

Figure 2. Comparison of the emission spectrum of Er^{3+} in $(\text{THF})_{14}\text{Er}_{10}\text{S}_6\text{Se}_{12}\text{I}_6$ complex and phosphate glass with same order of Er^{3+} concentration.

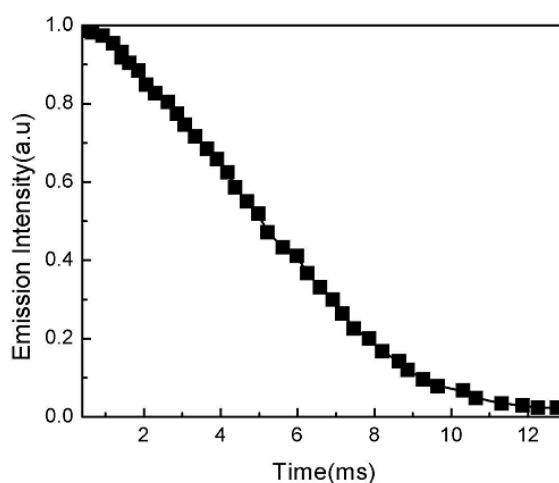


Figure 3. Fluorescence decay curve of the 1540 nm emission in $\text{Er}_{10}\text{S}_6\text{Se}_{12}\text{I}_6$ complex under 980 nm laser excitation.

Table 1. Comparison of the fluorescence lifetime and phonon frequencies of some reported Er containing solid-state materials.

Host	Lifetime(ms)	Phonon frequency(cm^{-1})
Sulphide	3.0	450-700
Selenide	2.3	450-700
Tellurite	4	450-700
Phosphate	11	1200
Borate	8	1400
Silicate	15	1100
Germanate	6	900
ZBLA	10	500
Halide	10-30	200-400
YAG	8	400