

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: Deionized water is poured onto a thin film of a 3D perovskite and a 3D perovskite coated in a 2D perovskite. Within 3 seconds of contact with water the 3D perovskite decomposes to PbI_2 and changes color from black to yellow. There are no observable changes in the color of the 2D coated perovskite over the length of the 1-minute exposure. The composition of the 3D perovskite is $(\text{FA}_{0.85}\text{MA}_{0.15})\text{Pb}(\text{I}_{0.85}\text{Br}_{0.15})_3$; FA and MA are formamidinium and methylammonium, respectively. The 2D perovskite is based on $(\text{CH}_3(\text{CH}_2)_{17}\text{NH}_3)_2\text{PbI}_4$.