

Substrate effects on the random lasing performance of solution-processed hybrid-perovskite multicrystal film

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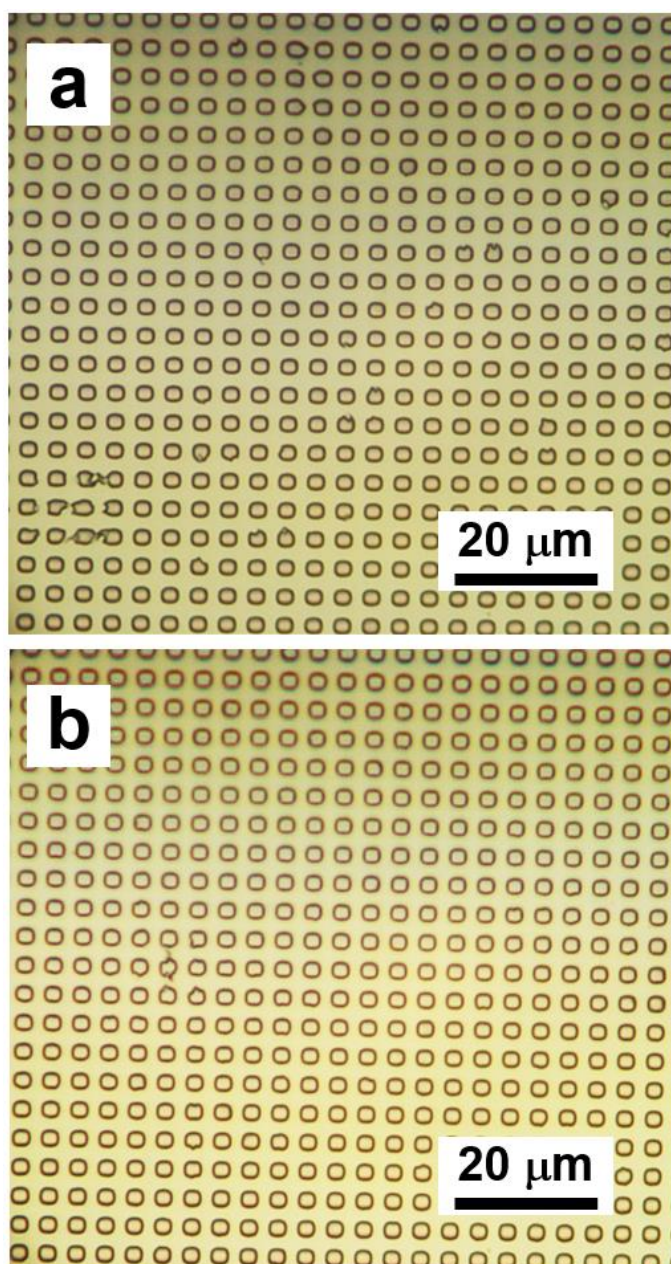


Figure S1 Optical microscopic image of an ADCP grating with a period of 4 μm before (a) and after (b) being immersed in DMF.

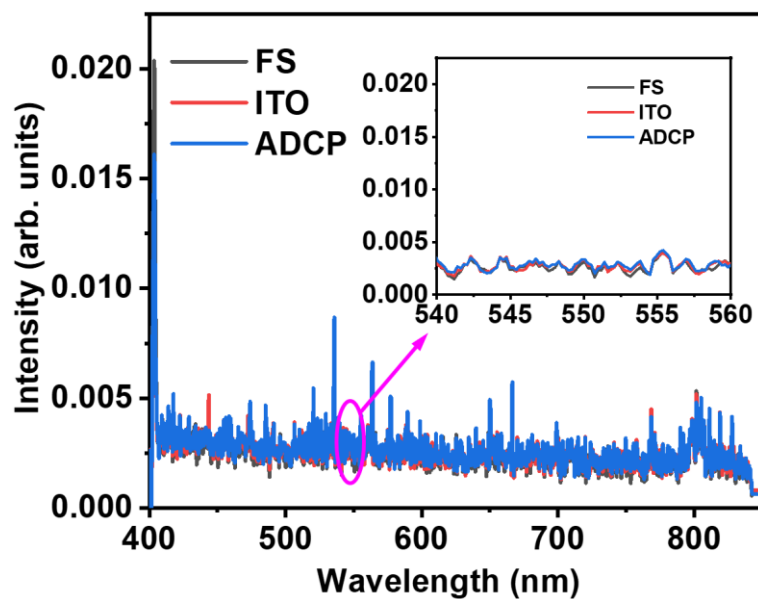


Figure S2 PL spectra of the pure FS, ITO, and ADCP substrates under the excitation of 150 fs pulses at 400 nm. Inset: enlarged view in the studied spectral range from 540 to 560 nm. Only noise is observed in the PL spectra without any typical spectral features.

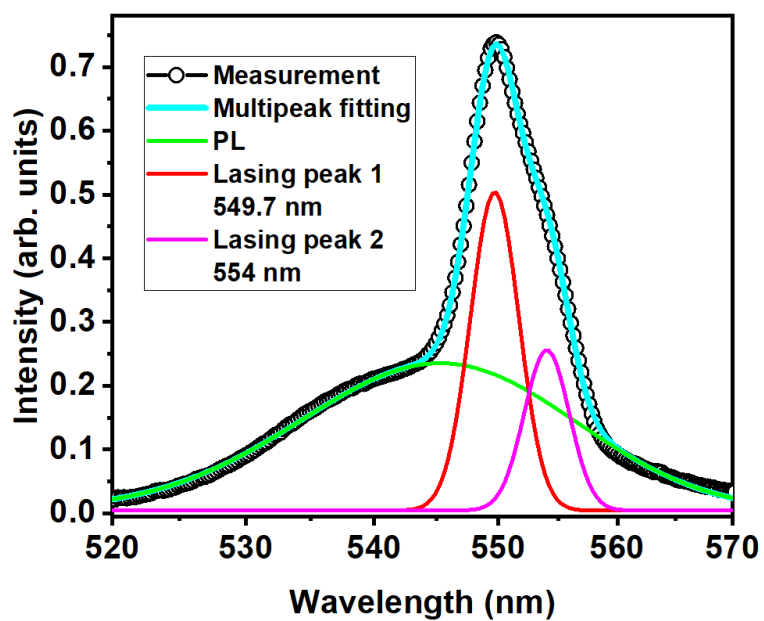


Figure S3 The measured emission spectrum of the ADCP-substrate MAPbBr₃ at a pump fluence of 50.6 $\mu\text{J}/\text{cm}^2$ of 400-nm excitation pulses and the multipeak fittings to resolve two distinct random lasing bands peaked at 547.1 and 554 nm by the red and magenta curves, respectively.

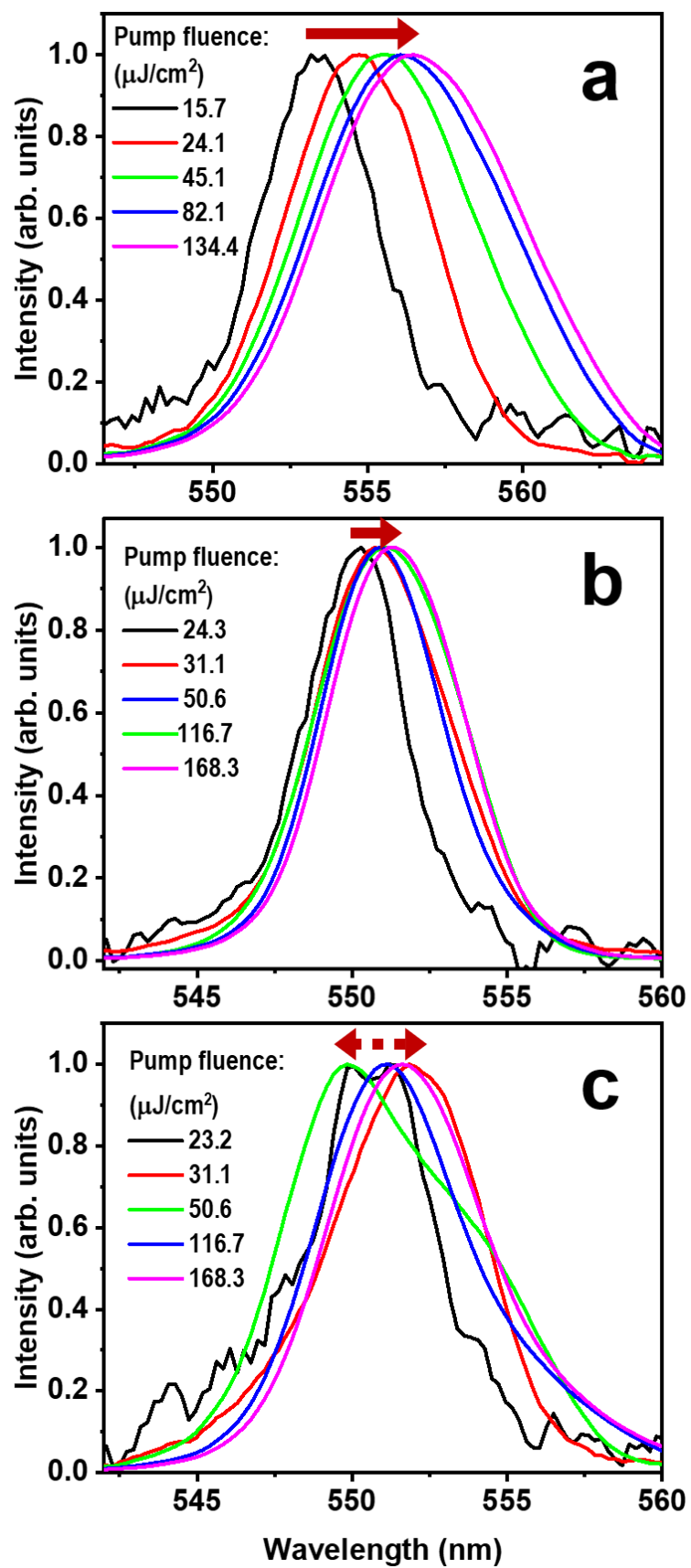


Figure S4 Pump fluence dependence of the normalized random lasing spectrum for the (a) ADCP, (b) ITO, and (c) FS substrates.