

Supporting Information

**Electric field-responsive photoluminescence color switching and reversible properties via  
Tb/Eu co-doped ergodic relaxor ferroelectrics**

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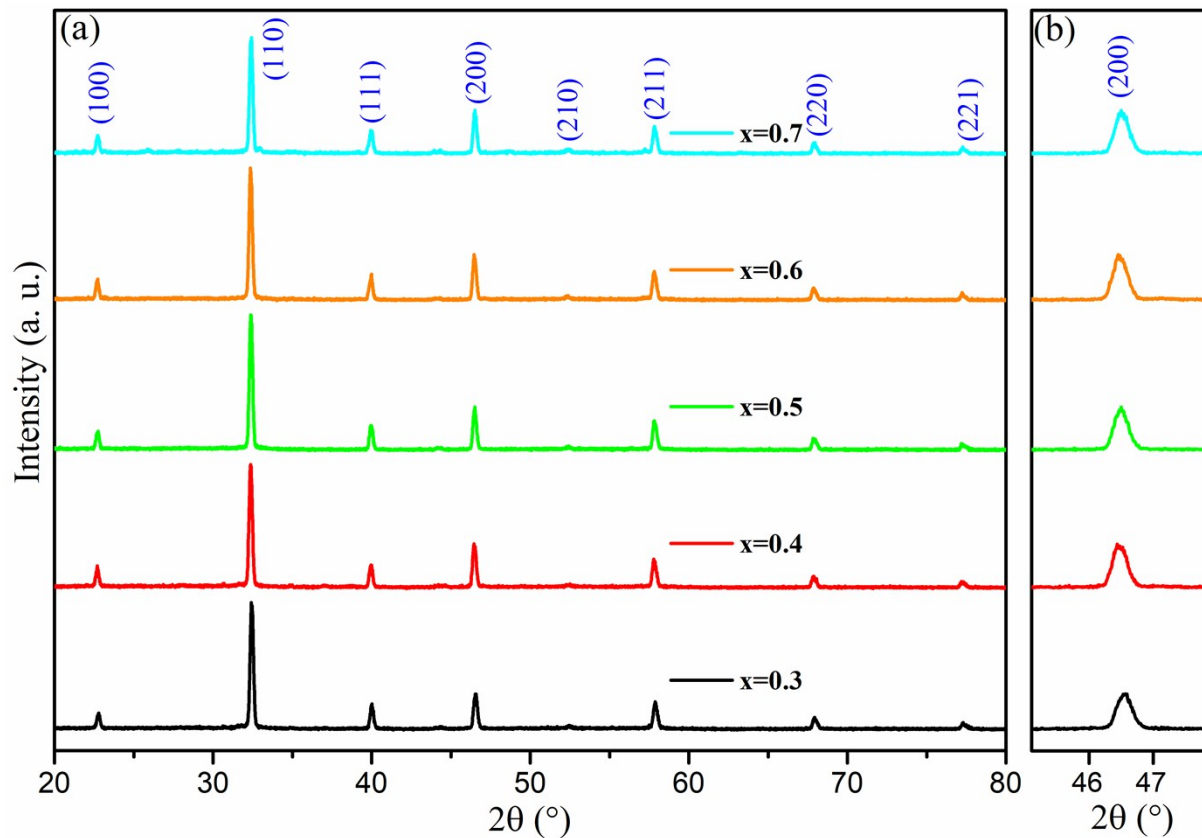


Figure S1 (a) General XRD patterns for the BNT6BT-Tb/Eu-x ceramics, (b) enlarged inspection of the XRD characteristic diffraction peak labeled as {200}.

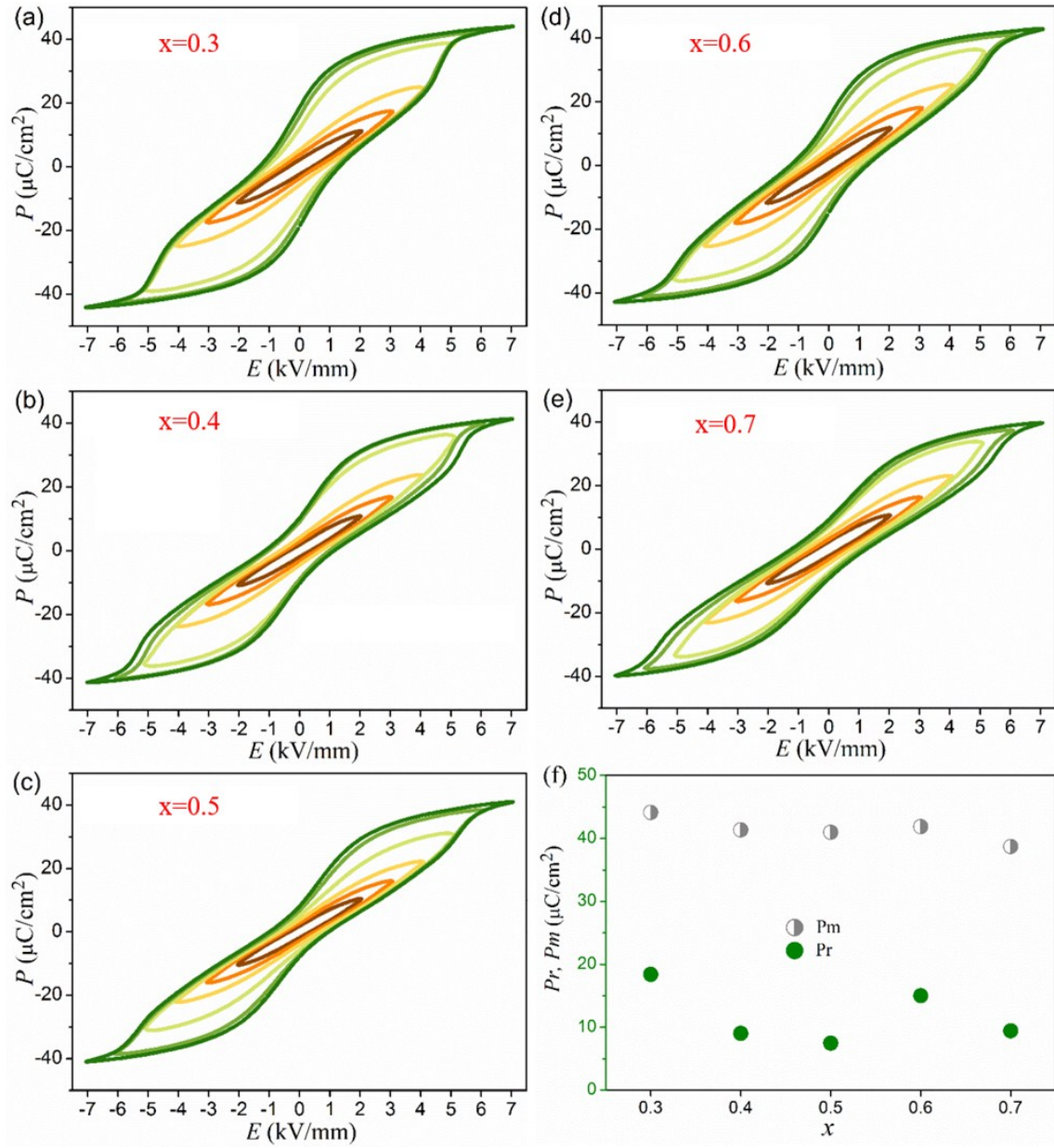


Figure S2 The polarization hysteresis ( $P$ - $E$ ) loops for BNT6BT-Tb/Eu- $x$  ceramics (a-e)  $x=0.3$ -0.7; (f) maximum polarization  $P_m$  and remanent polarization  $P_r$  as functions of  $x$ .

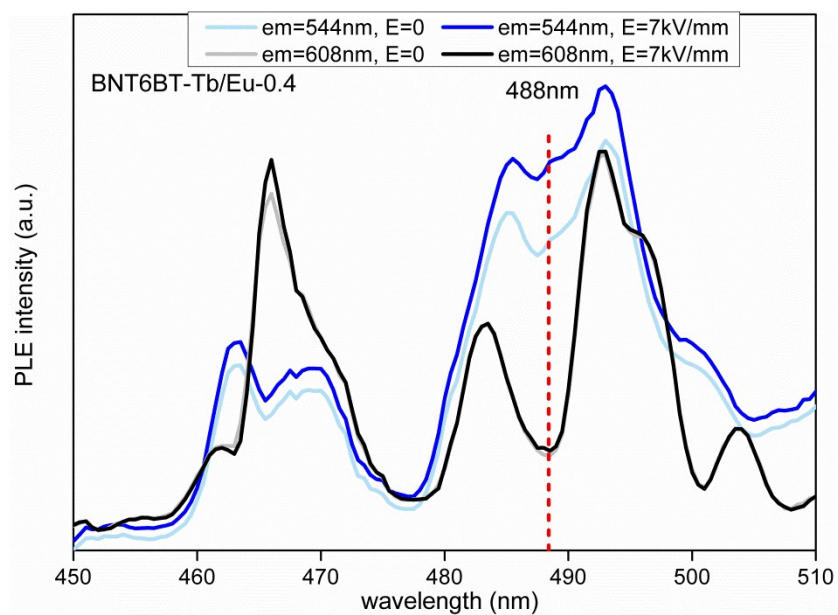


Figure S3 Effects of electric field on PLE spectra of  $x=0.4$  sample under 544nm and 608nm absorption.