

Figure 1S.  $^{31}\text{P}$  NMR spectra of ligand and  $\text{Ln}^{\text{III}}$ -CDTP solutions at pH around 5 and 9.

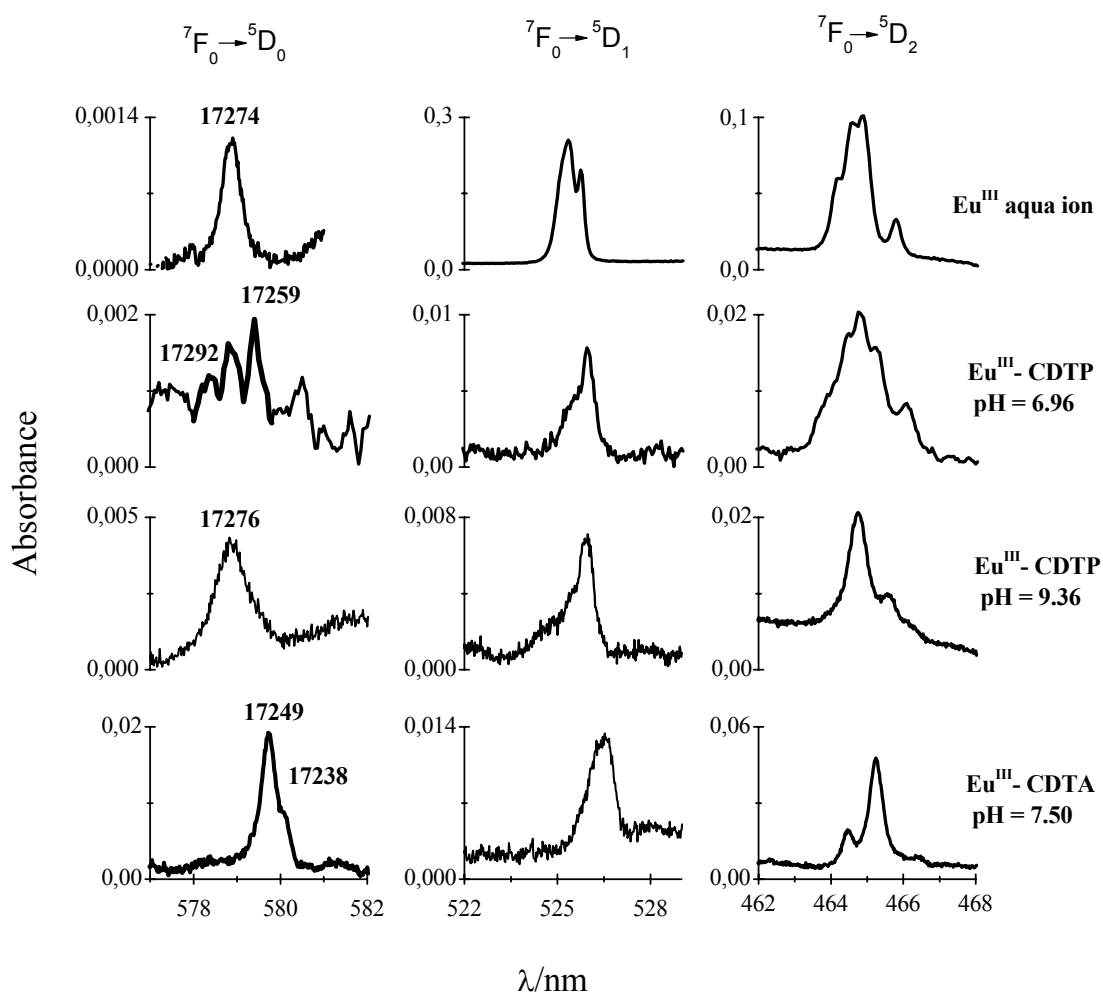


Figure 2S. Absorption spectra of  $\text{Eu}^{\text{III}}$  aqua ion and  $\text{Eu}^{\text{III}}$  complexes with CDTP and CDTA;  $(\text{Eu}(\text{ClO}_4)_3)$ :  $c_{\text{Eu}} = 6.53 \cdot 10^{-1} \text{ mol dm}^{-3}$ ,  $d = 5 \text{ cm}$ ;  $\text{Eu}^{\text{III}}$ -CDTP:  $c_{\text{Eu}} = 1.25 \cdot 10^{-2} \text{ mol dm}^{-3}$ ,  $c_{\text{L}} = 1.38 \cdot 10^{-2} \text{ mol dm}^{-3}$ ,  $d = 5 \text{ cm}$ ;  $\text{Eu}^{\text{III}}$ -CDTA  $c_{\text{Eu}} = 2 \cdot 10^{-2} \text{ mol dm}^{-3}$ ,  $c_{\text{L}} = 2.2 \cdot 10^{-2} \text{ mol dm}^{-3}$ ,  $d = 5 \text{ cm}$ .

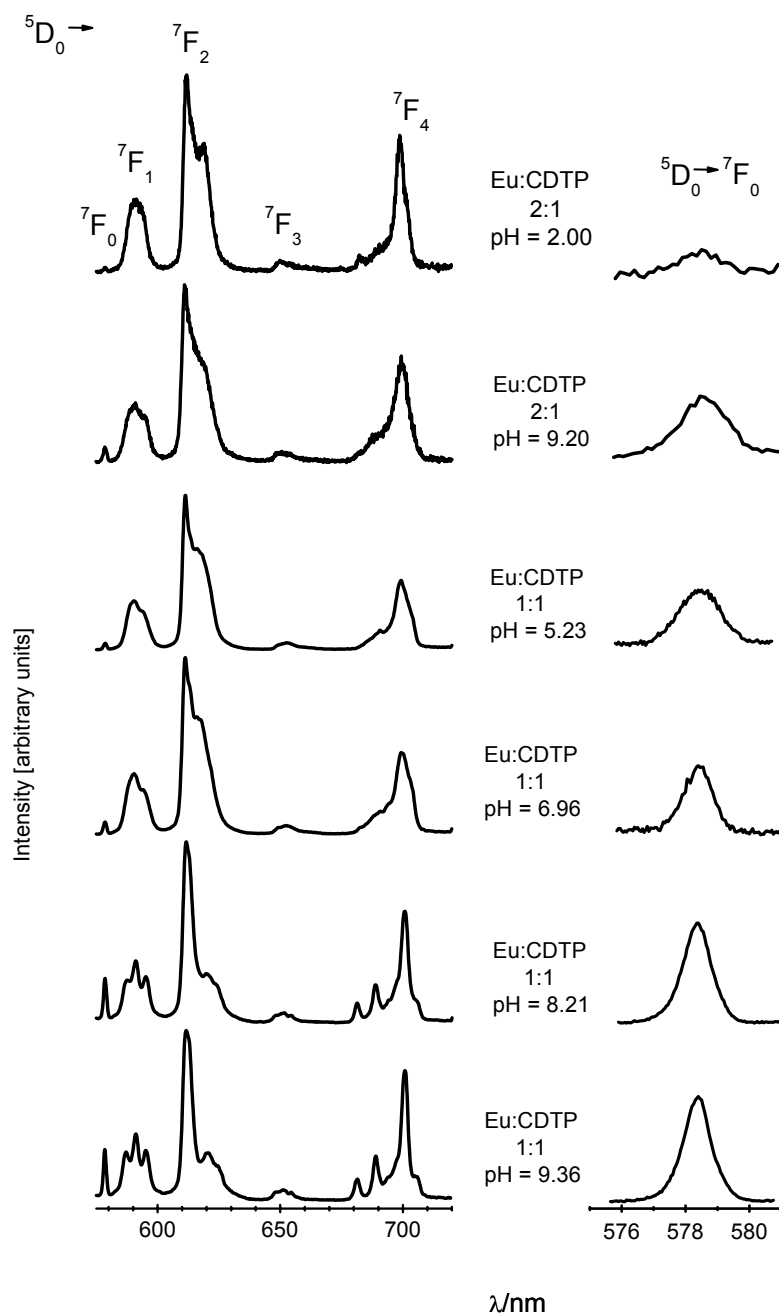


Figure 3S. Corrected emission spectra of 2:1 and 1:1 Eu<sup>III</sup>-CDTP solutions at different pH ( $\lambda_{\text{exc}} = 394$  nm).