

Supplementary Information

for

Acid-base properties and DNA-binding of water soluble N-confused porphyrins with cationic side-arms

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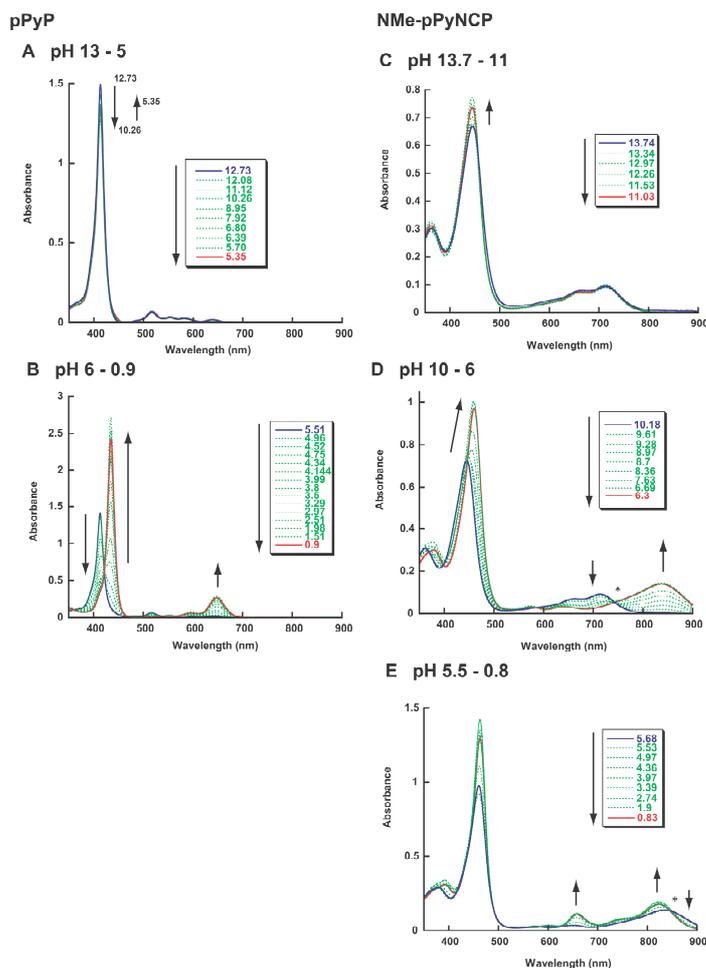


Fig. S1 Absorption spectra of **pPyP** (5 μ M) and **NMe-pPyNCP** (5 μ M) titrated with NaOH and HNO₃ in the presence of 0.2 M NaNO₃.

A,B: Absorption spectra of **pPyP** for titration at pH 13–5 (A) and pH 6–0.9 (B).

C–E: Absorption spectra of **NMe-pPyNCP** for titration at pH 13.7–11 (C), pH 10–6 (D), and pH 5.5–0.8 (E). Asterisk indicates isosbestic point.

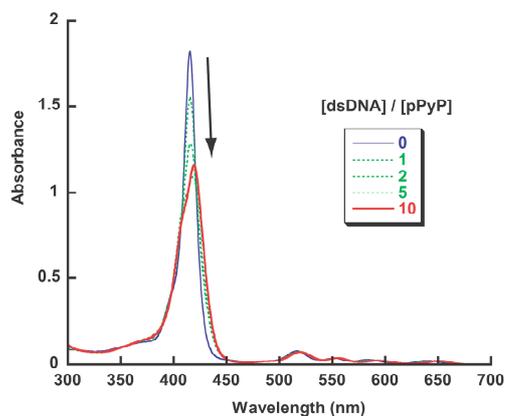


Fig. S2 Absorption spectra of **pPyP** ($5 \mu\text{M}$) in the absence and presence of dsDNA at pH 8.5.

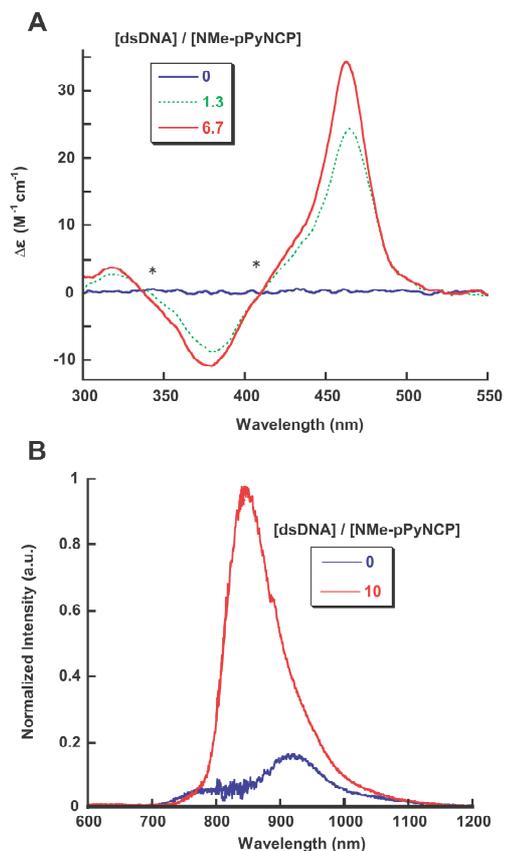


Fig. S3 A: Circular dichroism spectra of **NMe-pPyNCP** ($15 \mu\text{M}$) in the absence and presence of dsDNA at pH 8.5.

B: Fluorescence spectra of **NMe-pPyNCP** in the absence and presence of dsDNA at pH 8.5. Excited at 449 nm in the absence of dsDNA and at 464 nm in the presence of dsDNA.

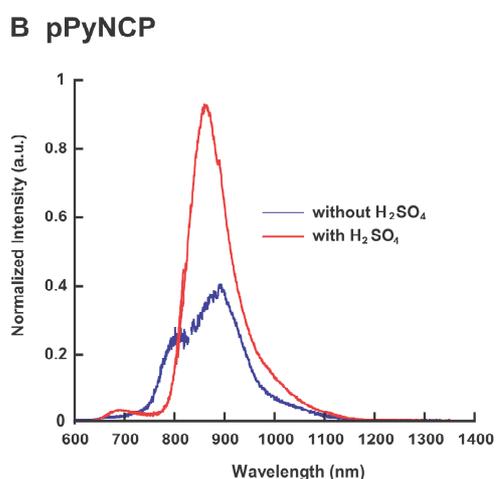
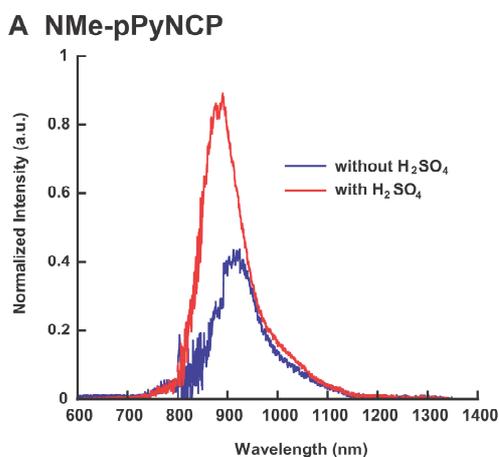


Fig. S4 A: Fluorescence spectra of NMe-pPyNCP (5 μ M) in ultrapure water and in 0.25% H₂SO₄. Excited at 444 nm in ultrapure water and at 458 nm in 0.25% H₂SO₄.
 B: Fluorescence spectra of pPyNCP (5 μ M) in ultrapure water and 0.25% H₂SO₄. Excited at 460 nm in ultrapure water and 463 nm in 0.25% H₂SO₄.

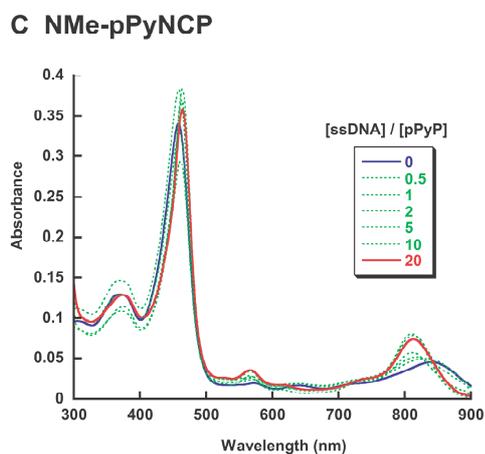
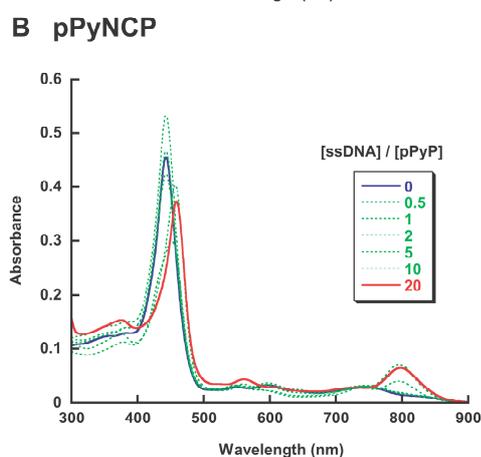
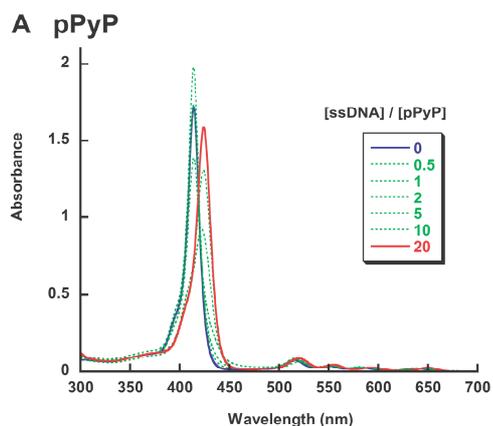


Fig. S5 Absorption spectra of 5 μ M pPyP (A), pPyNCP (B), and NMe-pPyNCP (C) in the absence and presence of the ssDNA at pH 7.0.