

Supplementary Information

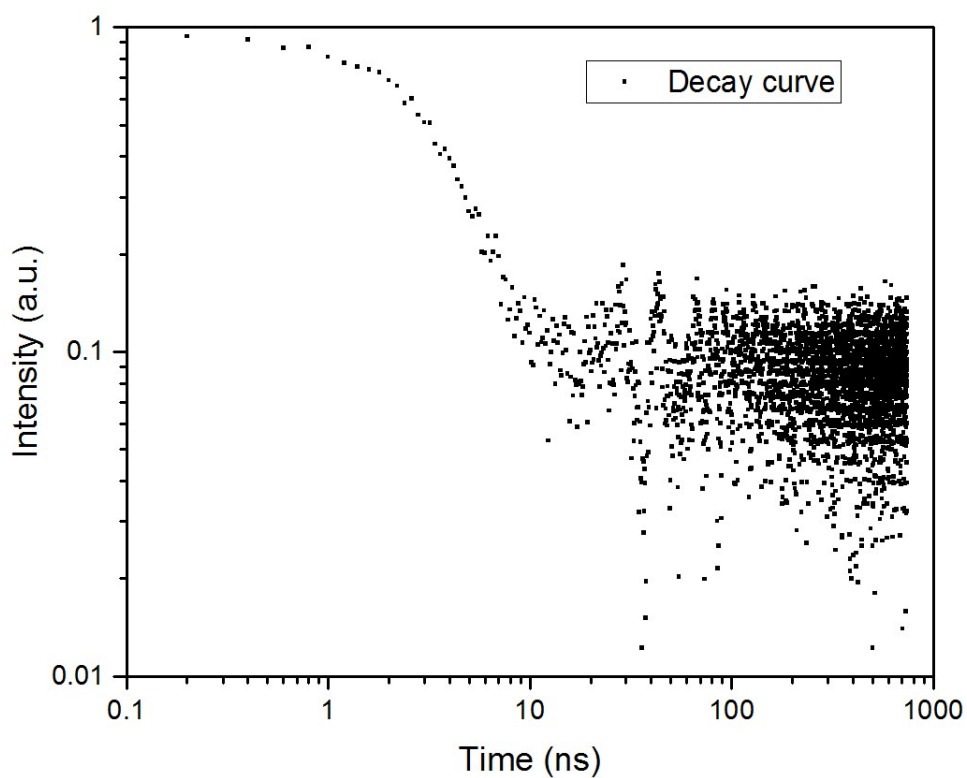
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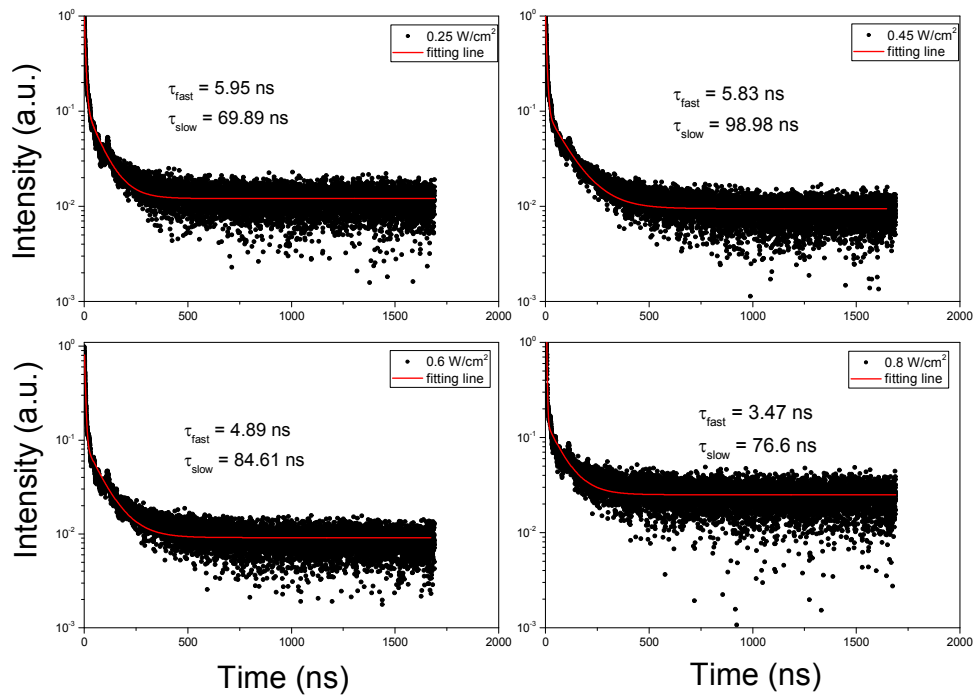
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S1. Decay curve of MAPbBr₃ single crystals with MAPbBr₃-MAPbI₃ heterojunctions.



S2. Lifetime fitting of MAPbBr₃ single crystals under 355 nm excitations with various excitation intensities.



S3. Lifetime fitting of MAPbBr₃ single crystals with MAPbCl₃-MAPbI₃ heterojunctions under 532 nm excitations with various excitation intensities.

