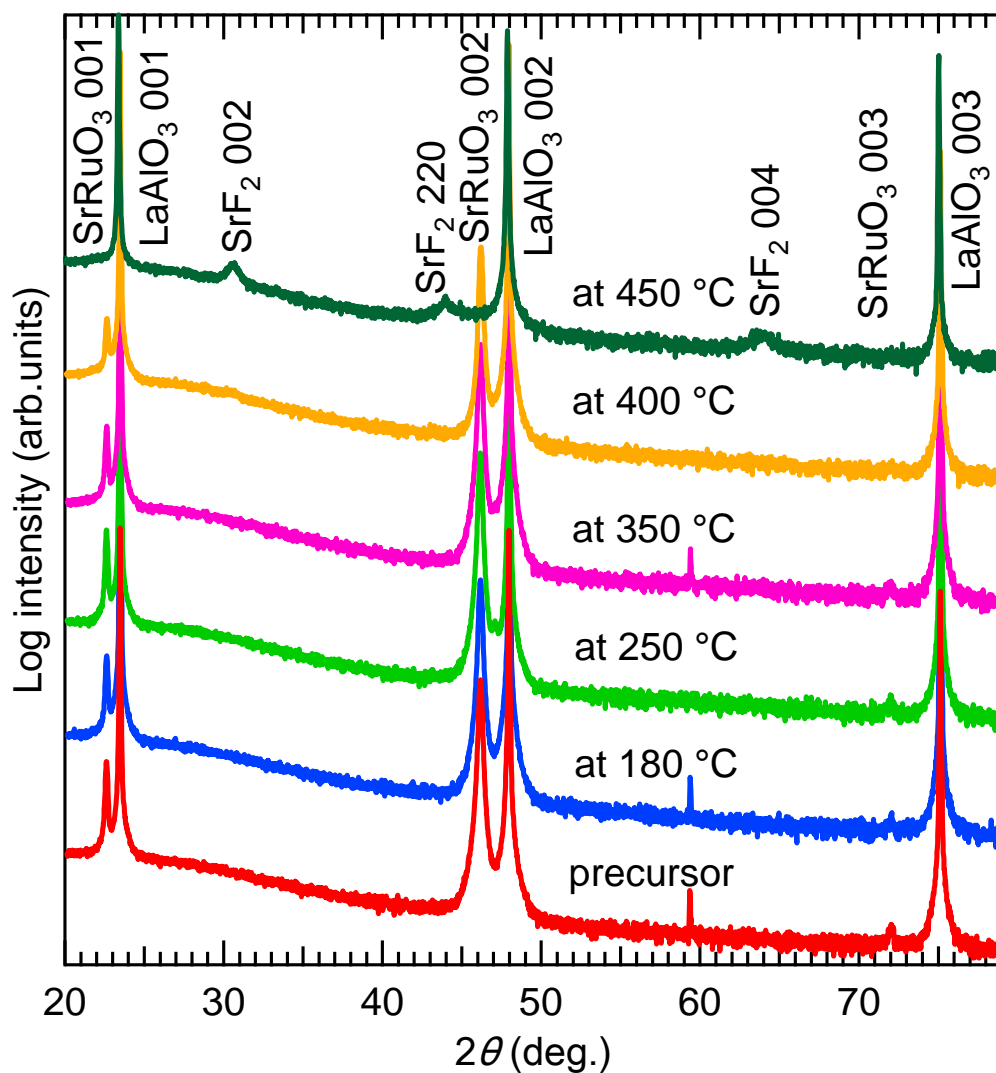
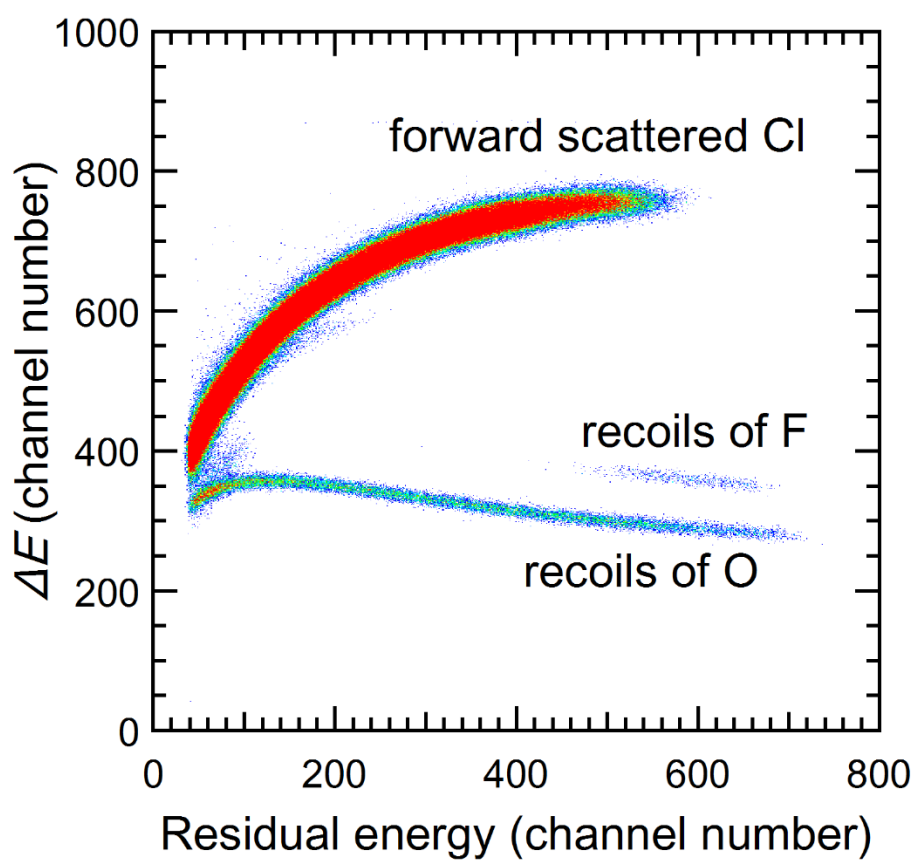


Supplementary figure



**Supplementary figure S1.**  $2\theta$ - $\theta$  X-ray diffraction patterns of the SrRuO<sub>3</sub> precursor and the PVDF treated films at 180-450 °C on LaAlO<sub>3</sub> (001) substrates.



**Supplementary figure S2.**  $\Delta E$ - $E$  ERDA histogram taken on the  $\text{Sr}_2\text{RuO}_4$  film fluorinated at 240 °C. Apart from the intense Cl signal, the recoil signals of O and F were clearly observed.