

**Table 2 Fitting parameters obtained from the temperature-dependent Tb(III) emission lifetime of [Tb<sub>2</sub>(hfa)<sub>6</sub>(dptp)<sub>2</sub>] and [TbNd(hfa)<sub>6</sub>(dptp)<sub>2</sub>] (Fig. 5, 140 K–300 K).**

| Parameter                                              | [Tb <sub>2</sub> (hfa) <sub>6</sub> (dptp) <sub>2</sub> ] | [TbNd(hfa) <sub>6</sub> (dptp) <sub>2</sub> ] |
|--------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------|
| <sup>a</sup> <i>A</i> <sub>1</sub> / s <sup>−1</sup>   | (1.35±0.10)×10 <sup>8</sup>                               | (1.3±0.2)×10 <sup>10</sup>                    |
| <sup>b</sup> <i>E</i> <sub>a1</sub> / cm <sup>−1</sup> | (2.16±0.01)×10 <sup>3</sup>                               | (2.38±0.03)×10 <sup>3</sup>                   |
| <sup>a</sup> <i>A</i> <sub>2</sub> / s <sup>−1</sup>   | (1.12±0.04)×10 <sup>4</sup>                               | (8.7±0.5)×10 <sup>3</sup>                     |
| <sup>b</sup> <i>E</i> <sub>a2</sub> / cm <sup>−1</sup> | (6.44±0.04)×10 <sup>2</sup>                               | (1.96±0.07)×10 <sup>2</sup>                   |

<sup>a</sup>Pre-exponential factors. <sup>b</sup>Activation energies. All parameters are represented by mean ± standard deviation.