Electronic Supplementary Information (ESI)

Novel nitro-substituted formazan derivatives: Selective ratiometric and colorimetric chemosensors for fluoride anion sensing detectable by the naked eye

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UV-vis spectra

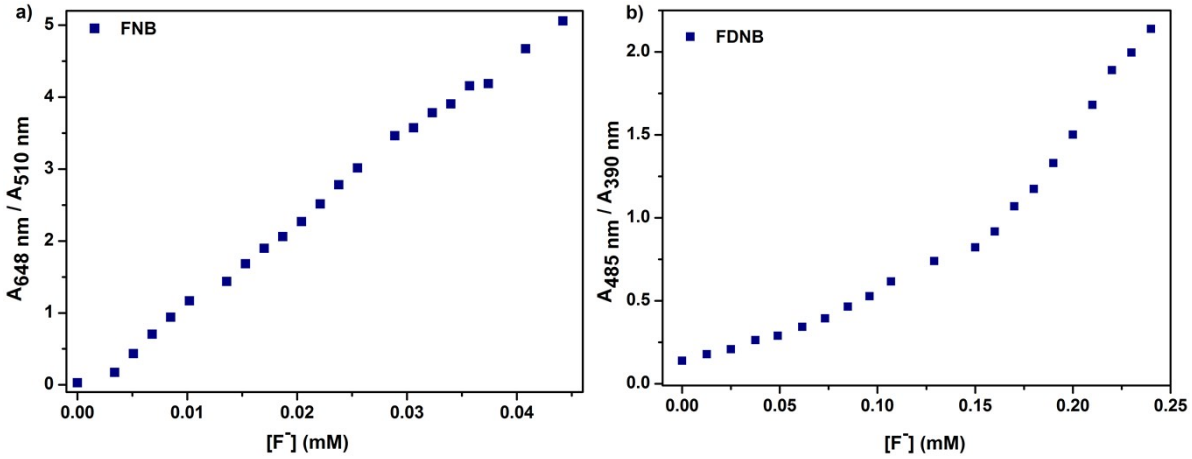

Figure S1. Ratiometric plots of **FNB** (a) and **FDNB** (b) with addition fluoride anion.

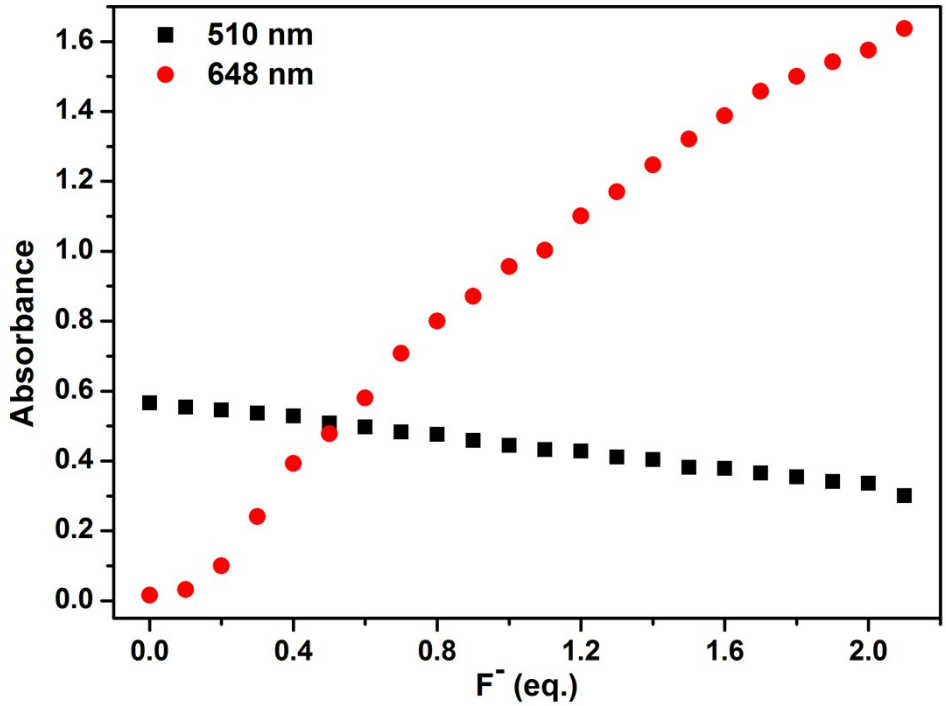

Figure S2. The titration curves of sensor **FNB** with F^- anion showing the 1:1 stoichiometry by UV-visible experiments.

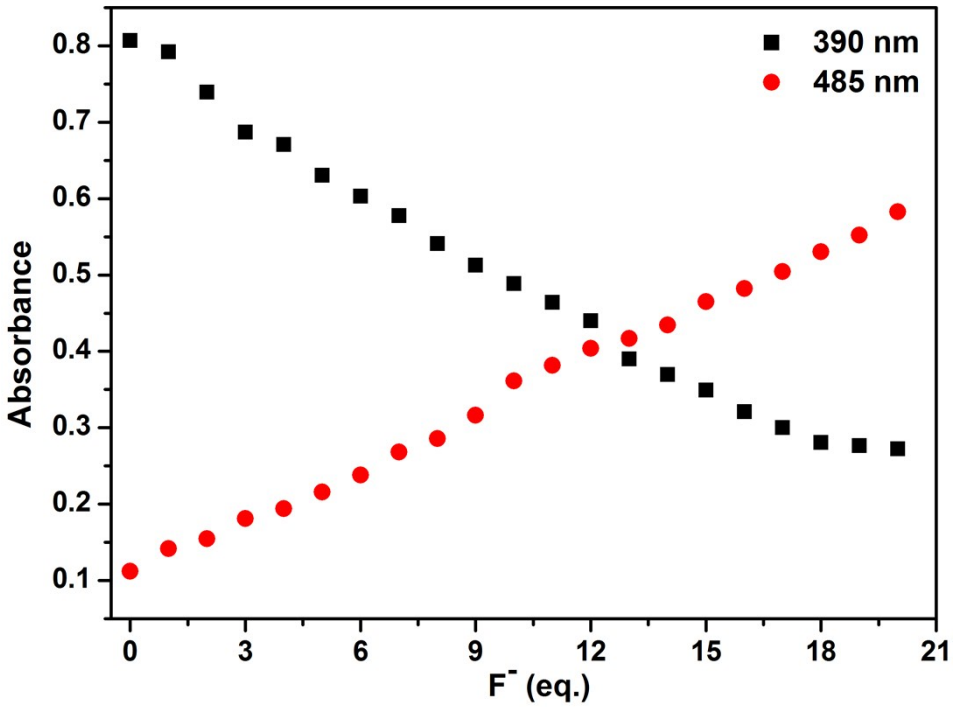

Figure S3. The titration curves of sensor **FDNB** with F^- anion showing the 1:1 stoichiometry by UV-visible experiments.

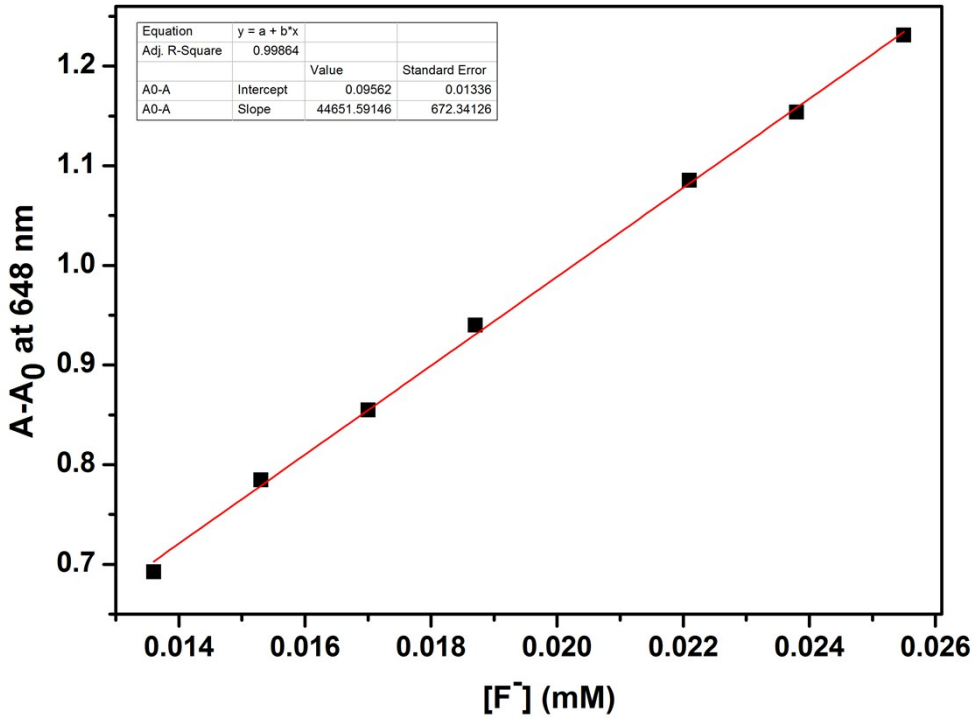

Figure S4. The absorbance change addition at 648 nm of the sensor **FNB** (17 μM) as a function of fluoride concentration in THF. Fluoride concentration: 0.014–0.026 mM (the lower concentration part).

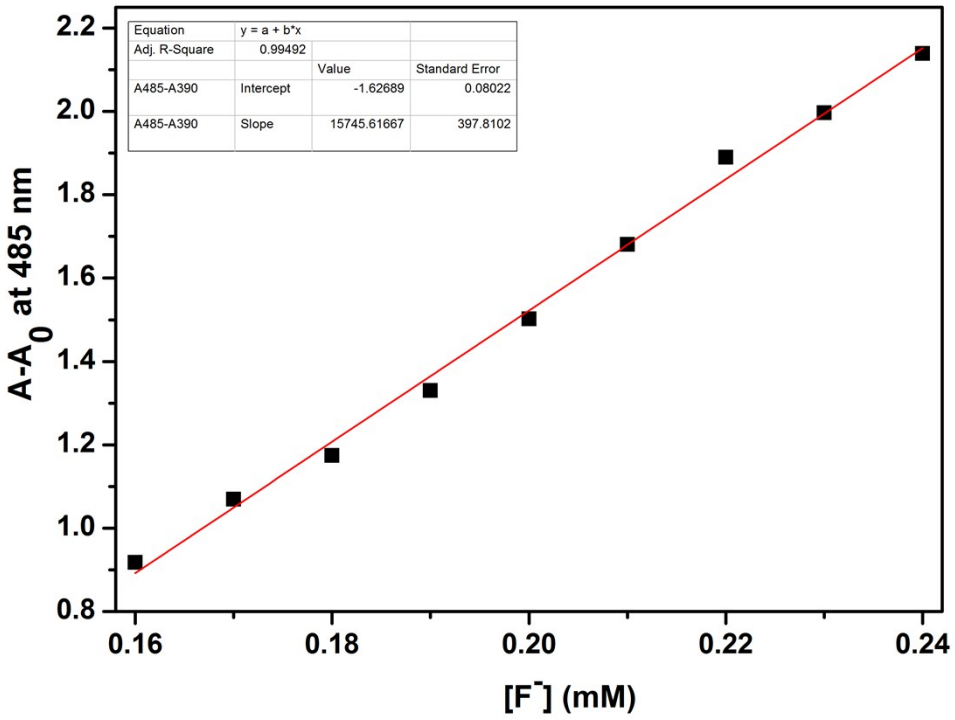

Figure S5. The absorbance change addition at 485 nm of the sensor **FDNB** (13 μM) as a function of fluoride concentration in THF. Fluoride concentration: 0.16–0.24 mM (the lower concentration part).

NMR spectra

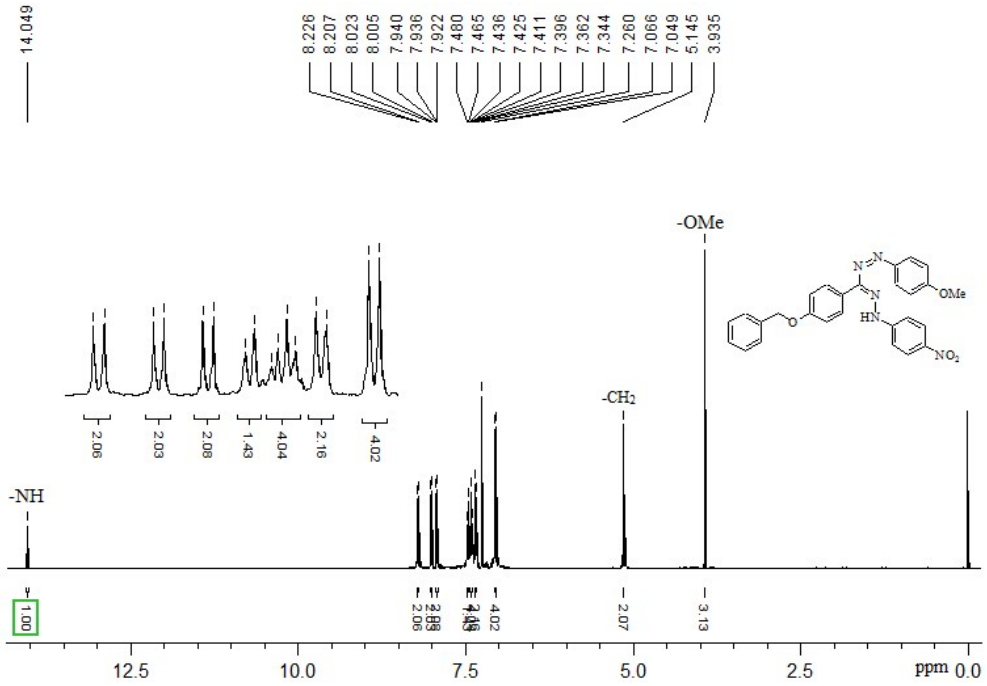

Figure S6. ^{1}H NMR (500 MHz, $CDCl_3$) spectrum of compound **FNB**.

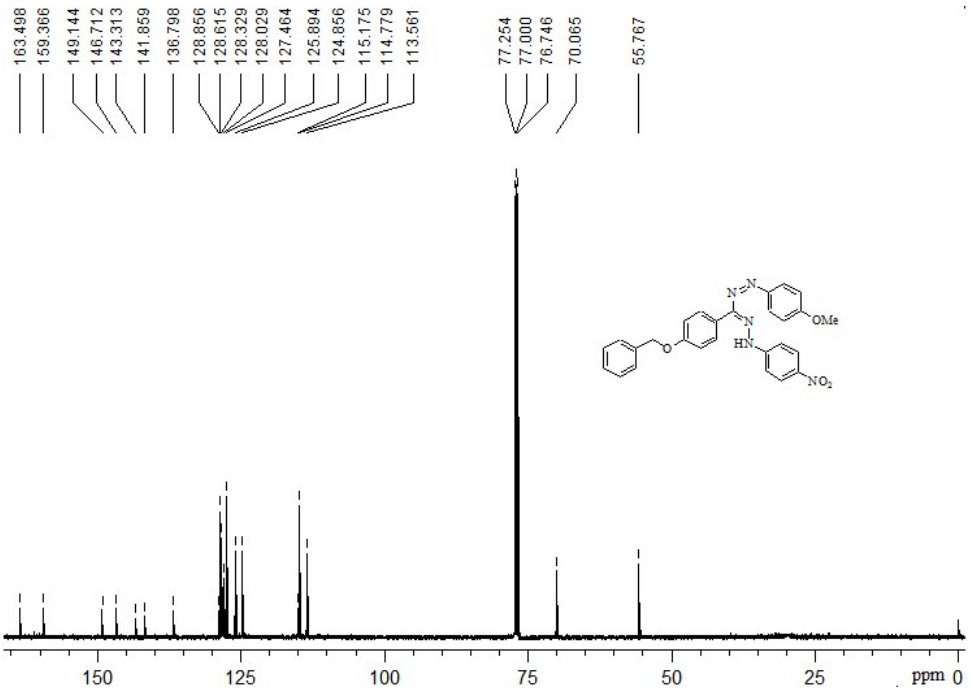

Figure S7. ^{13}C NMR (126 MHz, $CDCl_3$) spectrum of compound **FNB**.

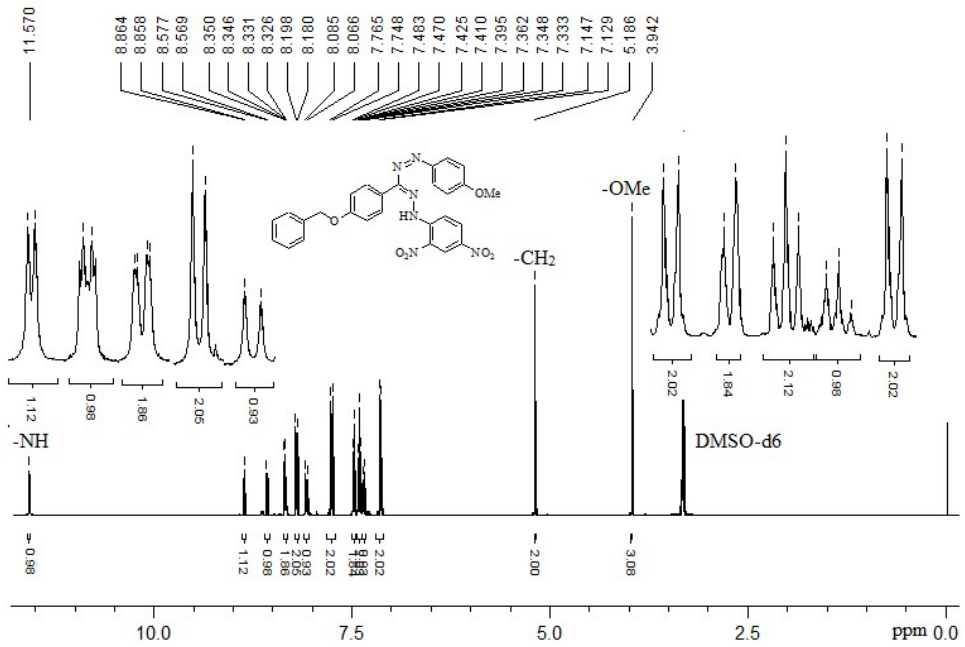

Figure S8. ^{1}H NMR (500 MHz, DMSO-d_6) spectrum of compound **FDNB**.

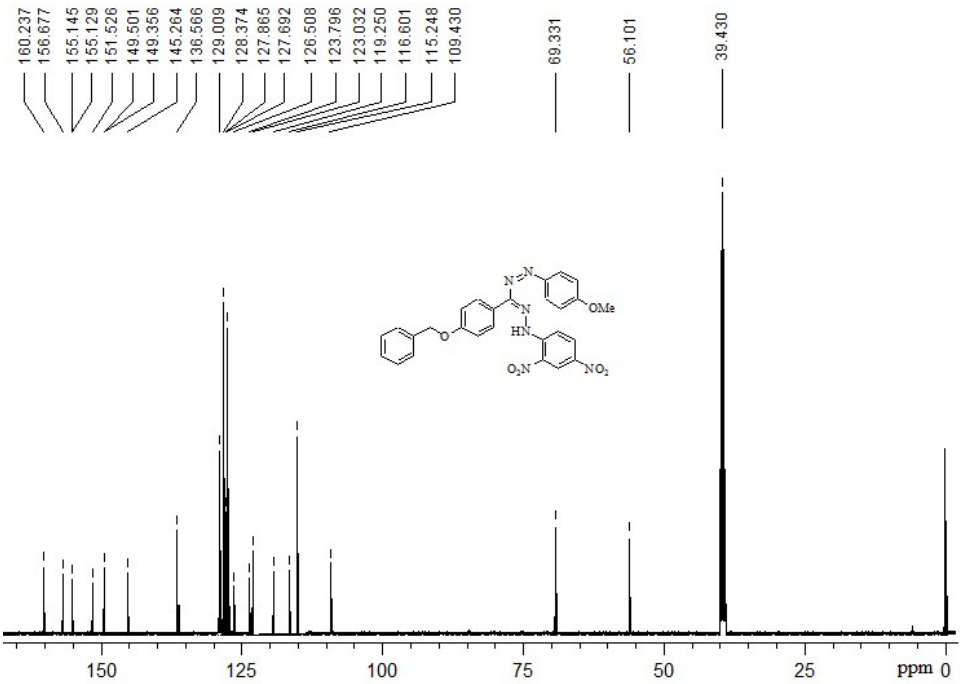

Figure S9. ^{13}C NMR (126 MHz, DMSO-d_6) spectrum of compound **FDNB**.