

**Supplementary Material for**  
**Synthesis and characterisation of fluorinated epitaxial films of**  
**BaFeO<sub>2</sub>F: Tailoring magnetic anisotropy via a lowering of**  
**tetragonal distortion**

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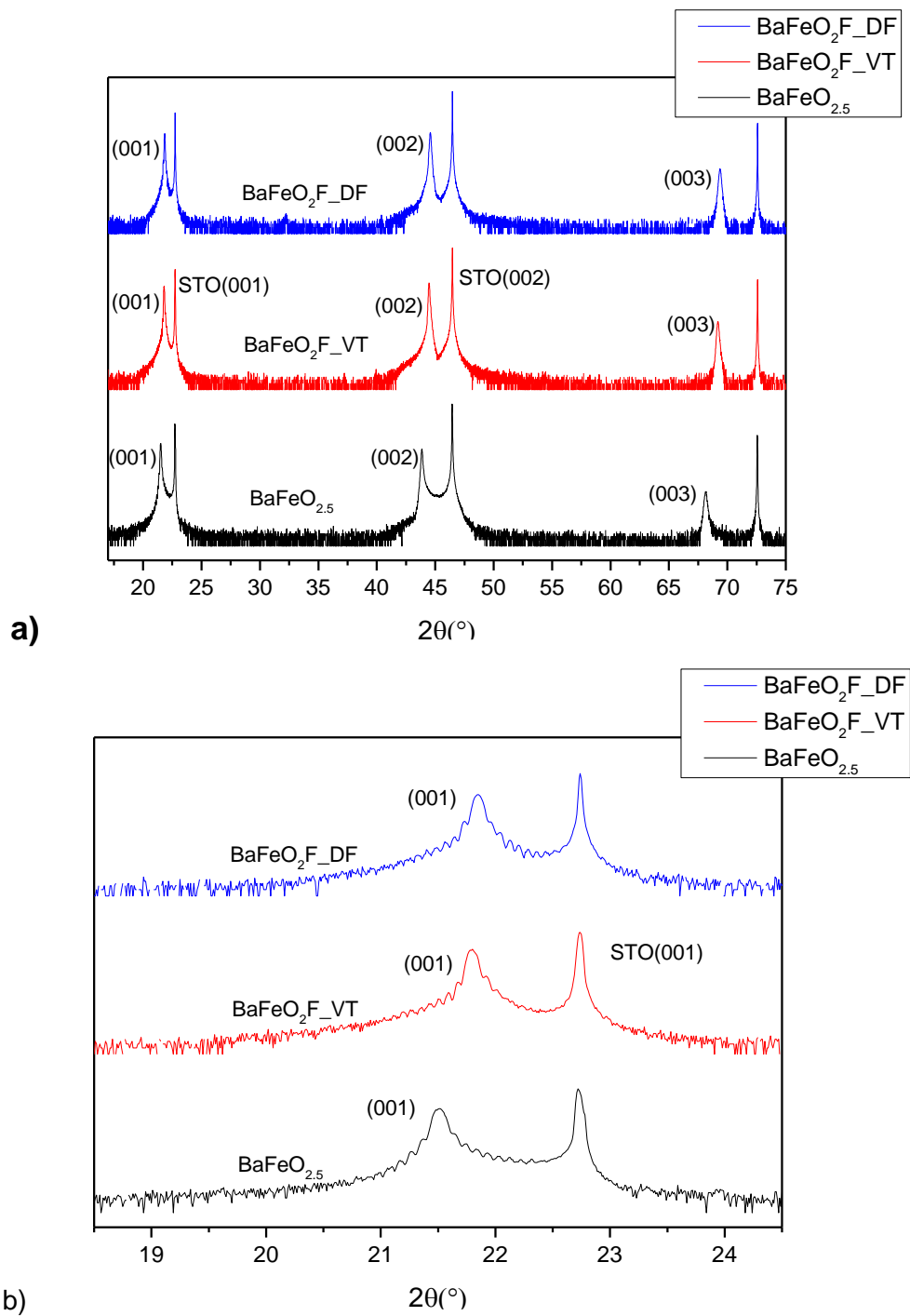


Figure S 1. a) XRD  $2\theta$ - $\theta$  patterns of the BFO film and BFOF films on STO. b) Expanded view of the 001 reflection.

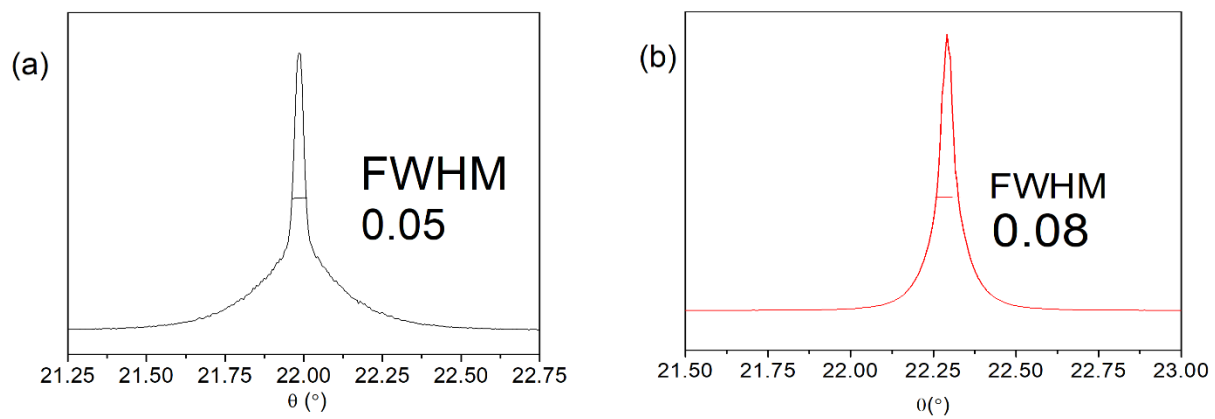


Figure S 2. Rocking curve scans of the (002) reflection of a film of BFO (a) and BFOF (b).

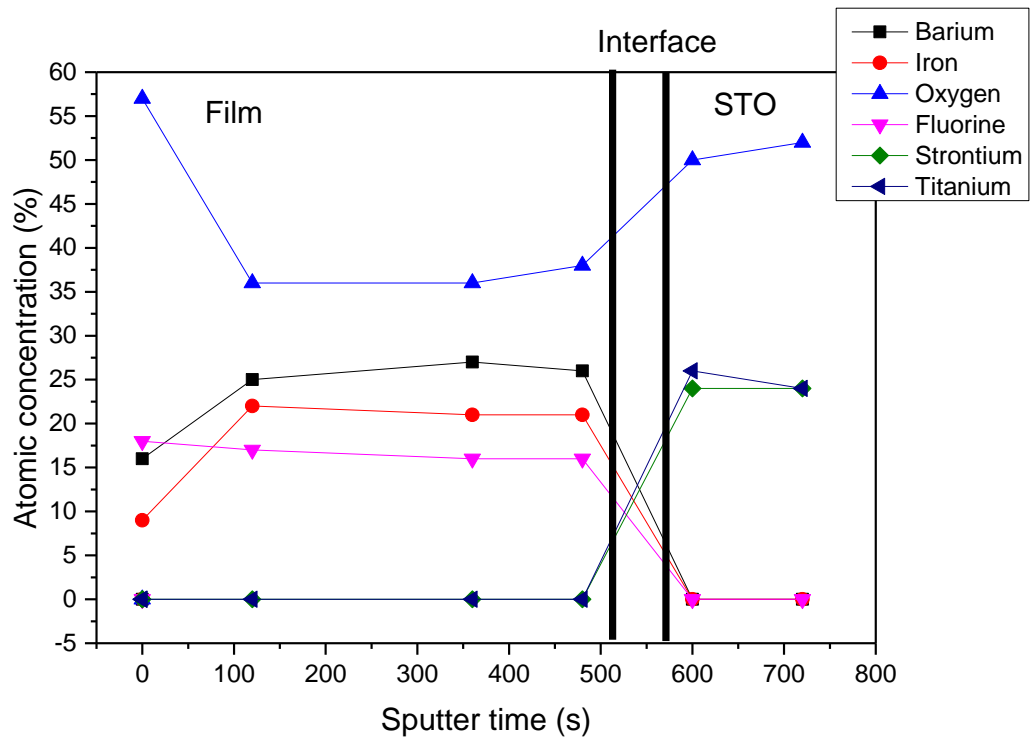


Figure S 3. Normalized concentration-depth profile for BFOF\_VT.