

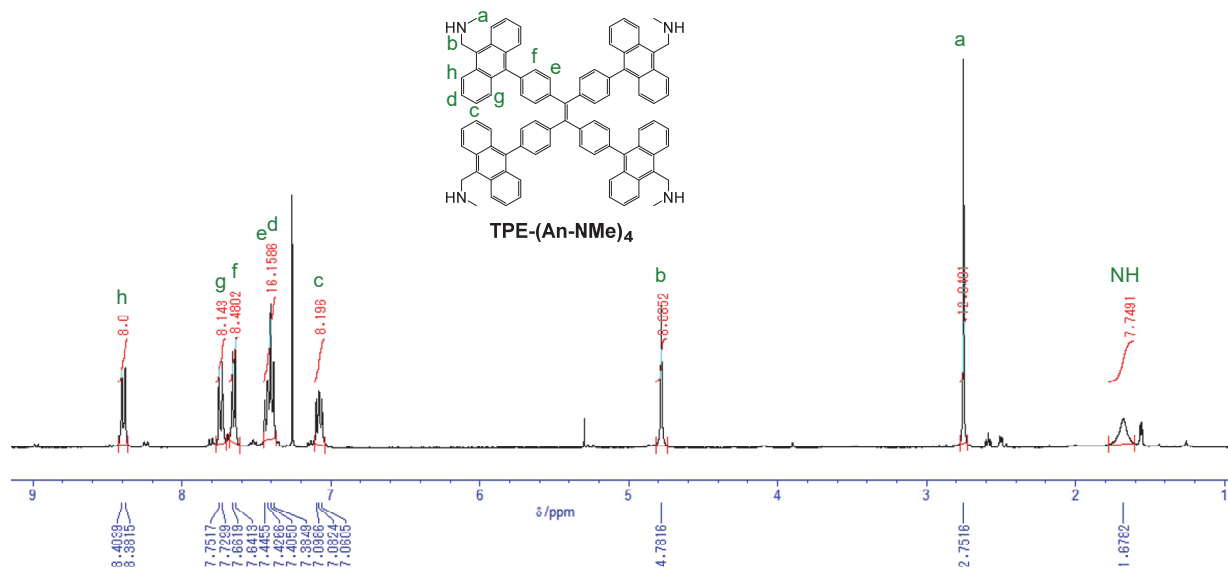
Supplementary Information

Tetraphenylethene–anthracene-based fluorescence emission sensor for detection of water with photo-induced electron transfer and aggregation-induced emission characteristics

Emiko Nishimoto, Yuta Mise, Takuma Fumoto, Saori Miho, Nao Tsunoji, Keiichi Imato and
Yousuke Ooyama*

*Applied Chemistry Program, Graduate School of Advanced Science and Engineering,
Hiroshima University, 1-4-1 Kagamiyama, Higashi-Hiroshima 739-8527, Japan. E-mail:
yooyama@hiroshima-u.ac.jp*

(a)



(b)

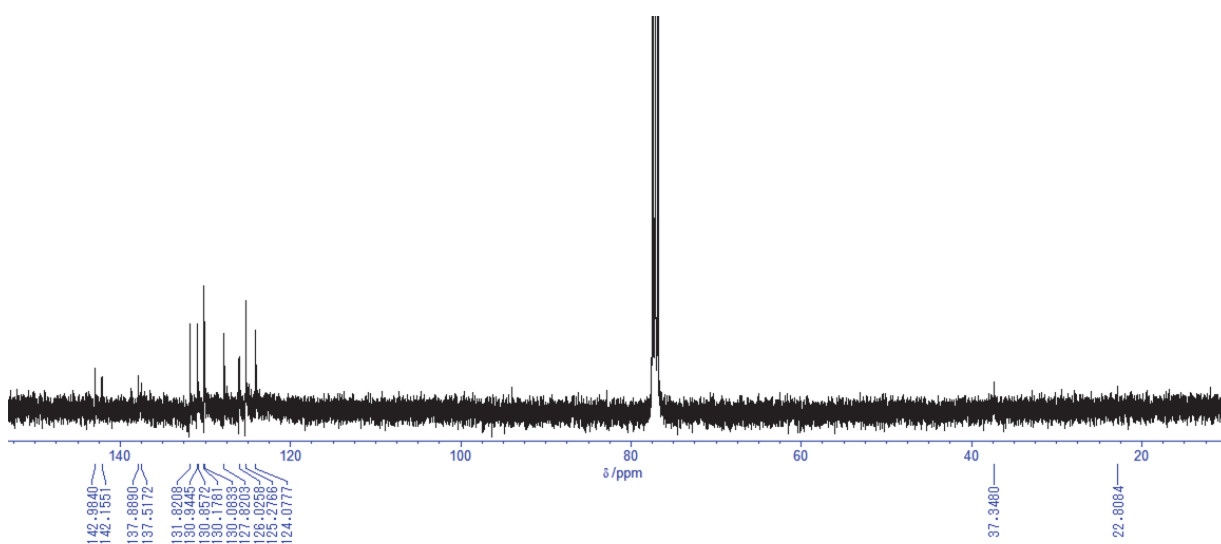
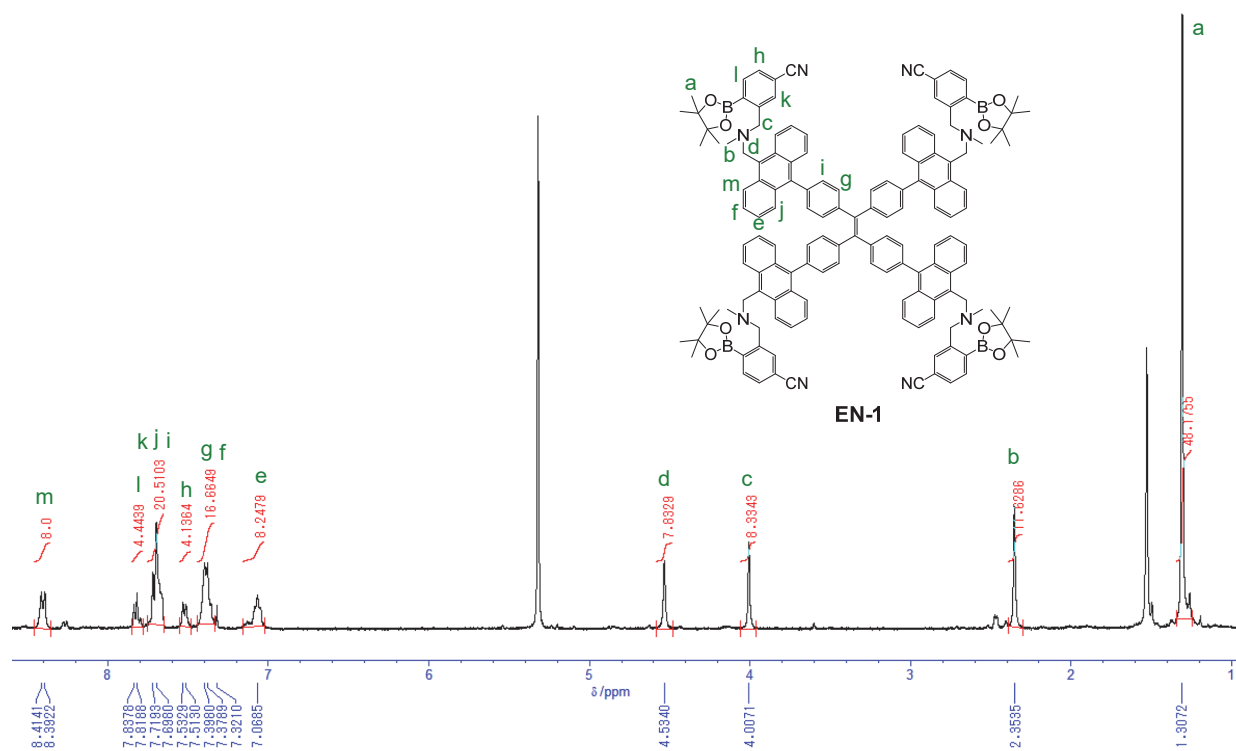


Fig. S1 (a) ¹H NMR (400 MHz) and (b) ¹³C NMR (100 MHz) spectra of TPE-(An-NMe)₄ in CDCl₃.

(a)



(b)

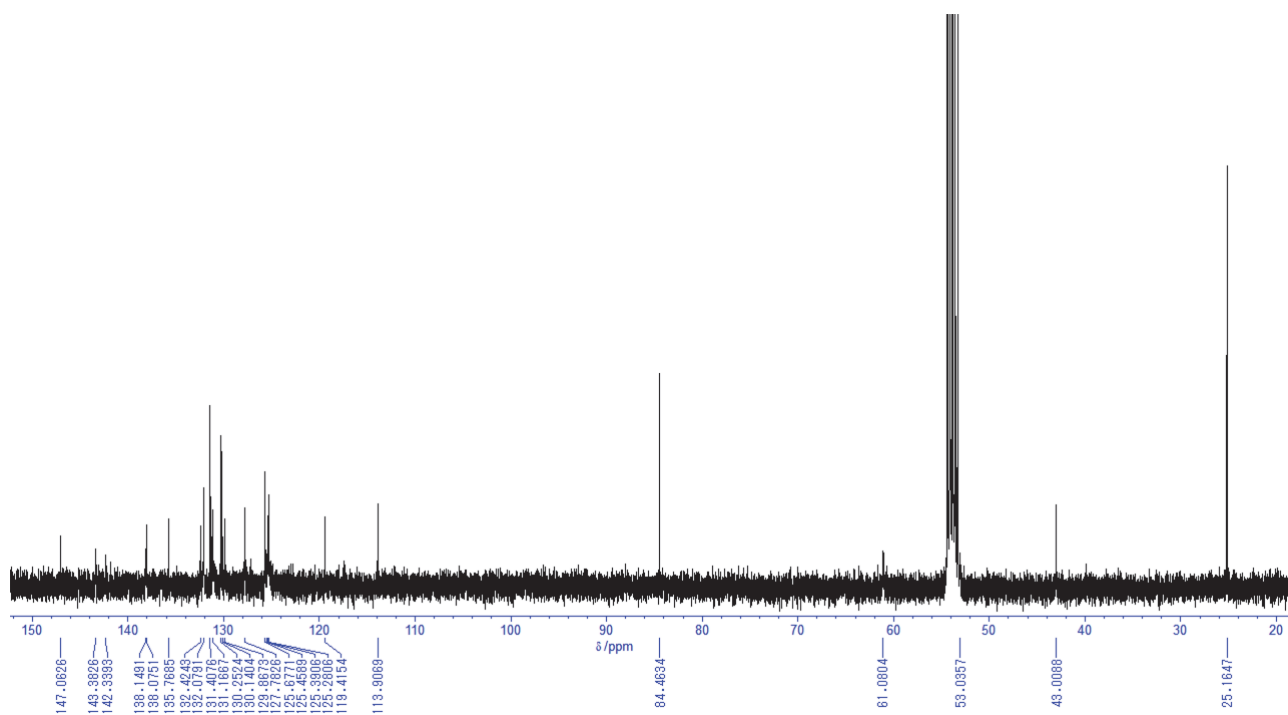


Fig. S2 (a) ^1H NMR (400 MHz) and (b) ^{13}C NMR (100 MHz) spectra of **EN-1** in CD_2Cl_2 .

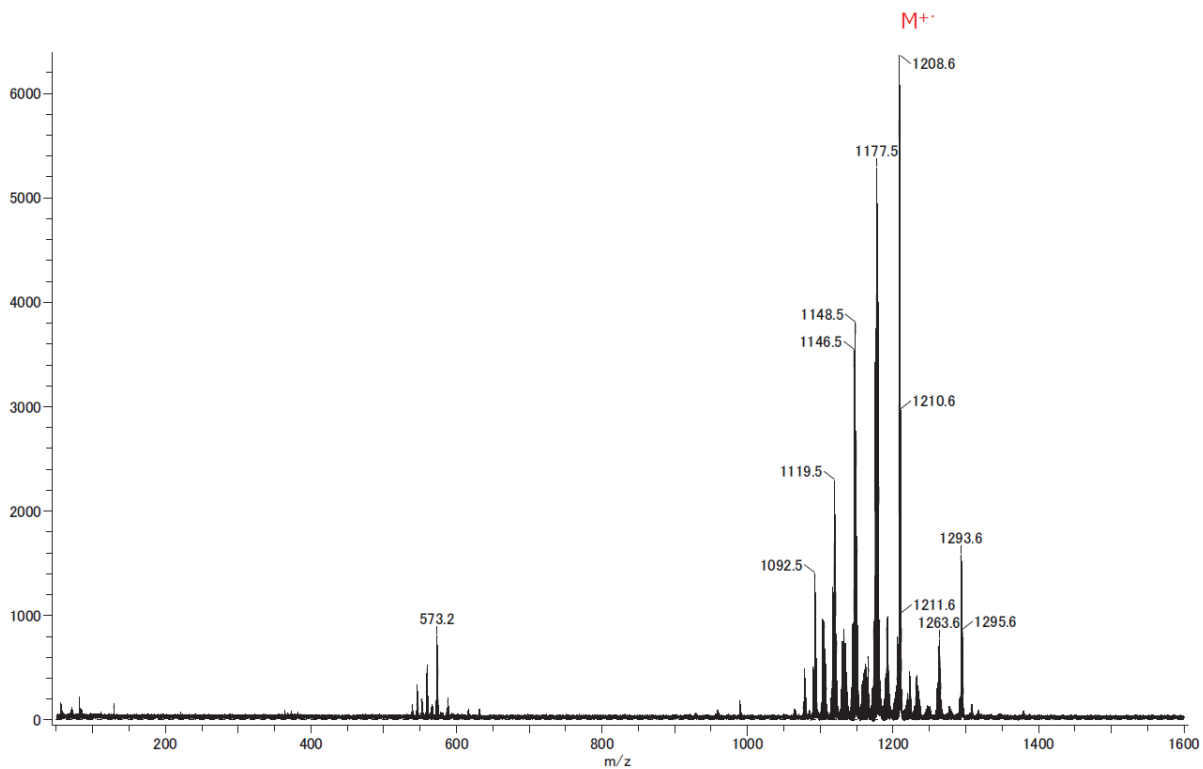


Fig. S3 HRMS (FD) spectrum of TPE-(An-NMe)₄.

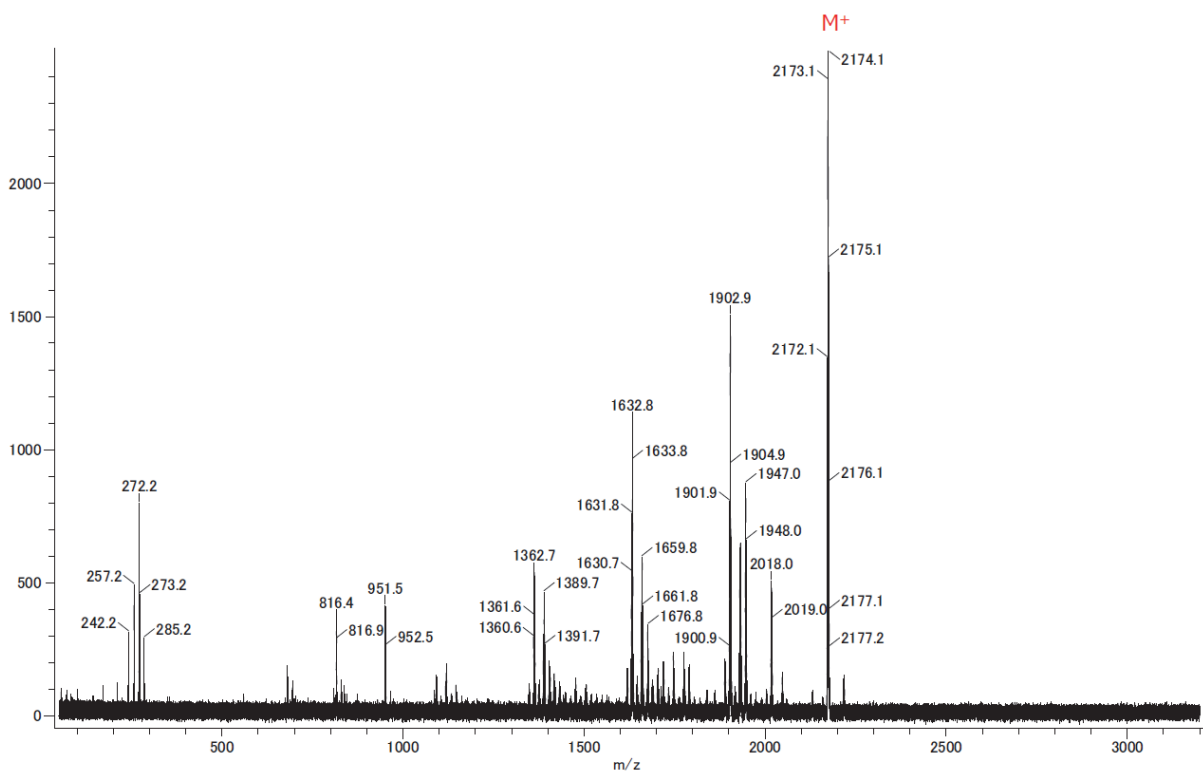


Fig. S4 HRMS (FD) spectrum of EN-1.

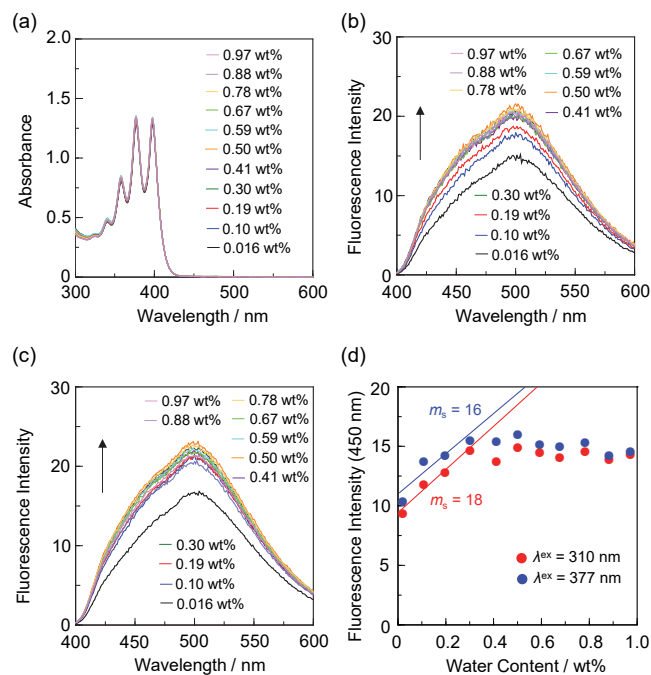


Fig. S6 (a) Photoabsorption spectra of **EN-1** ($c = 2.0 \times 10^{-5}$ M) in THF containing water (0.016–0.97 wt%). Fluorescence spectra of **EN-1** ($c = 2.0 \times 10^{-5}$ M) by λ^{ex} at (b) 310 nm and (c) 377 nm in THF containing water (0.016–0.97 wt%). (d) Fluorescence peak intensity at 450 nm of **EN-1** by λ^{ex} at 310 nm and 377 nm as a function of water content (0.016–0.97 wt%) in THF.