

One-step construction of a novel AIE probe based on diaminomaleonitrile and
application in double-detection of hypochlorites and formaldehyde gas

Xiaoye Wen^a, Li Yan^a, Zhefeng Fan^{a*}¹

Fig.S1 (a)¹H NMR of the probe (DMSO-*d*₆); (b)¹³C NMR of the probe (DMSO-*d*₆).

Fig.S2 MS spectrum of the probe.

Fig.S3 Particle size distribution of probe in different solvents: (a) DMSO; (b) H₂O/DMSO (1:9, v/v); (c) H₂O/DMSO (3:7, v/v); (d) H₂O/DMSO (1:1, v/v); (e) H₂O/DMSO (7:3, v/v); (f) H₂O/DMSO (8:2, v/v); (g) H₂O/DMSO (9:1, v/v); (h) H₂O/DMSO (99:1, v/v).

Fig.S4 MS spectrum of probe-ClO⁻.

Fig.S5 FT-IR spectrum of probe and probe-ClO⁻.

Fig.S6 MS spectrum of probe-FA.

Fig.S7 FT-IR spectrum of probe and probe-FA.

Fig.S8 Fluorescent photos of probe before and after adding ClO⁻ and FA.

¹ ^aDepartment of Chemistry, Shanxi Normal University, Linfen 041004, China

*Corresponding author. E-mail address: zhefengfan@126.com (Z. Fan).

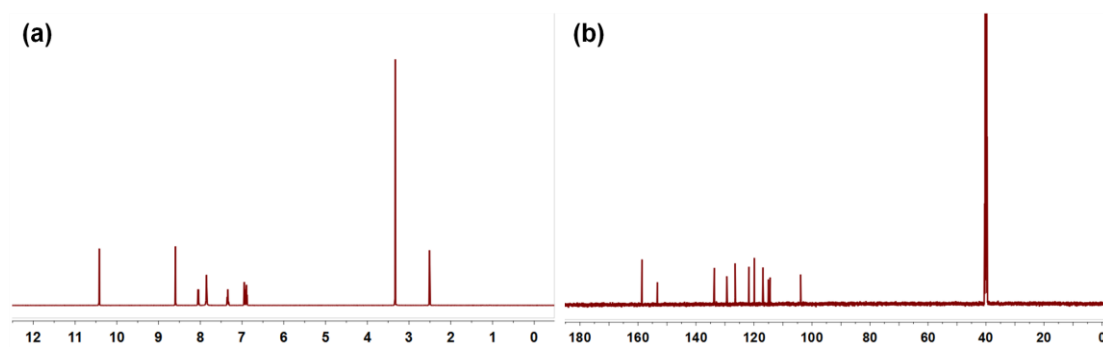


Fig.S1 (a) ^1H NMR of the probe (DMSO- d_6); (b) ^{13}C NMR of the probe (DMSO- d_6).

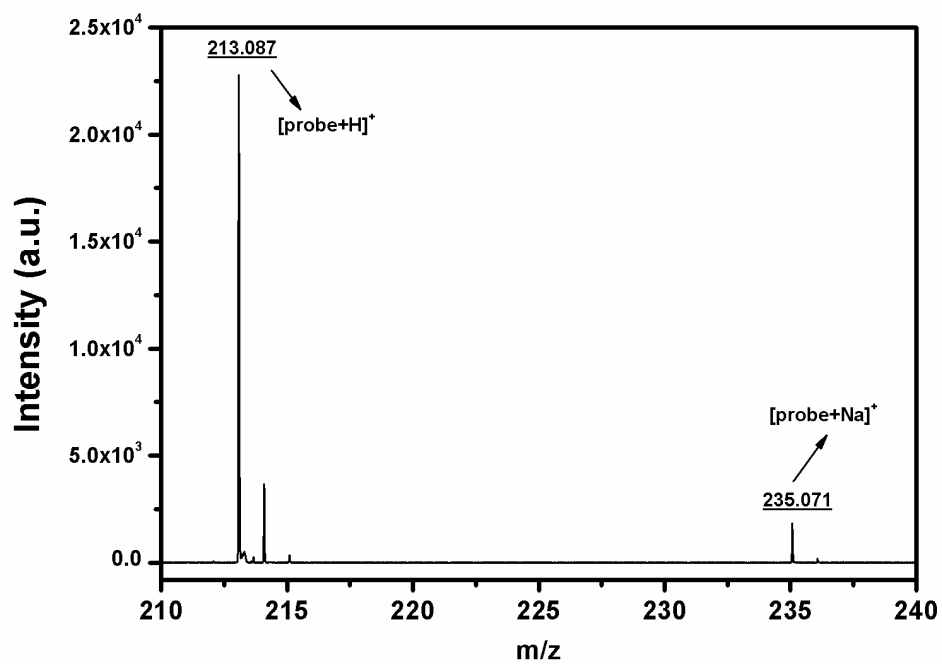


Fig.S2 MS spectrum of the probe.

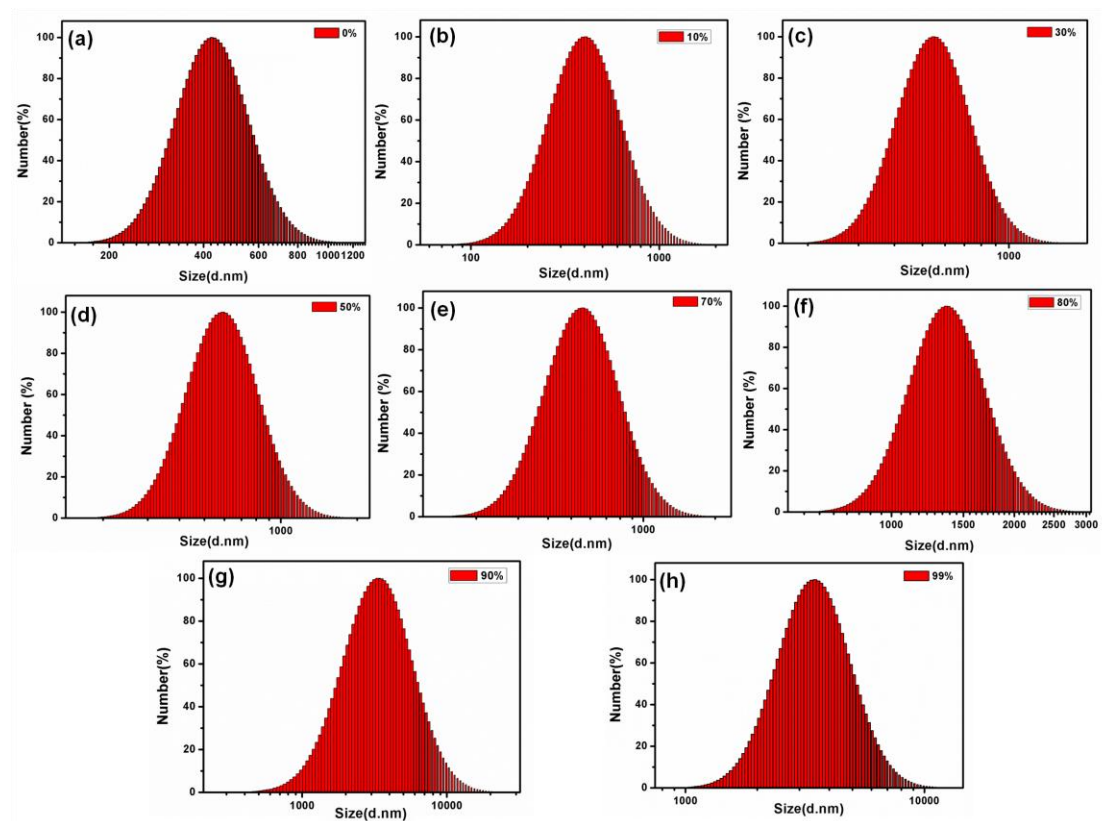


Fig.S3 Particle size distribution of probe in different solvents: (a) DMSO; (b) H₂O/DMSO (1:9, v/v); (c) H₂O/DMSO (3:7, v/v); (d) H₂O/DMSO (1:1, v/v); (e) H₂O/DMSO (7:3, v/v); (f) H₂O/DMSO (8:2, v/v); (g) H₂O/DMSO (9:1, v/v); (h) H₂O/DMSO (99:1, v/v).

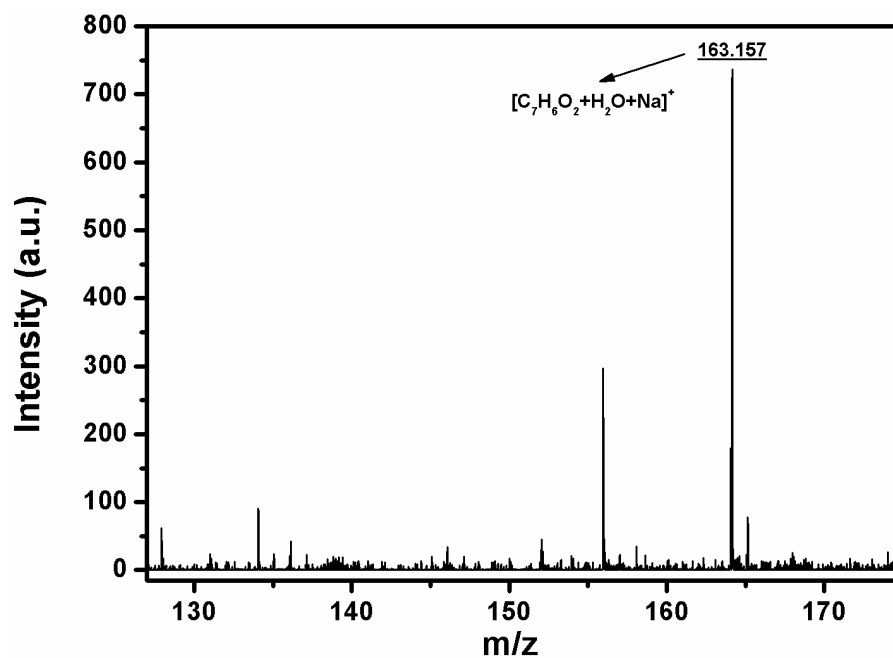


Fig.S4 MS spectrum of probe-C10⁻.

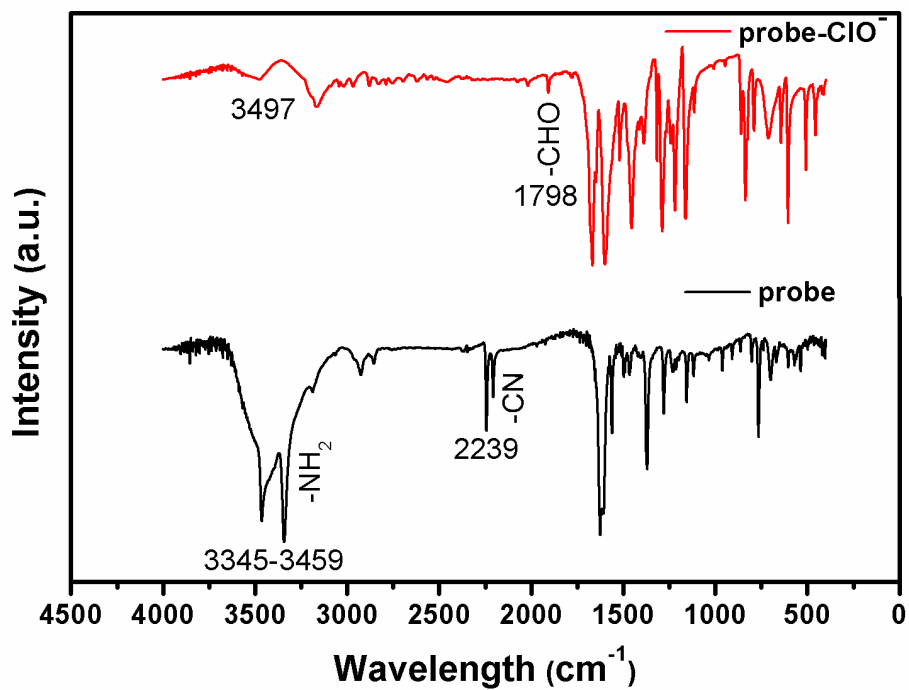


Fig.S5 FT-IR spectrum of probe and probe-C10⁻.

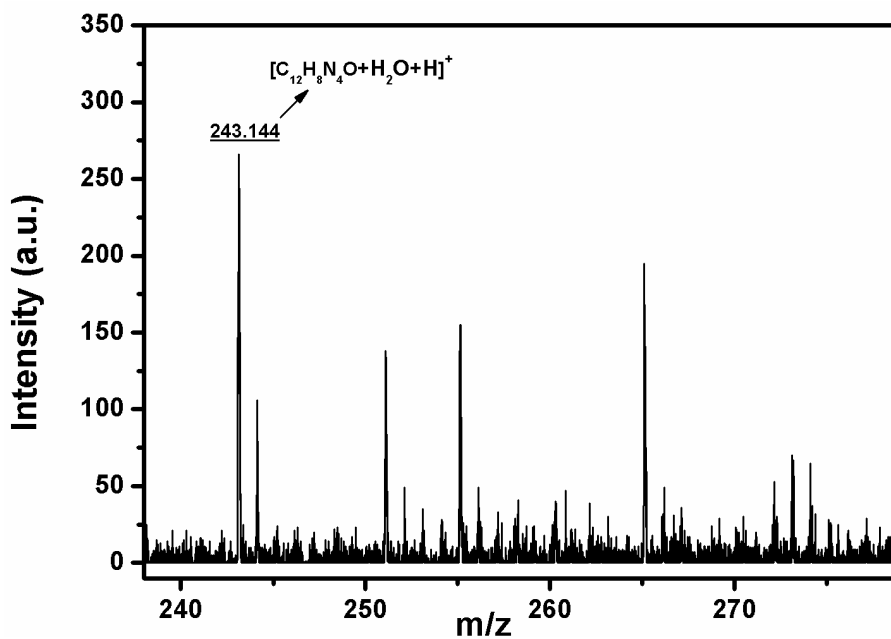


Fig.S6 MS spectrum of probe-FA.

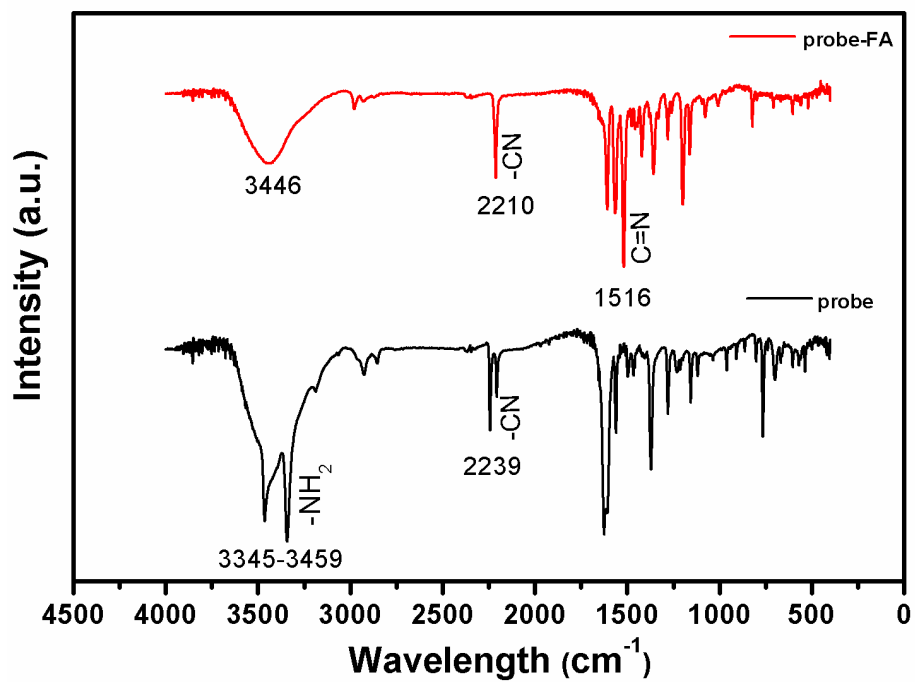


Fig.S7 FT-IR spectrum of probe and probe-FA.

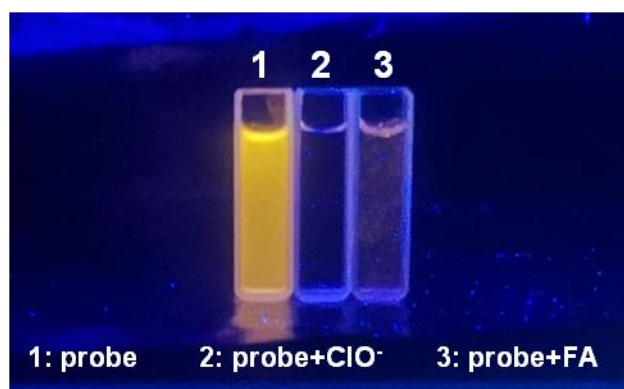


Fig.S8 Fluorescent photos of probe before and after adding ClO⁻ and FA.