

Fig. S1: Absorbance spectra of the precursor solutions

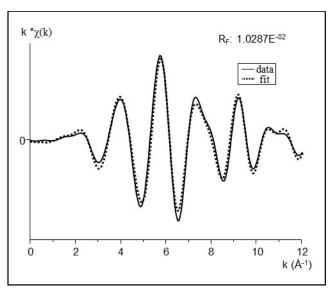


Fig. S2: Experimental (solid line) and fitted (dot line) two first-shell filtered EXAFS spectra at Y K-edge for stabilized acacmodified sol ( $R_{\rm C}$ =1)

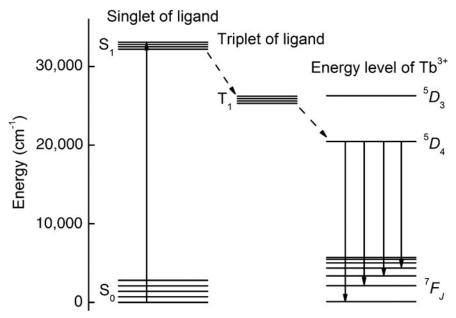


Fig. S3: General scheme representing the energy transfer from a ligand to Tb<sup>3+</sup> ions, evidencing the antenna effect

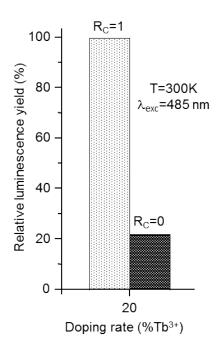


Fig. S4: Comparison of relative luminescence yields determined under blue excitation for Tb-doped sols between an acac-modified sol and an unmodified one.