

Supplementary Information

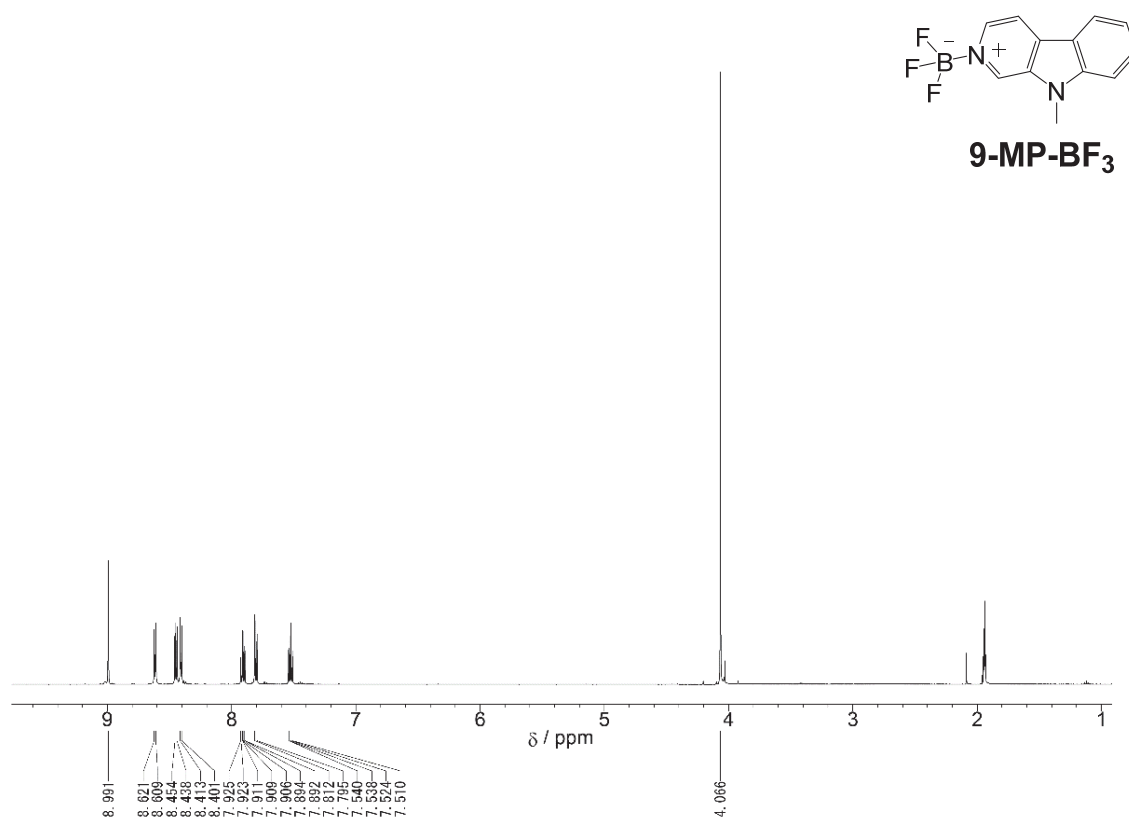
Colorimetric and ratiometric fluorescence sensing of water based on 9-methyl pyrido[3,4-*b*]indole-boron trifluoride complex

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(a)



(b)

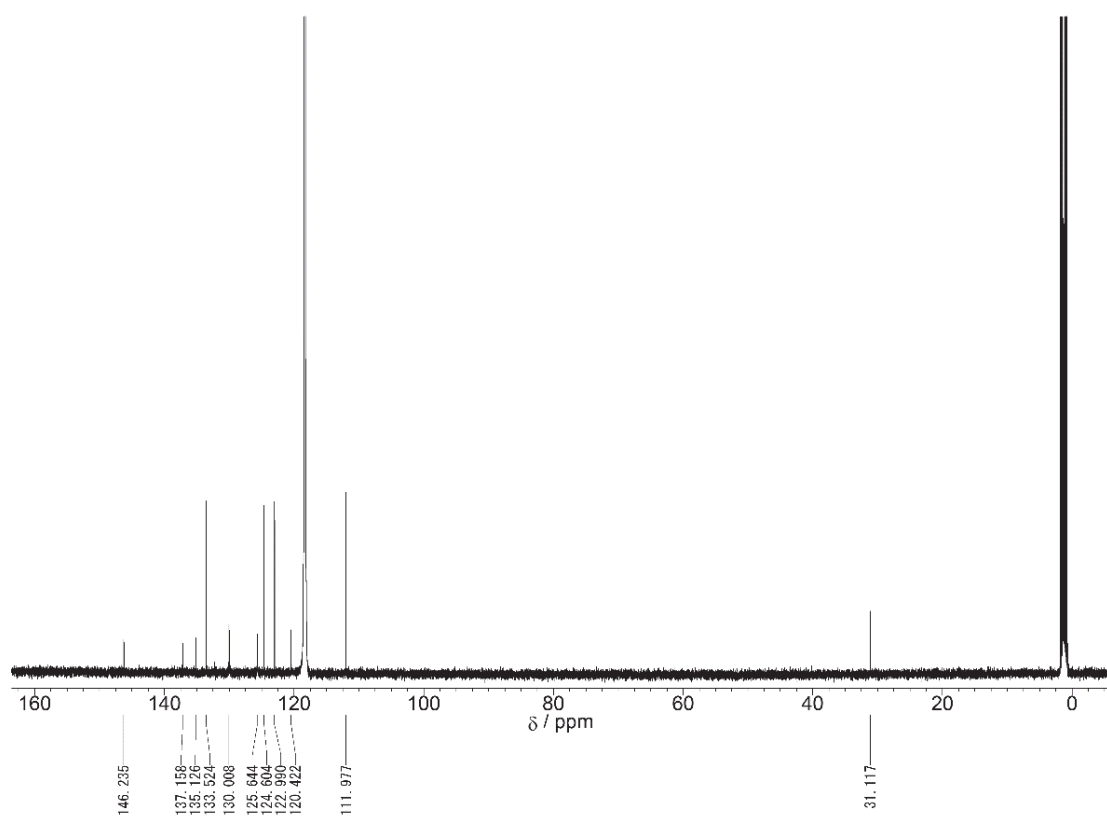


Fig. S1 (a) ¹H HMR (500 MHz) and (b) ¹³C HMR (125 MHz) spectra of **9-MP-BF₃** in acetonitrile-d₃.

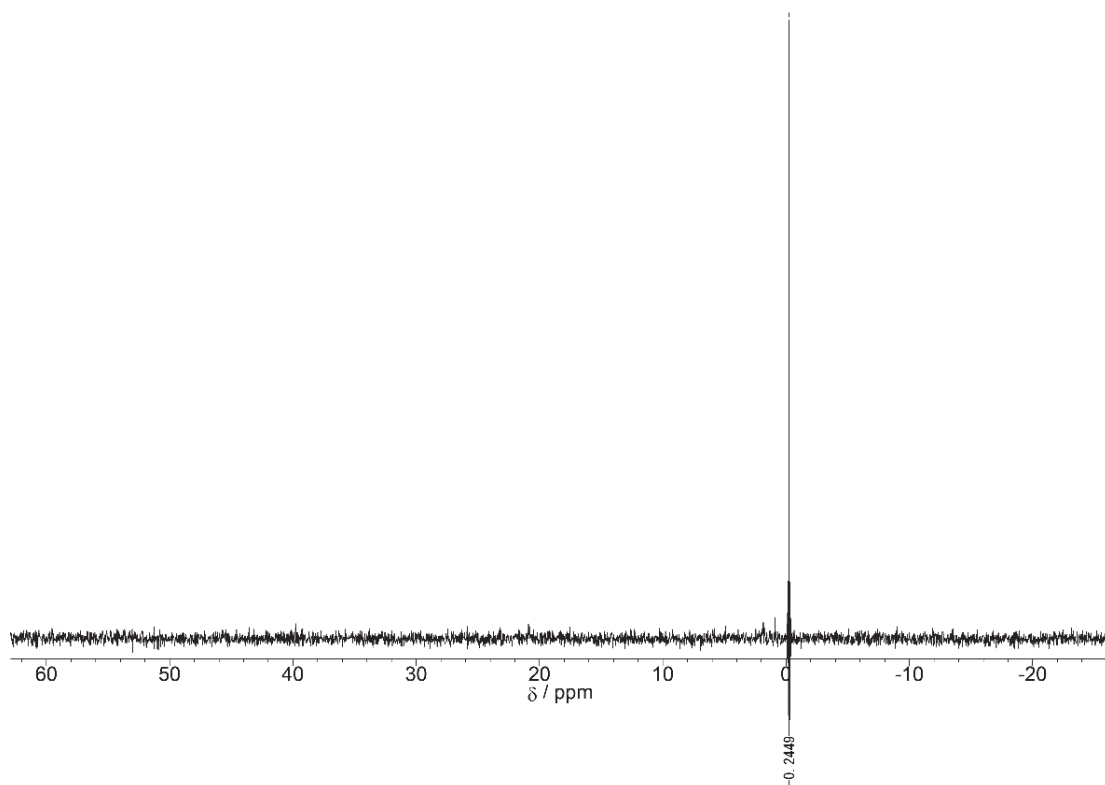


Fig. S2 ^{11}B HMR (160 MHz) spectra of **9-MP-BF₃** in acetonitrile- d_3 .

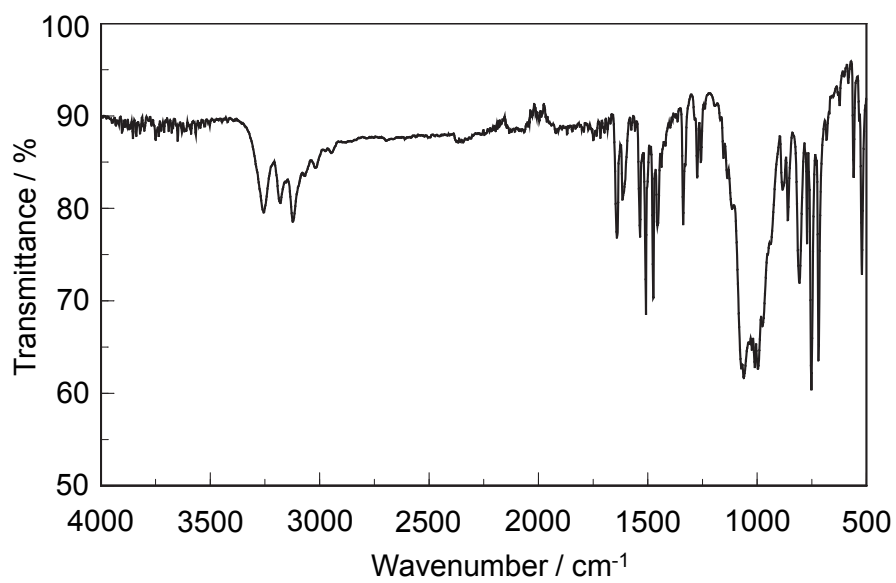


Fig. S3 FTIR spectrum of **9-MP-BF₃**.

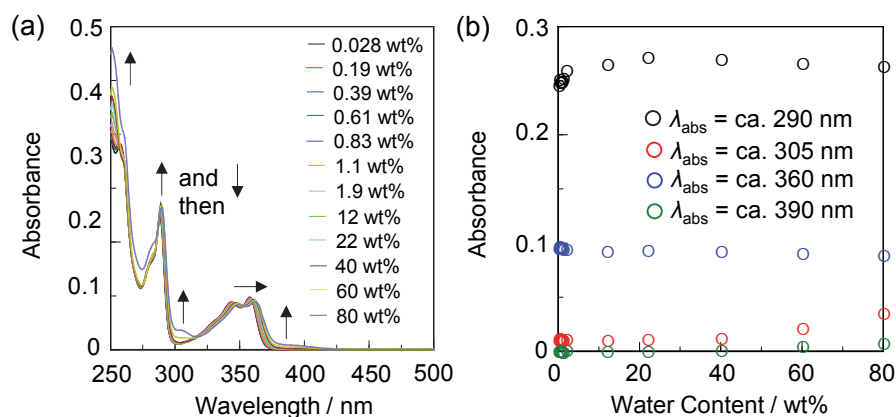


Fig. S4 (a) Photoabsorption spectra of **9-MP** ($c = 2.0 \times 10^{-5} \text{ M}$) in acetonitrile containing water (0.028–80 wt%). (b) Absorbance at 290 nm, 305 nm, 360 nm and 390 nm of **9-MP** as a function of water content from 0.028 wt% to 80 wt% in acetonitrile.

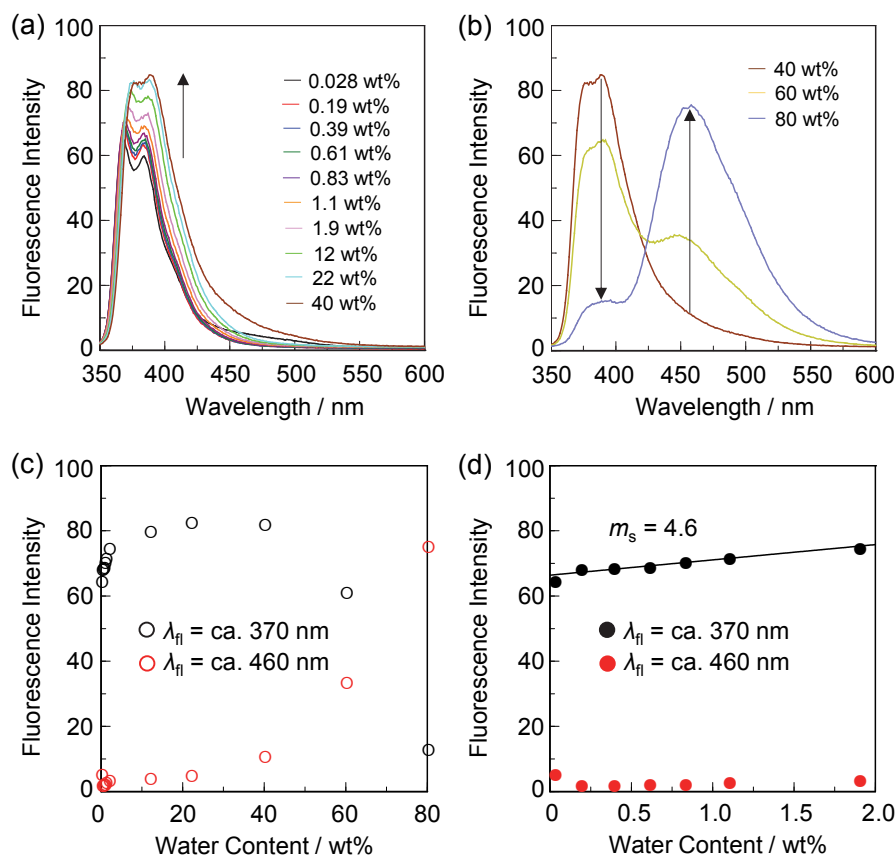


Fig. S5 Fluorescence spectra of **9-MP** ($c = 2.0 \times 10^{-5} \text{ M}$) by photoexcitation at 323 nm in acetonitrile containing water content of (a) 0.028–40 wt% and (b) 40–80 wt%. Fluorescence peak intensity at 370 nm and 460 nm of **9-MP** by photoexcitation at 323 nm as a function of water content from (c) 0.028 wt% to 80 wt% and (d) 0.028 wt% to 1.9 wt% in acetonitrile.