

Supporting Information

O₂ as a molecular probe for nonradiative surface defects in CsPbBr₃ perovskite nanostructures and single crystals

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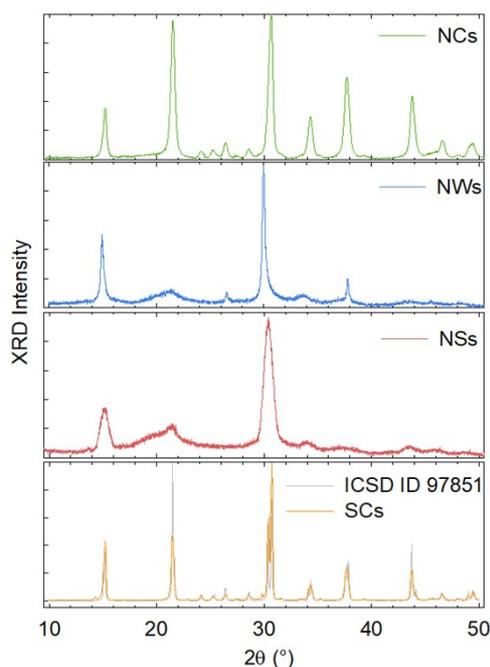


Figure S1: XRD patterns of the CsPbBr₃ NCs, NWs, NSs and SCs (ICSD reference pattern: 98-009-7851) showing orthorhombic phase for all systems.

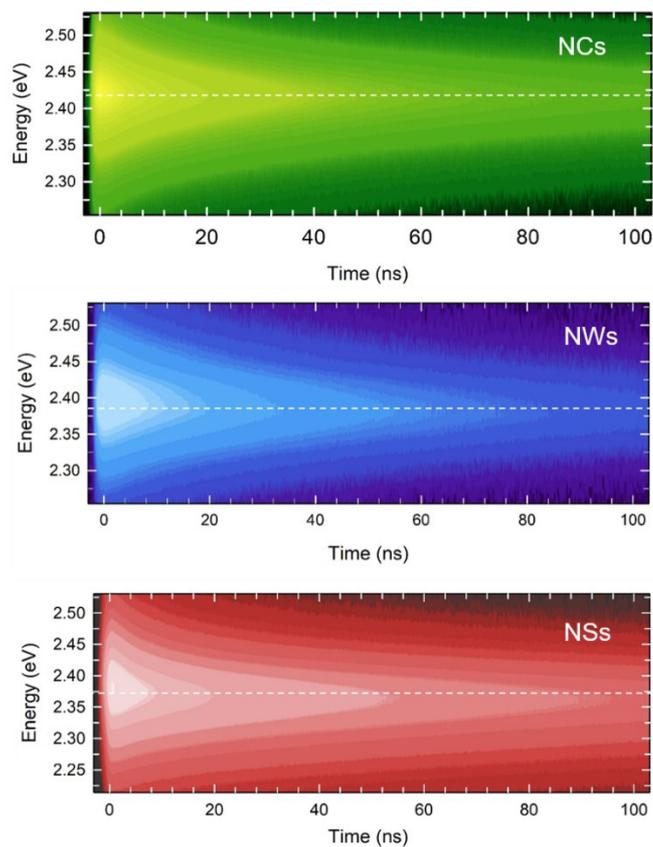


Figure S2. Contour plots of the PL decay curves of CsPbBr₃ NCs (green), NWs (blue) and NSs (pink) in toluene solution as a function of the emission energy.

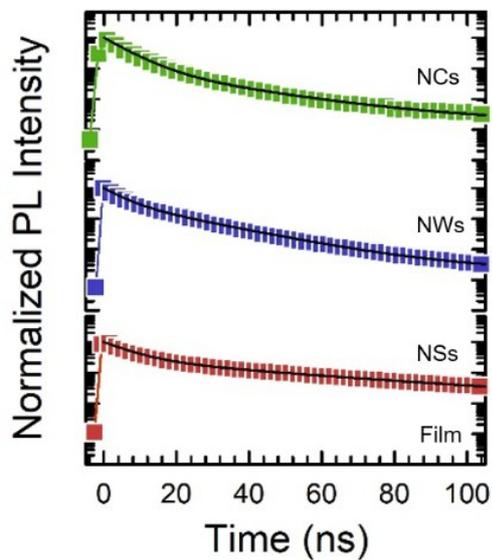


Figure S3. PL decay curves of CsPbBr₃ NCs (green), NWs (blue) and NSs (pink) drop-casted on silica along with the respective double exponential fit (black solid lines).

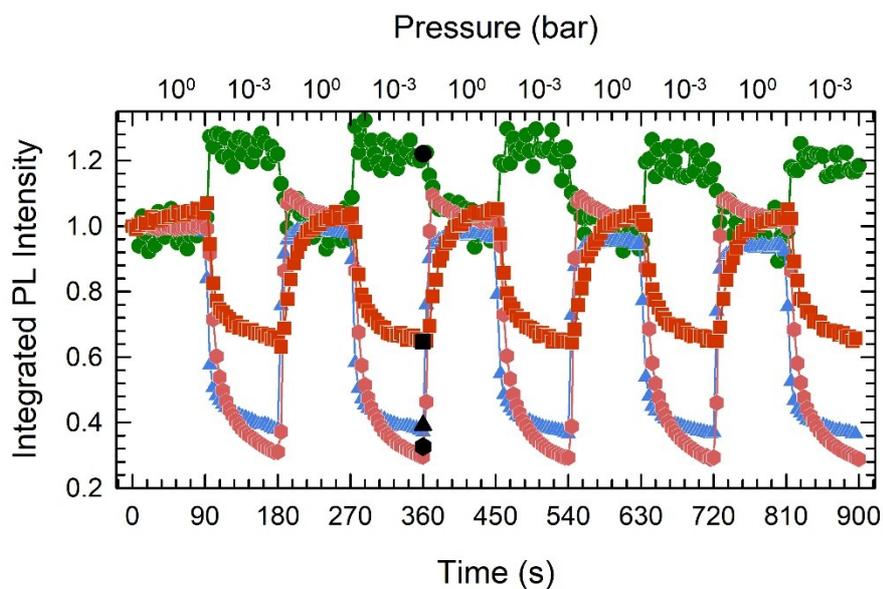


Figure S4: Integrated PL intensity of CsPbBr₃ NCs (green circles), NWs (blue triangles), NSs (pink hexagons) films and SCs (orange squares) monitored under continuous CW excitation at 400 nm during Humid air/Vacuum cycles between $P = 1$ bar and $P = 10^{-3}$ bar. Black points at 360 s correspond to the same measurements implemented under pure O₂ atmosphere.