

Supporting Information for

**Structural and spectroscopic features of the bixbyite-type yttrium
scandate doped by rare-earth ions**

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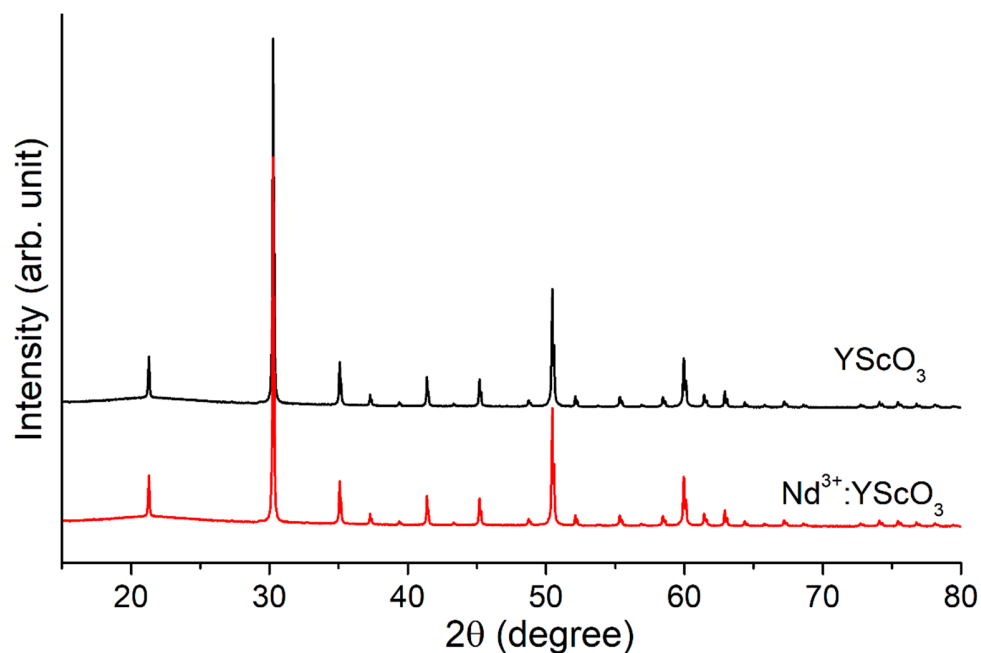


Figure S1. The X-ray pattern of YScO_3 and $\text{Nd}^{3+}:\text{YScO}_3$ crystal fibers (black and red ones, respectively).

Table S1. Miller indices (hkl), interplanar distances d , and Bragg angles 2θ of the pure and Nd^{3+} -doped YScO_3 crystal fibers with a bixbyite-type structure

hkl	m	YScO_3 , $a = 10.228(1) \text{ \AA}$		$\text{Nd}^{3+}:\text{YScO}_3$, $a = 10.224(1) \text{ \AA}$	
		d	2θ	d	2θ
211	24	4.1756	21.261	4.1738	21.271
222	8	2.9526	30.246	2.9513	30.259
004	6	2.5570	35.065	2.5559	35.081
411	24	2.4108	37.268	2.4097	37.285
332	24	2.1806	41.372	2.1797	41.391
341	24	2.0059	45.166	2.0050	45.186
251	24	1.8674	48.724	1.8666	48.747
044	12	1.8081	50.432	1.80730	50.455
433	24	1.7541	52.098	1.75334	52.123
611	24	1.6592	55.324	1.65849	55.350
541	24	1.5782	58.429	1.57754	58.457
622	24	1.5419	59.942	1.54127	59.971
631	24	1.5081	61.433	1.50739	61.463
444	8	1.4763	62.903	1.47565	62.934
721	24	1.3919	67.205	1.39126	67.238
008	6	1.2785	74.098	1.27795	74.136

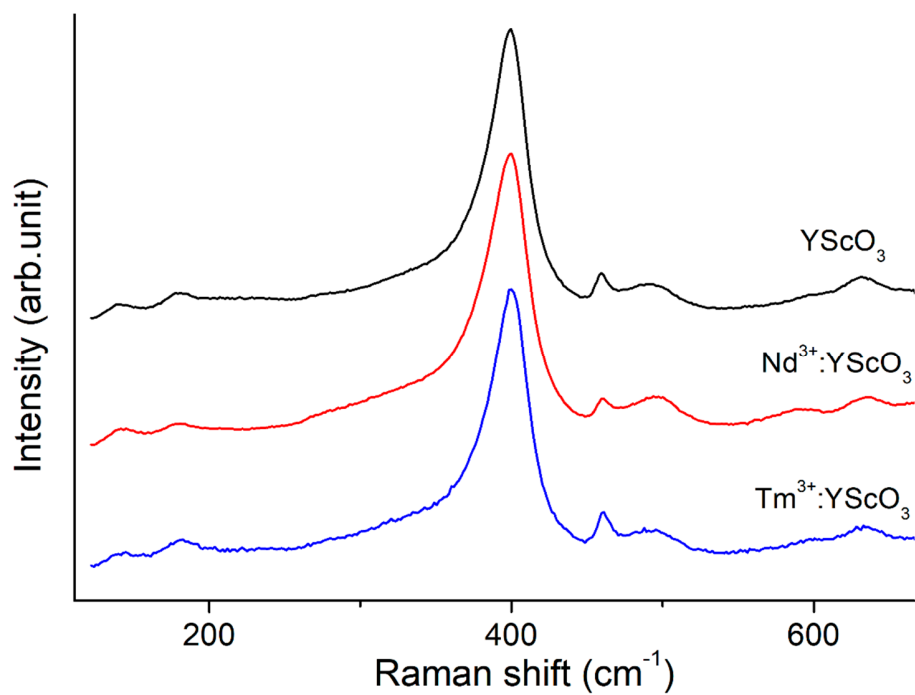


Figure S2. Micro-Raman spectra of YScO₃, Nd³⁺:YScO₃, and Tm³⁺:YScO₃ crystal fibers (black, red and blue ones, respectively).