## Electronic Supplementary Information (ESI) for

# Methyl-restricted fluorescent rotor rotation on the stator produces high-efficiency fluorescence emission: A new strategy to achieve aggregation-induced emission 

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Fig. S1. XRD diffractogram of as-prepared powder of (A) TFTB and (B) TFB.


Fig. S2. PL spectra of TFB in THF/water mixtures with different water fraction $\left(f_{\mathrm{w}}\right)$.


Fig. S3. Molecular orbital amplitude plots of HOMO and LUMO of TFTB and TFB calculated using B3LYP/6-31G(d) basis set.


Fig. S4. Absorption spectra of TFTB and TFB in THF solutions.


Fig. S5. Calculated HOMO and LUMO energy levels of TFTB and TFB using B3LYP/6-31G(d) basis set.


Fig. S6. DSC curves (second heating scan) of TFTB and TFB recorded under nitrogen $10 \mathrm{~mL} \mathrm{~min}^{-1}$ at a heating rate of $10^{\circ} \mathrm{C} \mathrm{min}^{-1}$.
${ }^{1} \mathrm{H}$ spectrum of $\mathbf{1}$ in $\mathrm{CDCl}_{3}$.

${ }^{13} \mathrm{C}$ spectrum of 1 in $\mathrm{CDCl}_{3}$.

${ }^{1} \mathbf{H}$ spectrum of $\mathbf{2}$ in $\mathrm{CDCl}_{3}$.

${ }^{13} \mathrm{C}$ spectrum of 2 in $\mathrm{CDCl}_{3}$.

${ }^{1} \mathrm{H}$ spectrum of 3 in $\mathrm{CDCl}_{3}$.

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${ }^{13} \mathrm{C}$ spectrum of 3 in $\mathrm{CDCl}_{3}$.


## ${ }^{1} \mathrm{H}$ spectrum of $4 \mathrm{in} \mathrm{CDCl}_{3}$.


${ }^{13} \mathrm{C}$ spectrum of 4 in $\mathrm{CDCl}_{3}$.



$\begin{array}{llllllllllllllllllllllllllllllll}155 & 150 & 145 & 140 & 135 & 130 & 125 & 120 & 115 & 110 & 105 & 100 & 95 & 90 & 85 & 80 & 75 & 70 & 65 & 60 & 55 & 50 & 45 & 40 & 35 & 30 & 25 & 20\end{array}$

## ${ }^{1} \mathrm{H}$ spectrum of 5 in $\mathrm{CDCl}_{3}$.


${ }^{13} \mathrm{C}$ spectrum of 5 in $\mathrm{CDCl}_{3}$.


