Electronic Supplementary Information

Neighbour-sensitized near-infrared emission of new Nd(III) and Er(III) complexes with 1-(anthracene-2-yl)-4,4,4-trifluoro-1,3-butanedione

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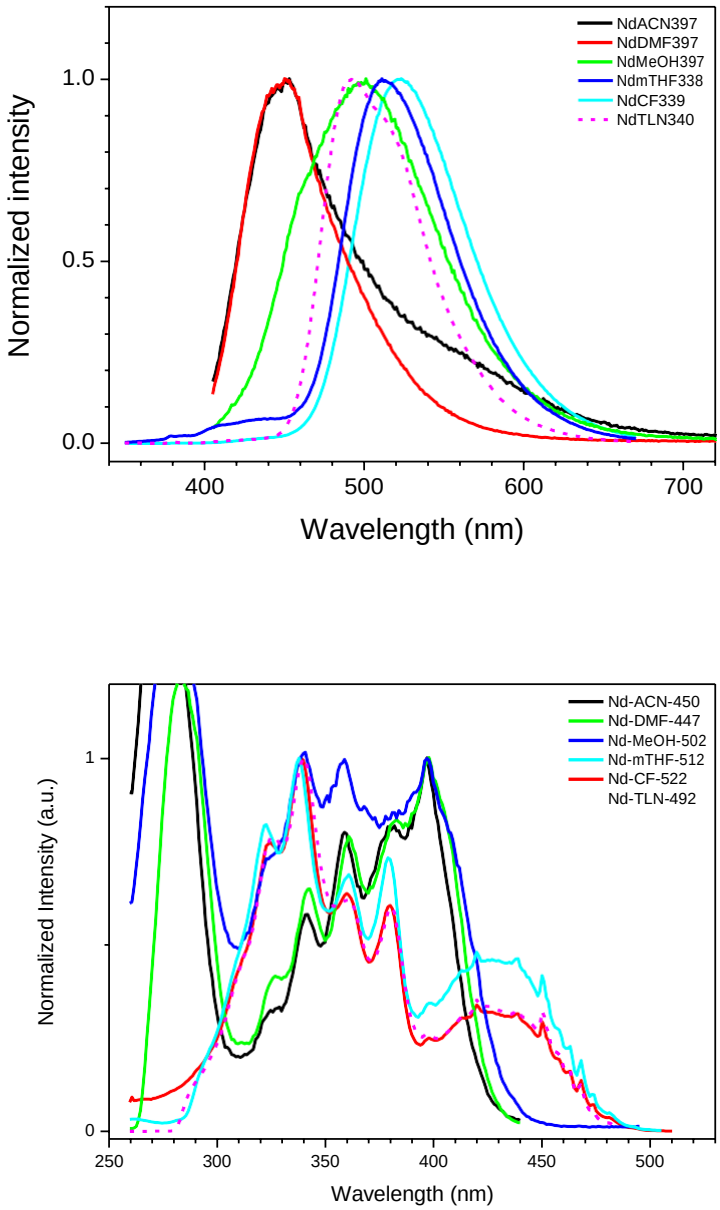

Fig. S1. Visible luminescence (a) and excitation (b) spectra of Nd(2-ATFB)$_3$ dissolved in various solvents.

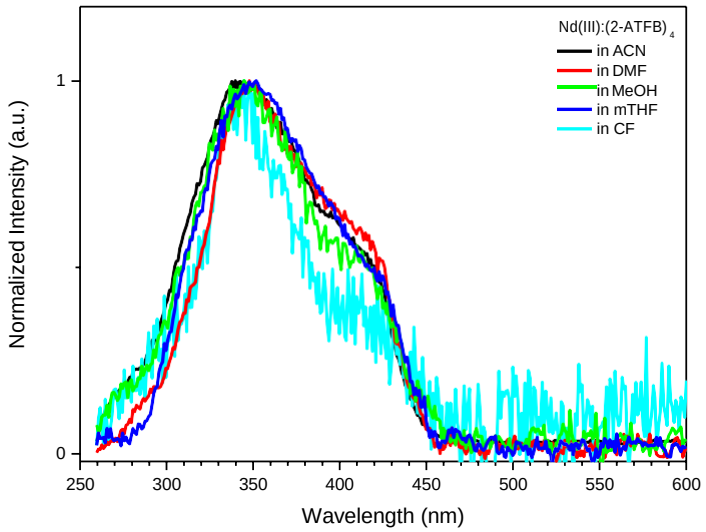

Fig. S2. Excitation spectra of the visible and the NIR luminescence of Nd(2-ATFB)$_3$ dissolved in various solvents.

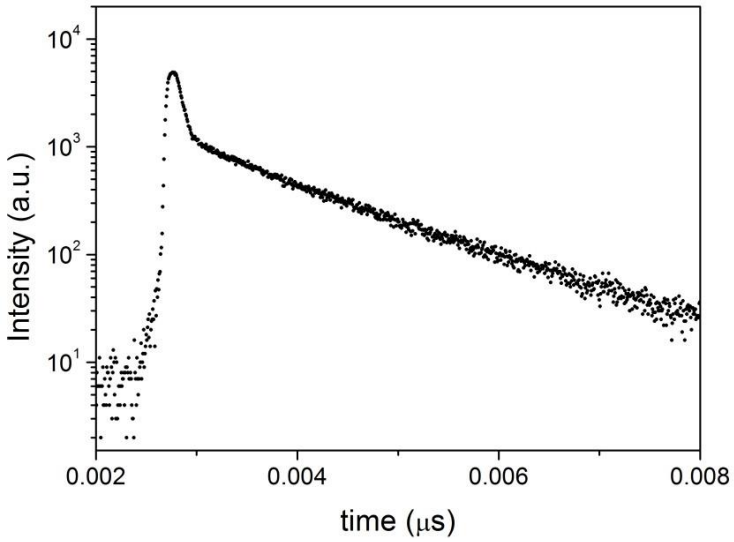

Fig. S3. Typical decay data of the 1060 nm emission from Nd(2-ATFB)$_3$ in MeCN. The early stage in the profile was due to a scattered light from the pumping source. A semi-log plot of the data vs. time shows that the luminescence decay is satisfied by one exponential component.

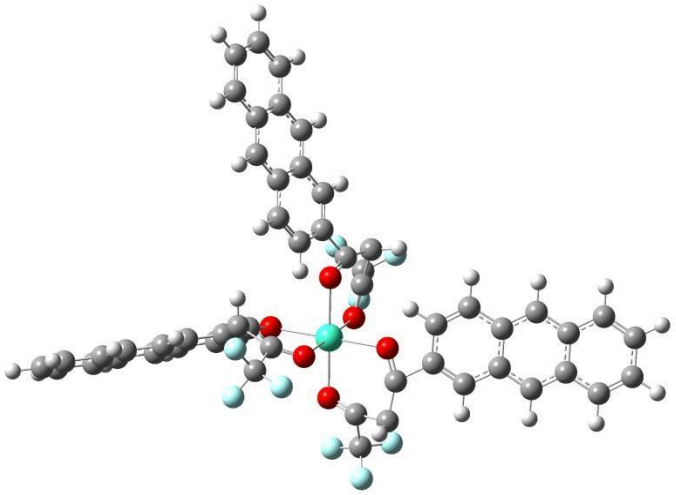

Fig. S4. Molecular geometry of Gd(2-ATFB)$_3$ molecule optimized on the DFT/B3LYP level using Gen basis set (MWB28 for Gd, and 3-21G for H, C, O, and F) in Gaussian 09.

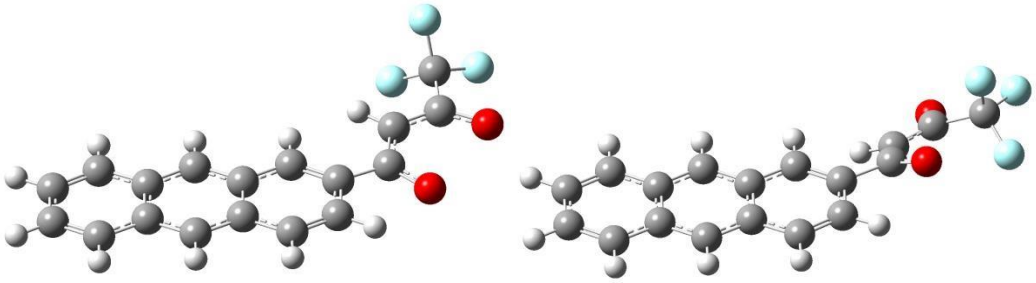

Fig. S5. Optimized geometries of coordinate and free 2-ATFB anions optimized on the DFT/B3LYP level using 3-21G basis function in Gaussian 09.

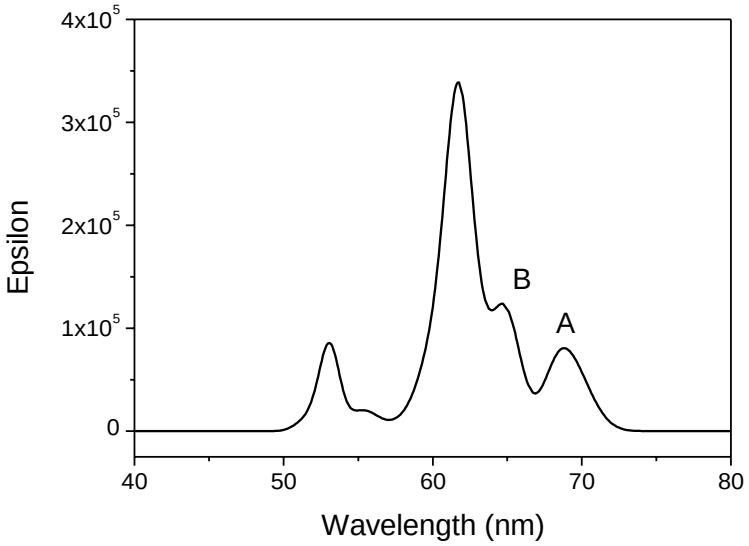

Fig. S6. Simulated UV-visible spectrum of 2-ATFB anion molecule in gas phase.