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Electronic Supplementary Information

Peripheral substitution as a tool for tuning electron-accepting properties of phthalocyanine analogs in intramolecular charge transfer

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Fig. S1 TLC (chloroform/THF (20 : 1)) of the mixture of congeners arising from reaction of precursor **6** and **10** with zinc acetate in pyridine.



Fig. S2 Influence of extinction coefficient of **1Zn** at 652 nm on concentration (a) and the absorption spectra of the **1Zn** (λ_{max} = 652 nm) (b) at different concentrations (0.8 µM to 100 µM). The comparison of normalized absorption spectra of **1Zn** at 100 µM (green line) and 0.8 µM (orange line) (c).



Fig. S3 Absorption spectra of 2H (a), 3H (b), 4H (c), 5H (d) in THF at 1 μM concentration.



Fig. S4 Normalized absorption (blue), excitation (black) and emission (red) spectra of 1Zn (a), 2Zn (b), 3Zn (c), 4Zn (d), and 5Zn (e) in THF. The emission of 1Zn was too weak to obtain excitation spectra of sufficient quality.



Fig. S5 The changes of absorption spectra of **s1Zn** (a), **s2Zn** (b), **s4Zn** (c) and **s5Zn** (d) in DMSO (1 μ M) upon addition of sulfuric acid. Insets: Dependence of absorption in Q-band maximum (black line) and quantum yields of fluorescence (Φ_F , red line) on amount of sulfuric acid.



Fig. S6 Changes of Φ_F values of studied TPyzPzs (1 μ M) in DMSO after addition of sulfuric acid. **s1Zn** (square, red dashed line), **s2Zn** (triangle, orange dashed line), **s4Zn** (asterisk, green dashed line), **s5Zn** (dot, magenta dashed line).







Fig. S8 ¹H NMR spectrum of **1Zn** in the mixture of CDCl₃ and pyridine-d₅. Asterisk indicates signal of residual water.



Fig. S9 ¹H NMR spectrum of 2H in the mixture of CDCl₃ and pyridine-d₅.



Fig. S10 ¹H NMR spectrum of 2Zn in the mixture of CDCl₃ and pyridine-d₅.



Fig. S11 ¹H NMR spectrum of **3H** in the mixture of CDCl₃ and pyridine-d₅. Asterisk indicates signal of residual water.



Fig. S12 ¹H NMR spectrum of **3Zn** in the mixture of CDCl₃ and pyridine-d₅. Asterisk indicates signal of residual water.



Fig. S13 ¹H NMR spectrum of **4H** in the mixture of CDCl₃ and pyridine-d₅. Asterisk indicates signal of residual water.

Fig. S14 ¹H NMR spectrum of **4Zn** in the mixture of CDCl₃ and pyridine-d₅. Asterisk indicates signal of residual water.

Fig. S15 ¹H NMR spectrum of **5H** in the mixture of CDCl₃ and pyridine-d₅. Asterisk indicates signal of residual water.

Fig. S16 ¹H NMR spectrum of **5Zn** in the mixture of CDCl₃ and pyridine-d₅. Asterisk indicates signal of residual water.