

**Extended Air, Light, and Heat Resistive Organolead Halide Perovskite Single-Crystalline
Microrods for High-Performance Photodetector**

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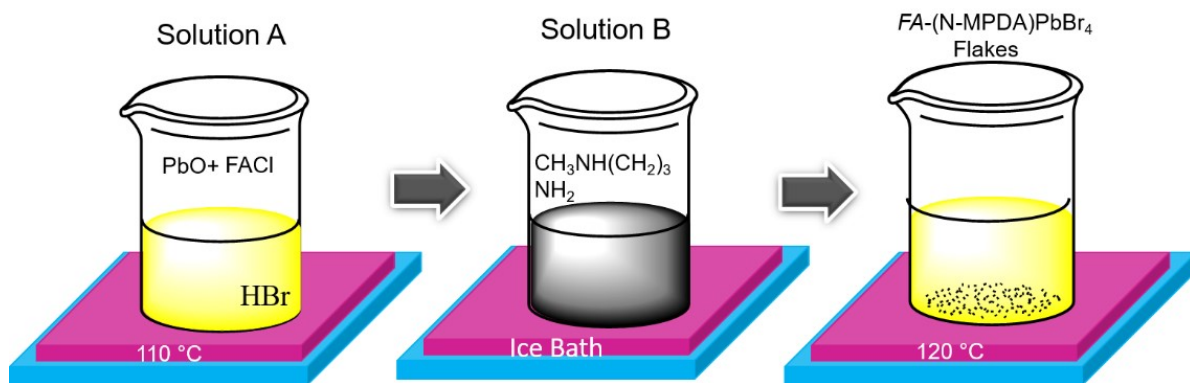


Fig. S1. Diagrammatic view of the synthesis of FA-(N-MPDA)PbBr₄ flakes.

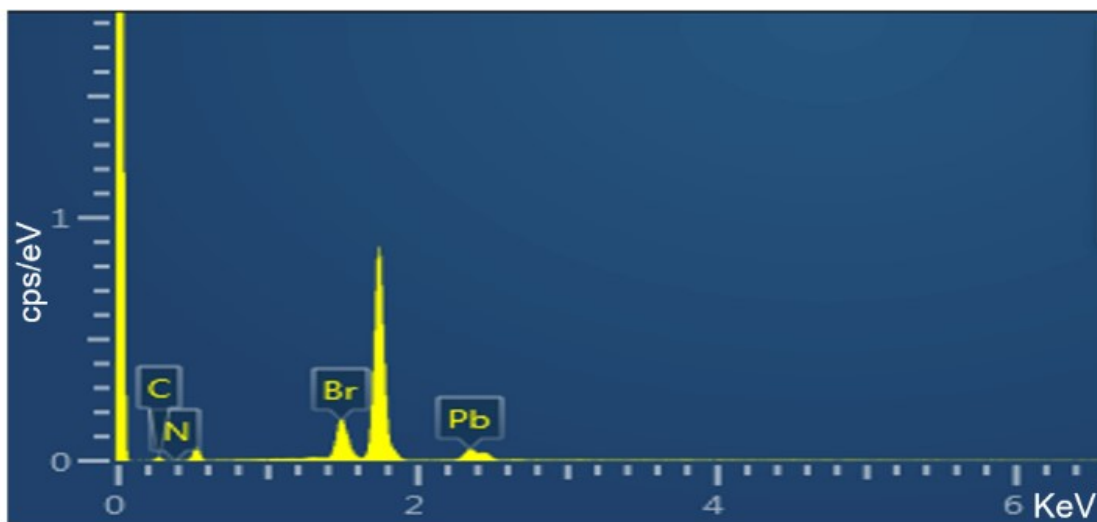


Fig. S2. EDS spectrum of as-grown FA-(N-MPDA)PbBr₄ single crystal.

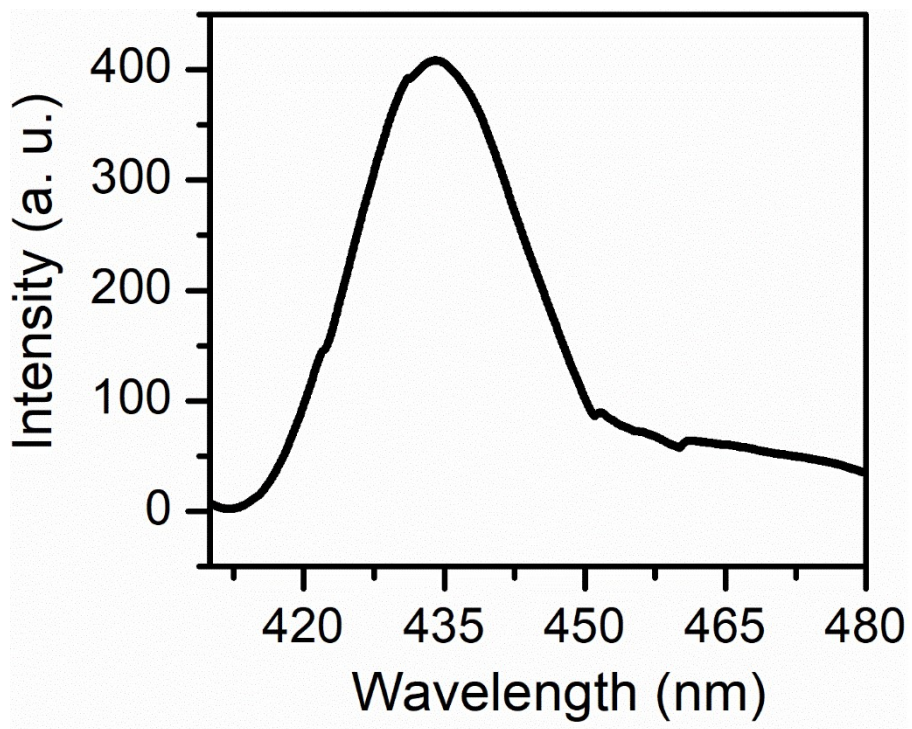


Fig. S3. The emission spectrum of (N-MPDA)PbBr₄ single crystal.

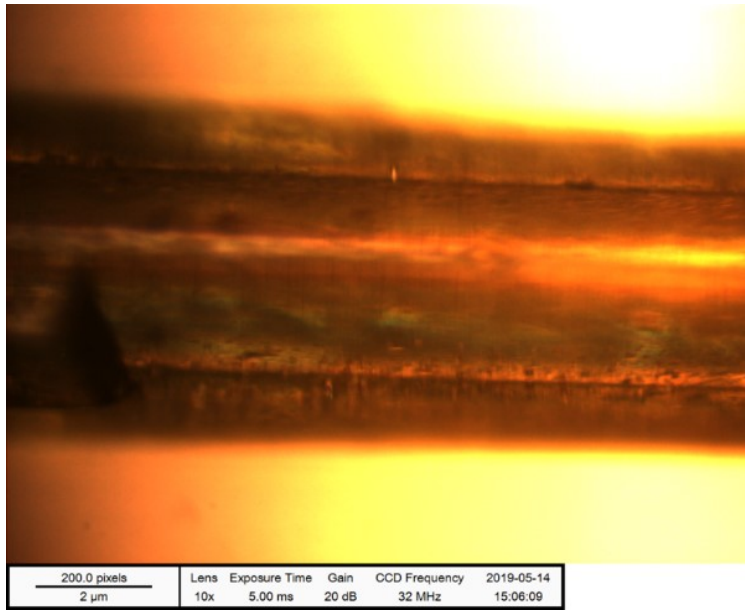


Fig. S4. Optical microscopy image of FA-(N-MPDA)PbBr₄ single crystal.

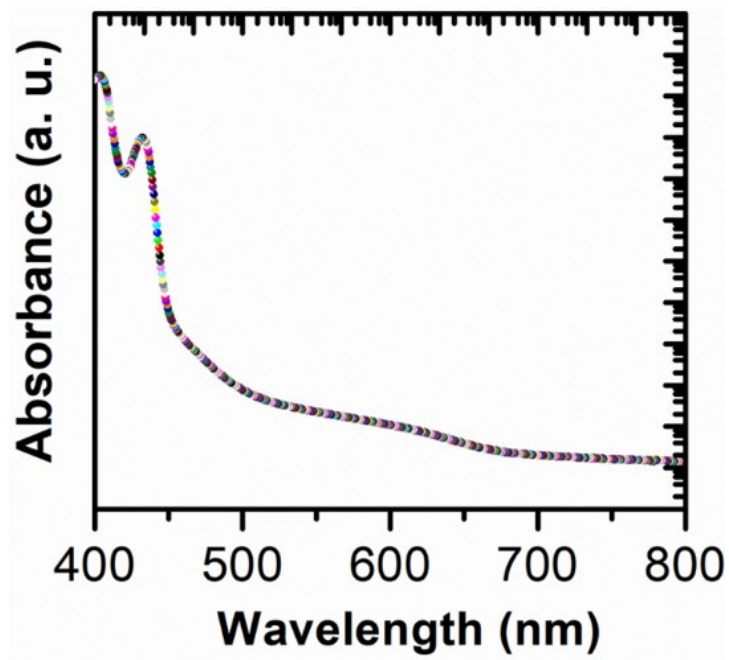


Fig. S5. The absorption spectrum for bulk FA-(N-MPDA)PbBr₄ single crystal was observed between 400-800 nm.

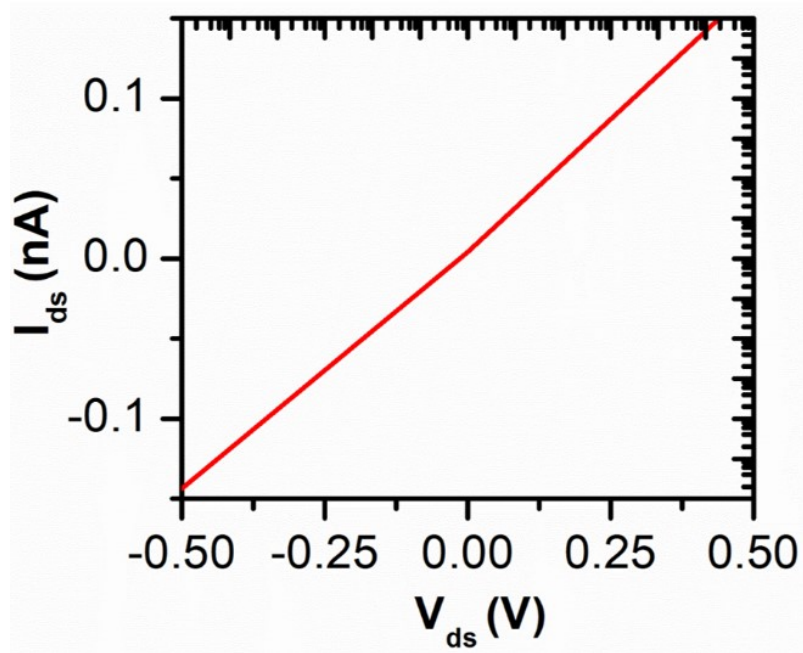


Fig. S6. The I_{ds} - V_{ds} characteristic curves of the FA-(N-MPDA)PbBr₄-FET measured between -0.5 to 0.5 V.

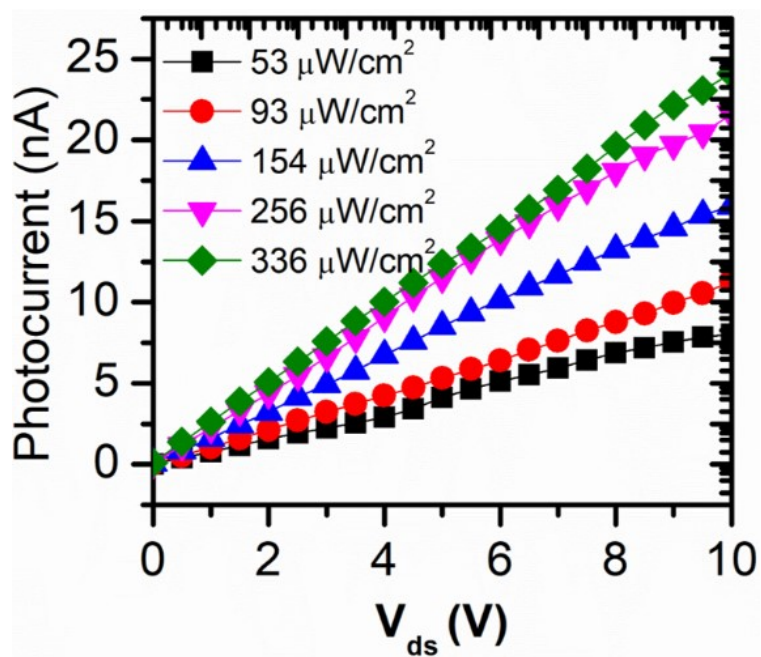


Fig. S7. The photocurrent (I_{ph}) is plotted as the incident laser power function with varying V_{ds} from 0 to 10 V.

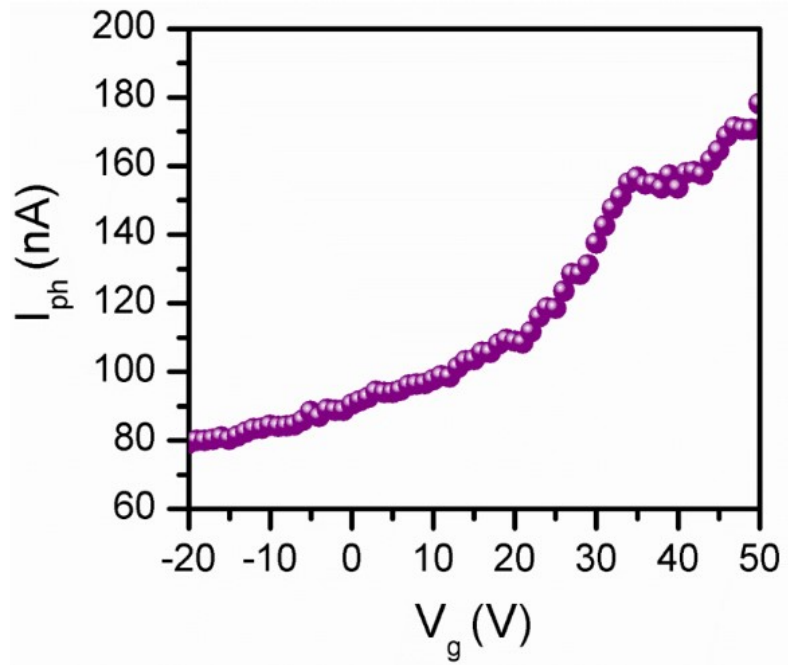


Fig. S8. The I_{ph} is plotted versus varying V_g from -20 to 50 V at constant V_{ds} of 10V under incident laser power of 140 mW.

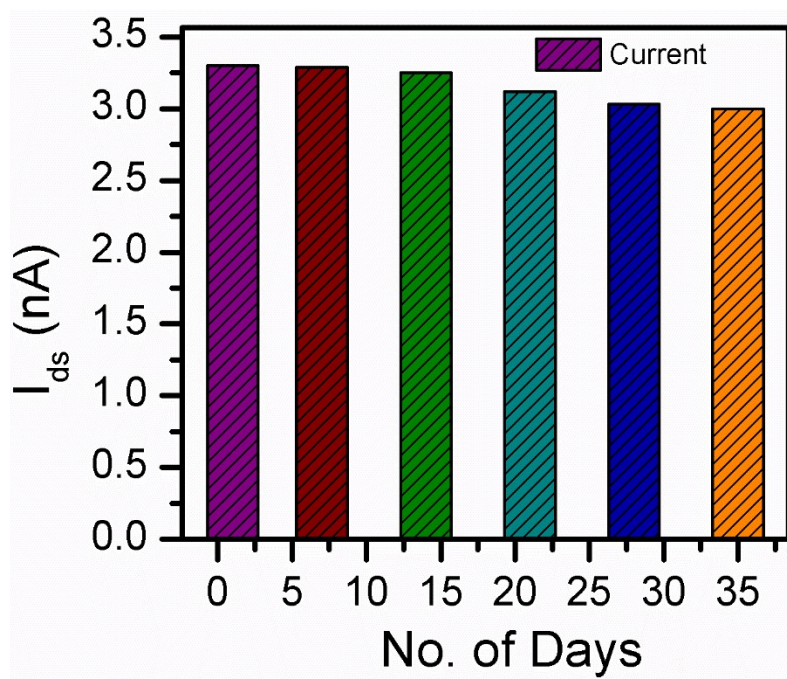


Fig. S9. Long-term stability of FA-(N-MPDA)PbBr₄-FET vs. different days.

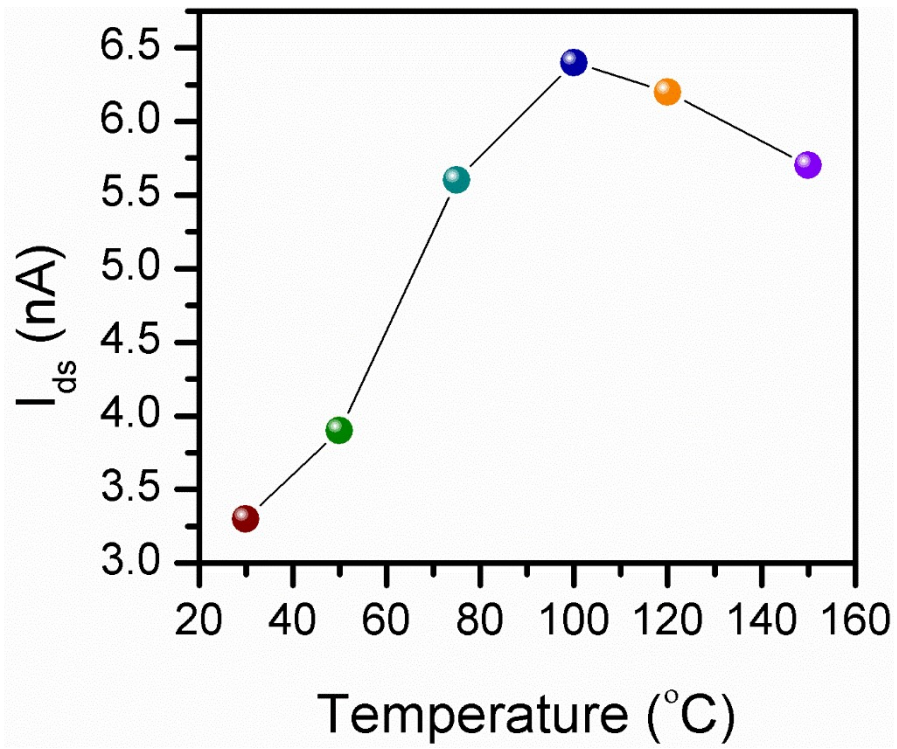


Fig. S10. Thermal stability of FA-(N-MPDA)PbBr₄-FET device at 10 V of V_{ds} .