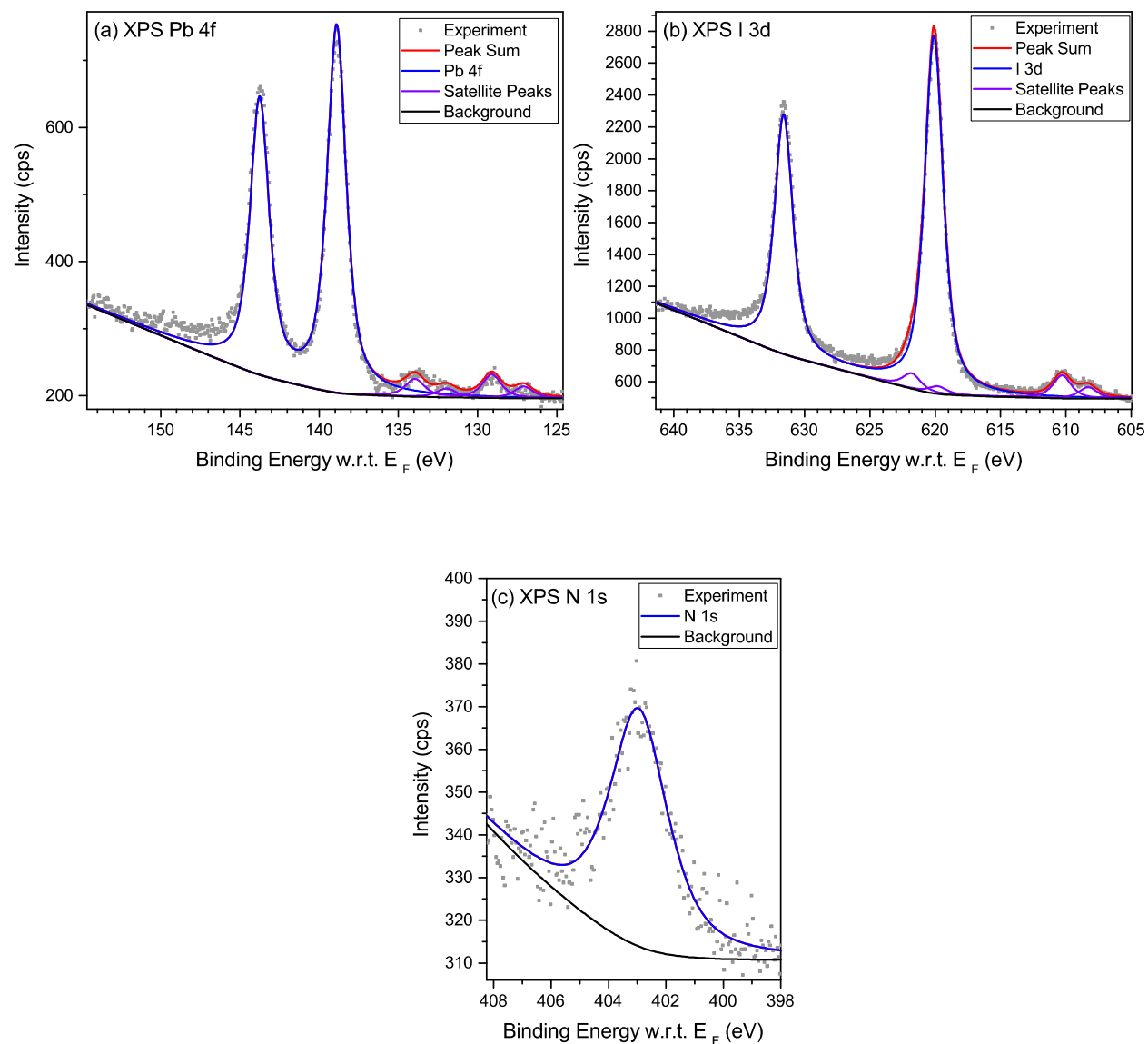
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XPS high resolution scans of specific core levels were taken on the samples investigated in this work. XPS measurements were always performed after UPS and IPES measurements. As mentioned in the manuscript, small levels of adventitious carbon and oxygen were found on all samples. Surface composition of WIS and PU samples were evaluated and compared based on the type of data presented in Figure S1 (a) and (b) for CsPbBr<sub>3</sub> and Figure S2 (a), (b) and (c) for MAPbI<sub>3</sub>. Our XPS data also revealed the absence of metallic Pb, as can be seen from Figures S1(a) and S2(a).



**Figure S1:** (a) Pb 4f and (b) Br 3d and Cs 4d core levels measured via XPS from a CsPbBr<sub>3</sub> sample grown at the WIS. No metallic Pb is detected in the film. Small features on the low binding energy side of the main core level peaks are due to minor satellite radiation lines, with energy 9.8 eV and 11.8 eV above the main 1486.7 eV Al K $\alpha$  line.



**Figure S2:** Same as Figure S1, for (a) Pb 4f, (b) I 3d and (c) N 1s core level measured via XPS from a MAPbI<sub>3</sub> sample grown at PU.