Supplementary data for article:

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Supplementary Information

for

Redox behaviour and biological properties of a novel ferrocene bearing porphyrin

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Table S1 Bacteriostatic effect of sub MIC concentrations of porphyrin **4**.

Organism	MIC (μg/mL)	sub MIC (μg/mL)	CRT* (h)
S. aureus	31.2	15.6	12
		7.8	4
		3.9	3
B. subtilis	125	62.5	15
		31.2	12
		15.6	6
		7.8	4
K. pneumonie	125	125	15
		62.5	5
E. faecalis	250	125	15
		62.5	5
		31.2	3

*CRT – culture recovery time needed for culture to enter phase of exponential growth.

Table S2 Antifungal activity of porphyrin **4** given as MIC of different pathogenic clinical fungal isolates.

Organism	MIC (µg/mL)
C. albicans ATCC 10231	31.2
C. albicans CA-06	250
A. fumigatus 157/10	250
M. gypseum 95/10	62.5

Table S3 Total cytotoxicity of porphyrins **1**, **2**, **4**, and ferrocene **3** on MRC5 human fibroblasts (IC_{50}) compared to hemolytic activity (H_{50}). Concentration range was 5-500 µg/mL for each compound tested. IC_{50} and H_{50} are given in µg/mL.

compound	IC_{50}	H_{50}
4	20	100
1	10	300
2	500	>500
ferrocene **3**	100	>500

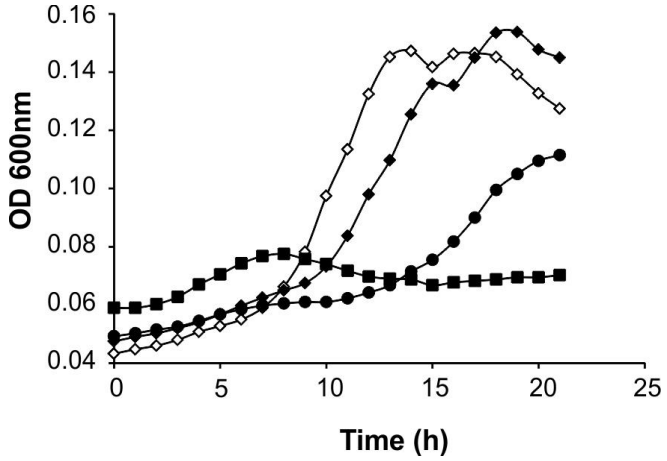


Fig. S1 MIC of porphyrin **4** on *C.albicans* ATCC 10231. ◇ontrol; 7◆ μg/mL; ● 15.6 μg/mL; ■ 31.25 μg/mL;

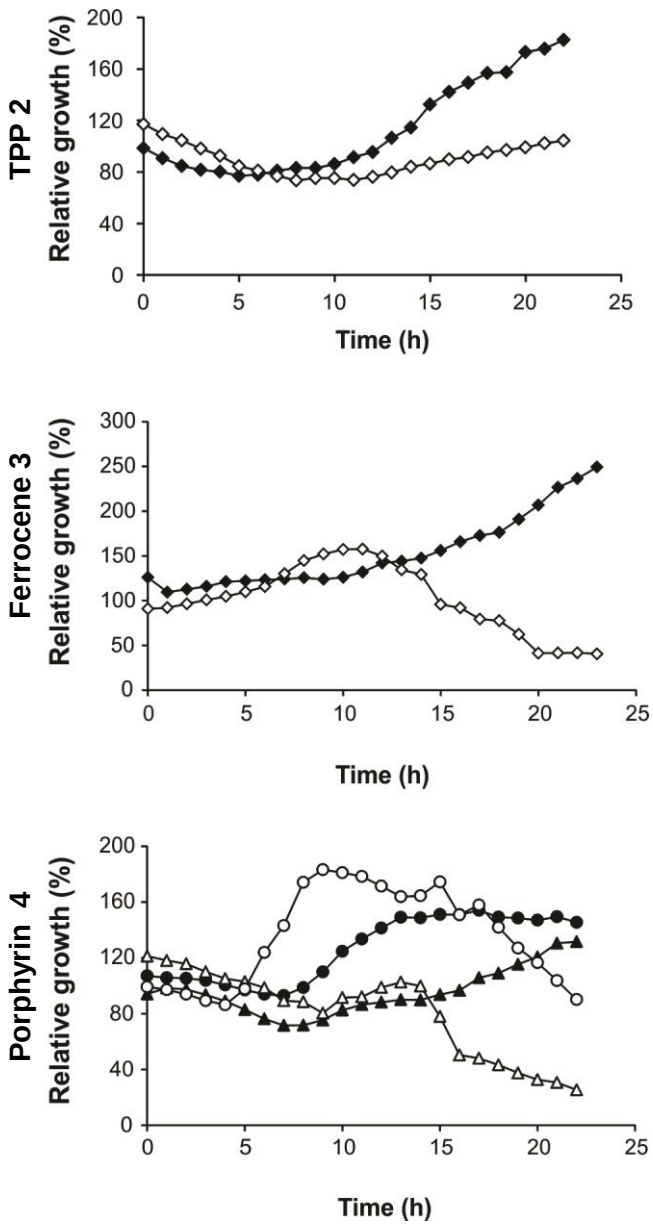


Fig. S2 Effects of photoactivation on growth of *C. albicans* cultures treated with low doses of TPP **2** (50 µg/mL), ferrocene **3** (50 µg/mL), and porphyrin **4** (7.8 µg/mL, round marks, and 15.6 µg/mL, triangular marks). Growth is given as a percent of control culture growth (100 %). Closed marks represent cultures grown in the dark, while open marks represent cultures grown upon illumination.

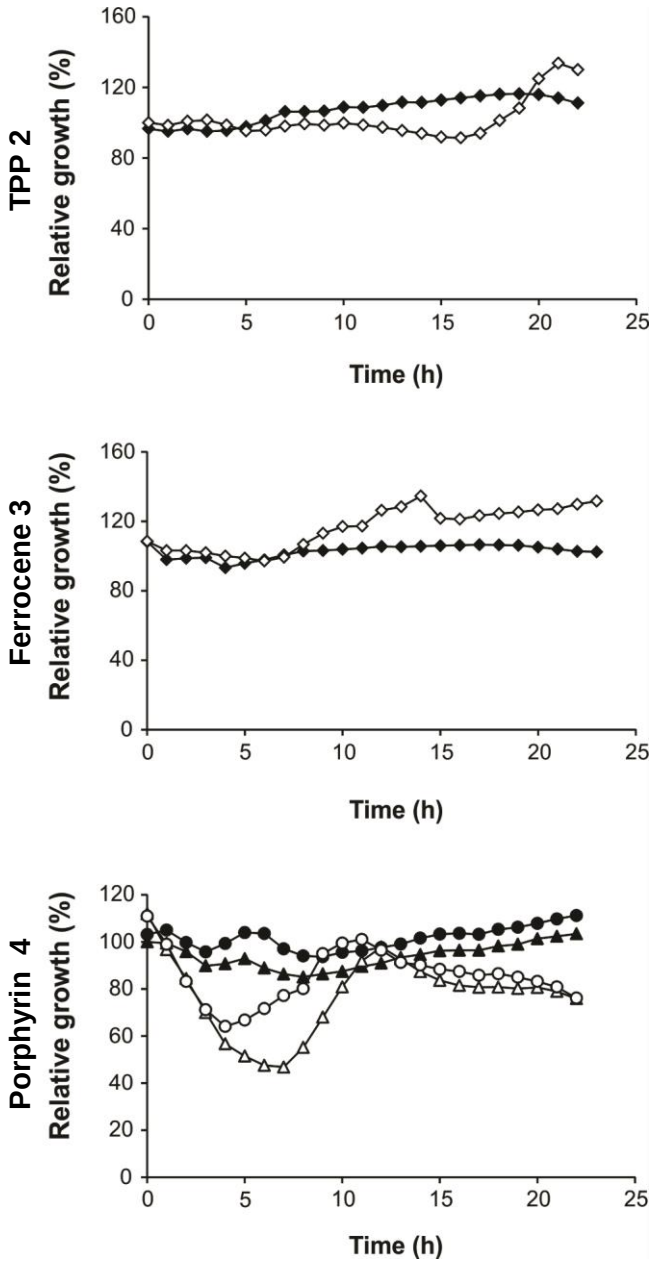


Fig. S3 Effects of photoactivation on growth of *S. aureus* culture treated with low doses of TPP **2** (50 µg/mL), ferrocene **3** (50 µg/mL), and porphyrin **4** (7.8 µg/mL, round marks, and 15.6 µg/mL, triangular marks). Growth is given as a percent of control culture growth (100 %). Closed marks represent cultures grown in the dark, while open marks represent cultures grown upon illumination.

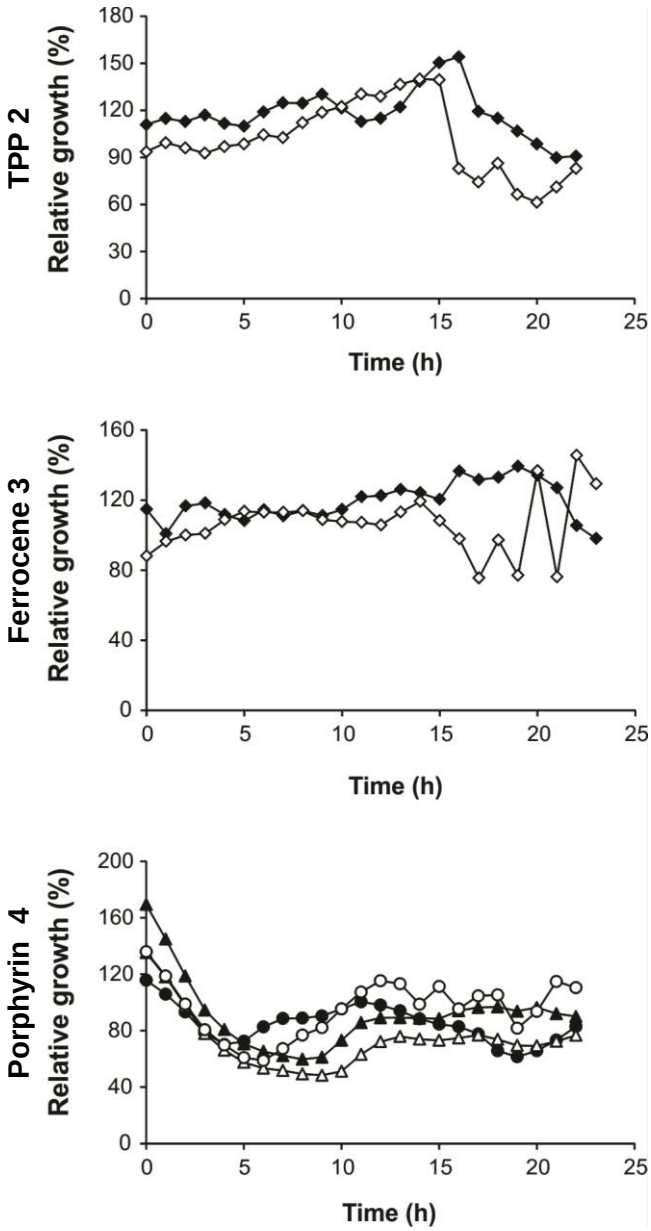


Fig. S4 Effects of photoactivation on growth of *B.subtilis* culture treated with low doses of TPP **2** (50 µg/mL), ferrocene **3** (50 µg/mL), and porphyrin **4** (31.2 µg/mL, round marks, and 62.5 µg/mL, triangular marks). Growth is given as a percent of control culture growth (100 %). Closed marks represent cultures grown in the dark, while open marks represent cultures grown upon illumination.

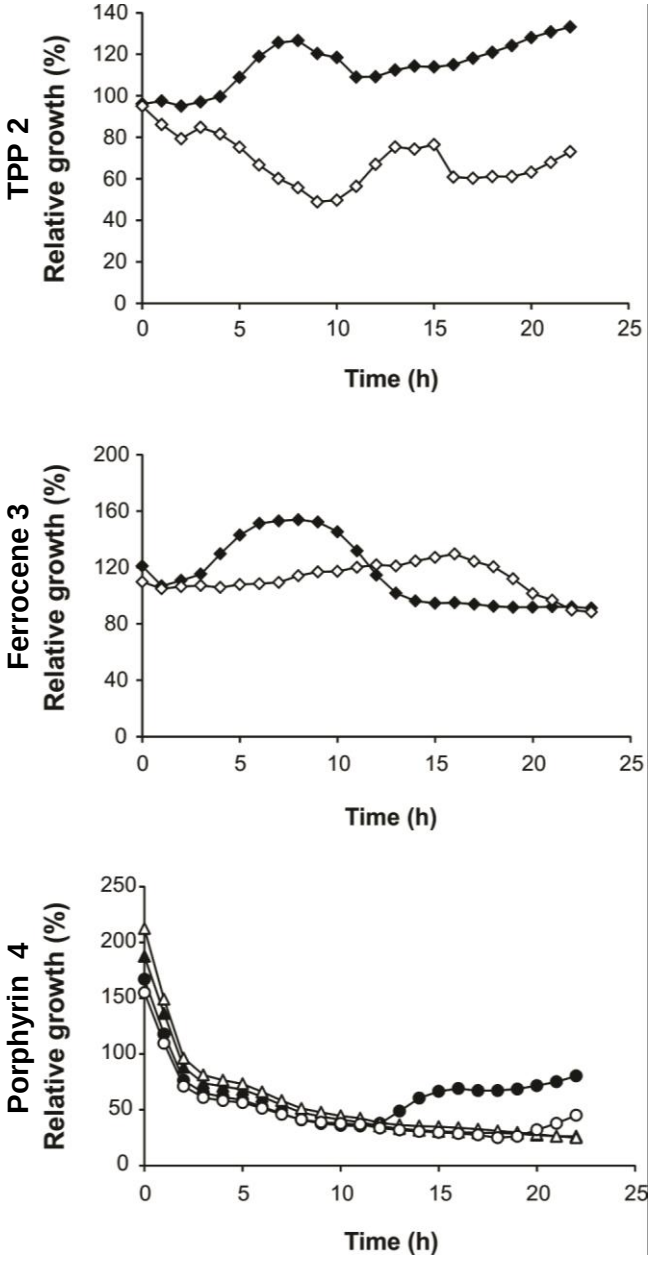


Fig. S5 Effects of photoactivation on growth of *K. pneumoniae* culture treated with low doses of TPP **2** (50 μg/mL), ferrocene **3** (50 μg/mL), and porphyrin **4** (62.5 μg/mL, round marks, and 125 μg/mL, triangular marks). Growth is given as a percent of control culture growth (100 %). Closed marks represent cultures grown in the dark, while open marks represent cultures grown upon illumination.

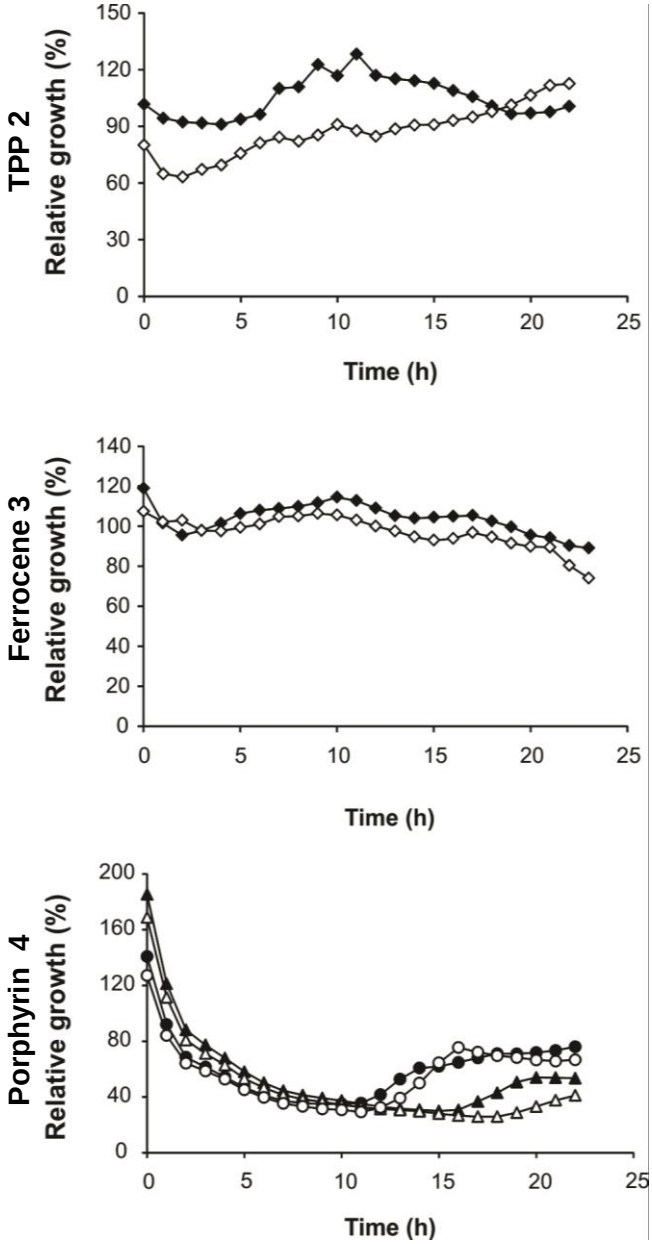


Fig. S6 Effects of photoactivation on growth of *E. faecalis* culture treated with low doses of TPP **2** (50 µg/mL), ferrocene **3** (50 µg/mL), and porphyrin **4** (62.5 µg/mL, round marks, and 125 µg/mL, triangular marks). Growth is given as a percent of control culture growth (100 %). Closed marks represent cultures grown in the dark, while open marks represent cultures grown upon illumination.

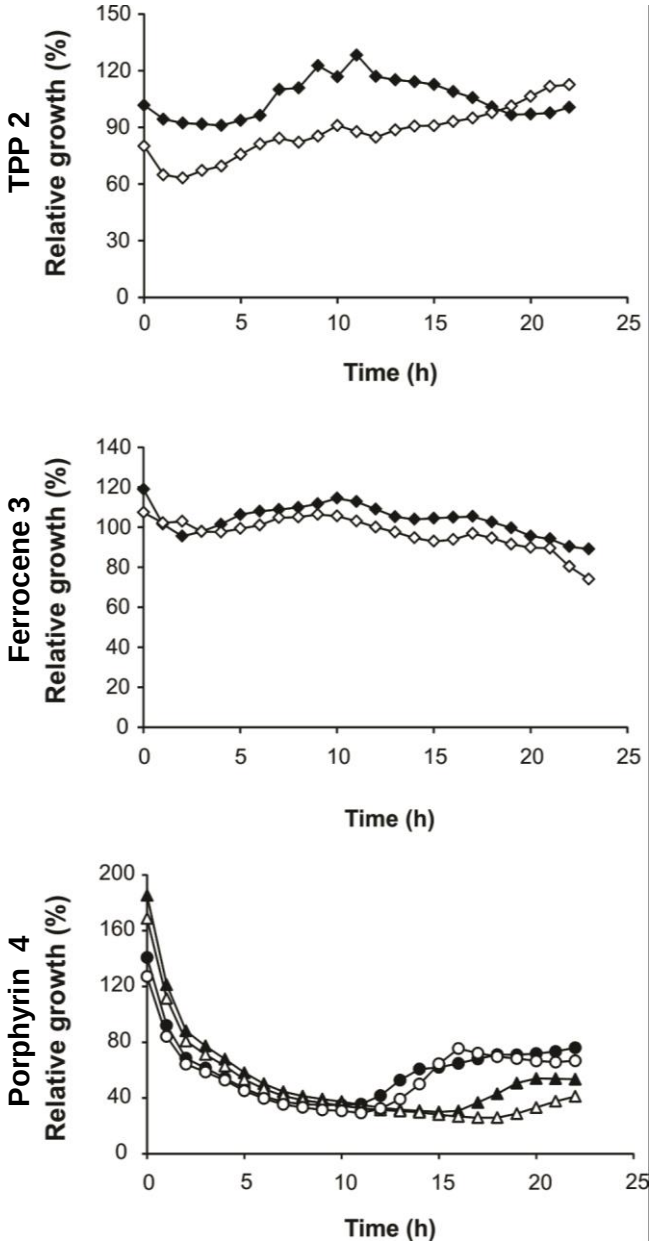


Fig. S7 Effects of photoactivation on growth of *L. monocytogenes* culture treated with low doses of ferrocene **3** (50 µg/mL), TPP **2** (50 µg/mL), and porphyrin **4** (125 µg/mL, round marks, and 250 µg/mL, triangular marks). Growth is given as a percent of control culture growth (100 %). Closed marks represent cultures grown in the dark, while open marks represent cultures grown upon illumination.

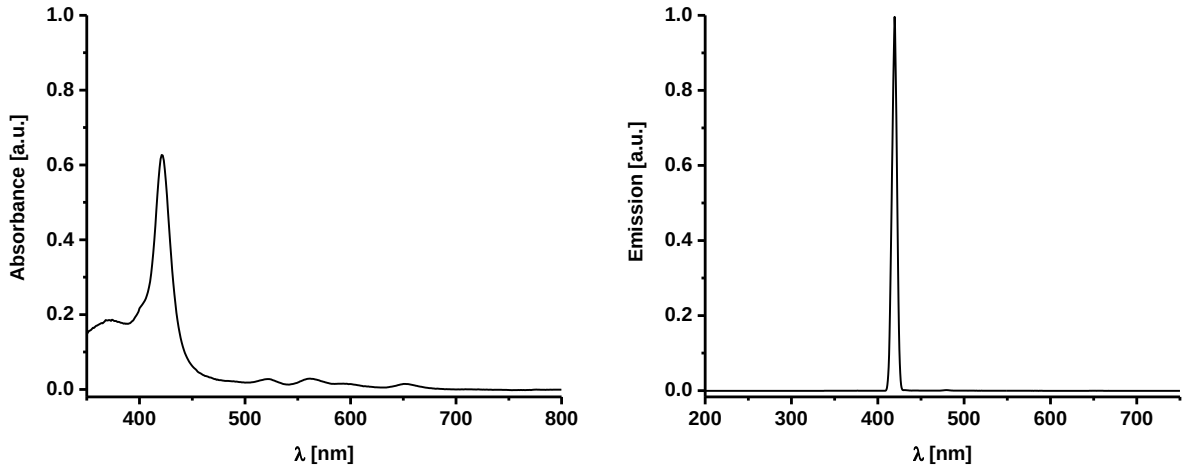


Fig. S8 UV/vis spectrum of porphyrin **1** in methylene chloride (left); Fluorescence spectrum of porphyrin **1** in methylene chloride at the excitation wavelength of 420 nm (right).

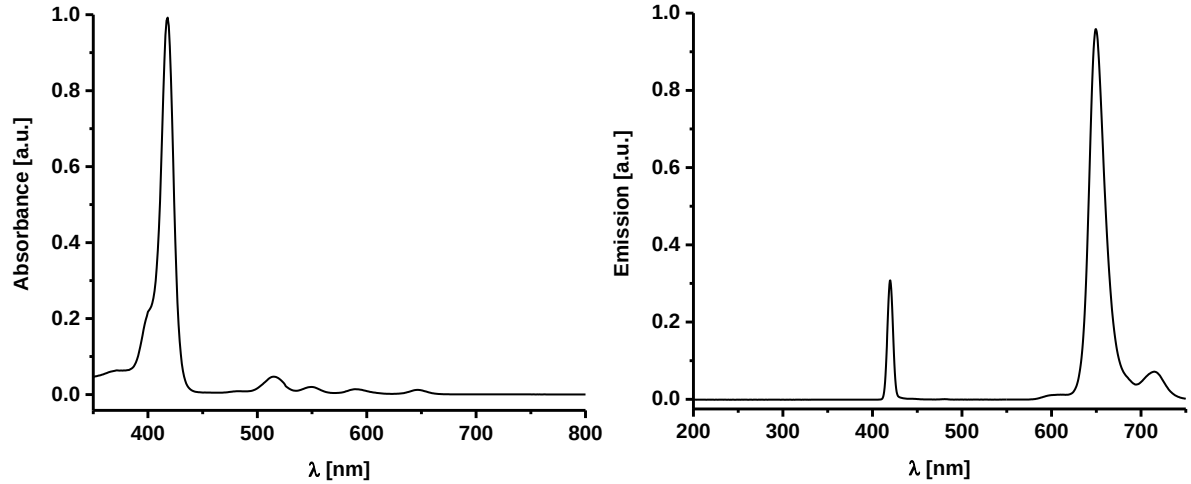
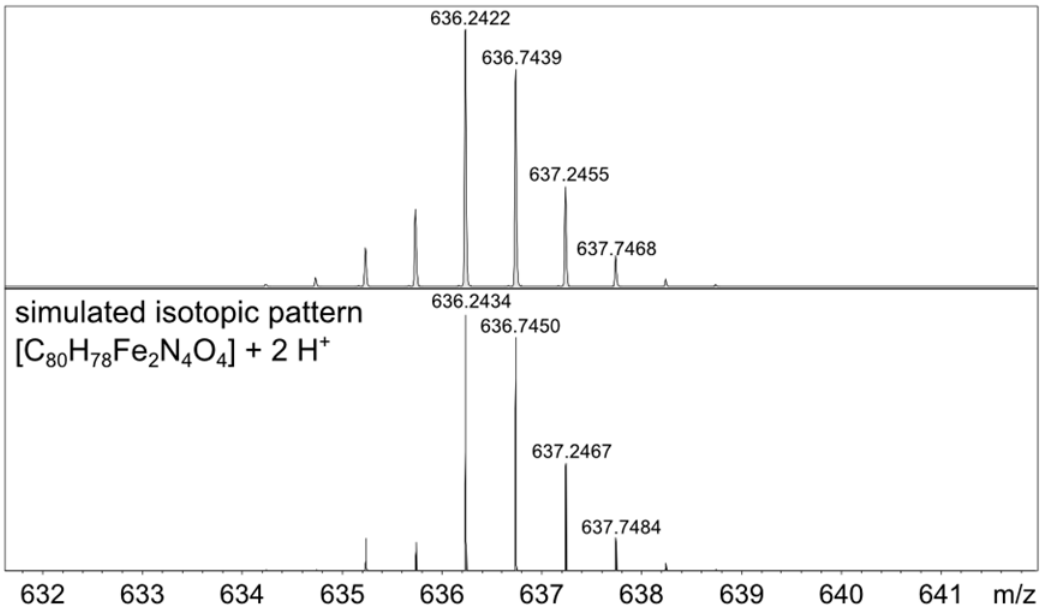


Fig. S9 UV/vis spectrum of TPP **2** in methylene chloride (left); Fluorescence spectrum of TPP **2** in methylene chloride at the excitation wavelength of 420 nm (right).

a)



b)

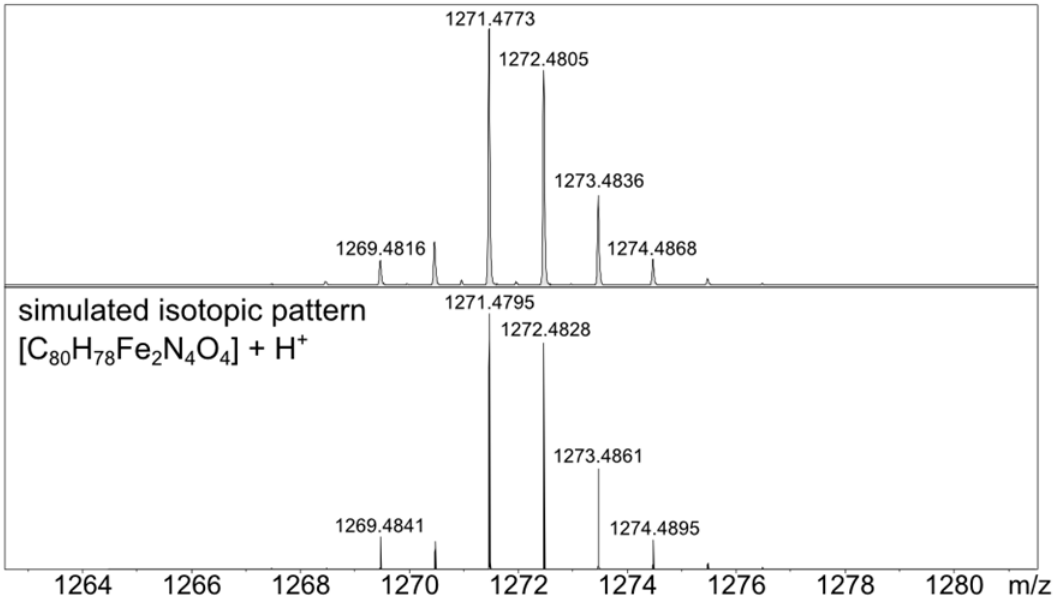


Fig. S10 Measured (top) and simulated (bottom) isotopic distributions of the peaks at *m/z* 636.2422 [($C_{80}H_{78}Fe_2N_4O_4$)+2H^+] of the UHR-ESI-TOF mass spectrum of porphyrin **4** in methylene chloride/methanol (1/1) with formic acid at RT (**a**); Measured (top) and simulated (bottom) isotopic distributions of the peaks at *m/z* 1271.4773 [($C_{80}H_{78}Fe_2N_4O_4$)+H^+] of the UHR-ESI-TOF mass spectrum of porphyrin **4** in methylene chloride/methanol (1/1) with formic acid at RT (**b**).

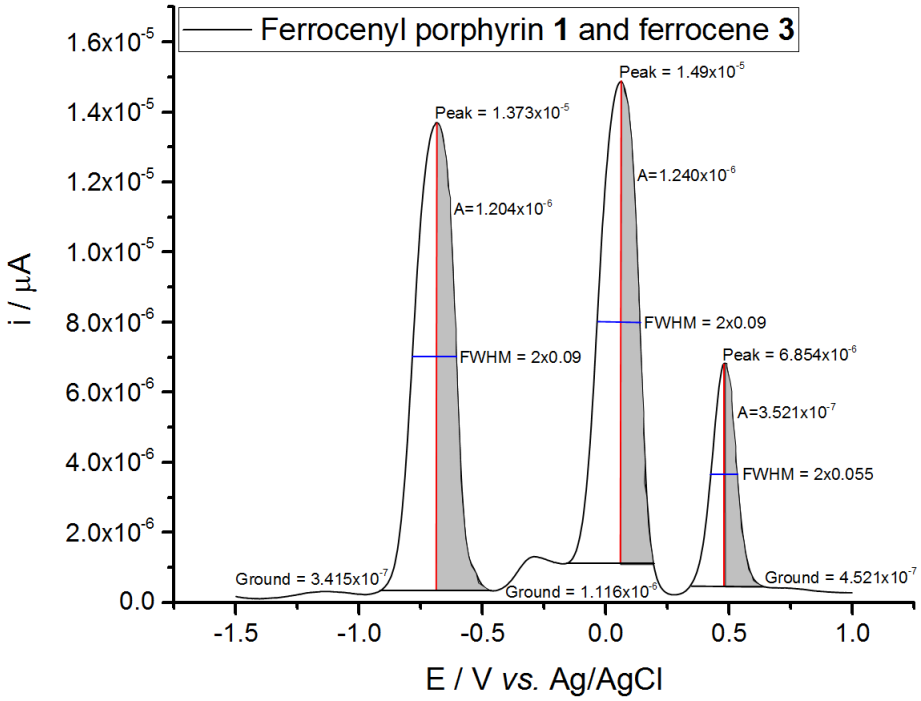


Fig. S11 Differential pulse voltammogram of a 1:1 mixture of porphyrin **1** ($c=10^{-3}$ M) and ferrocene **3** ($c=10^{-3}$ M) in methylene chloride *vs.* Ag/AgCl as reference.

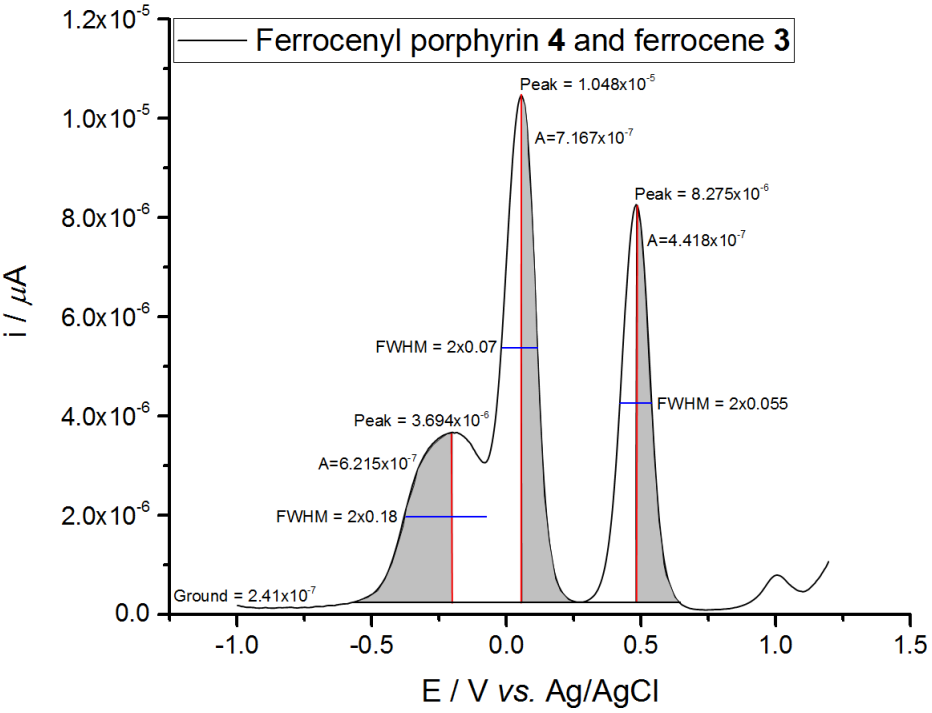


Fig. S12 Differential pulse voltammogram of a 1:1 mixture of porphyrin **4** ($c=10^{-3}$ M) and ferrocene **3** ($c=10^{-3}$ M) in methylene chloride *vs.* Ag/AgCl as reference.