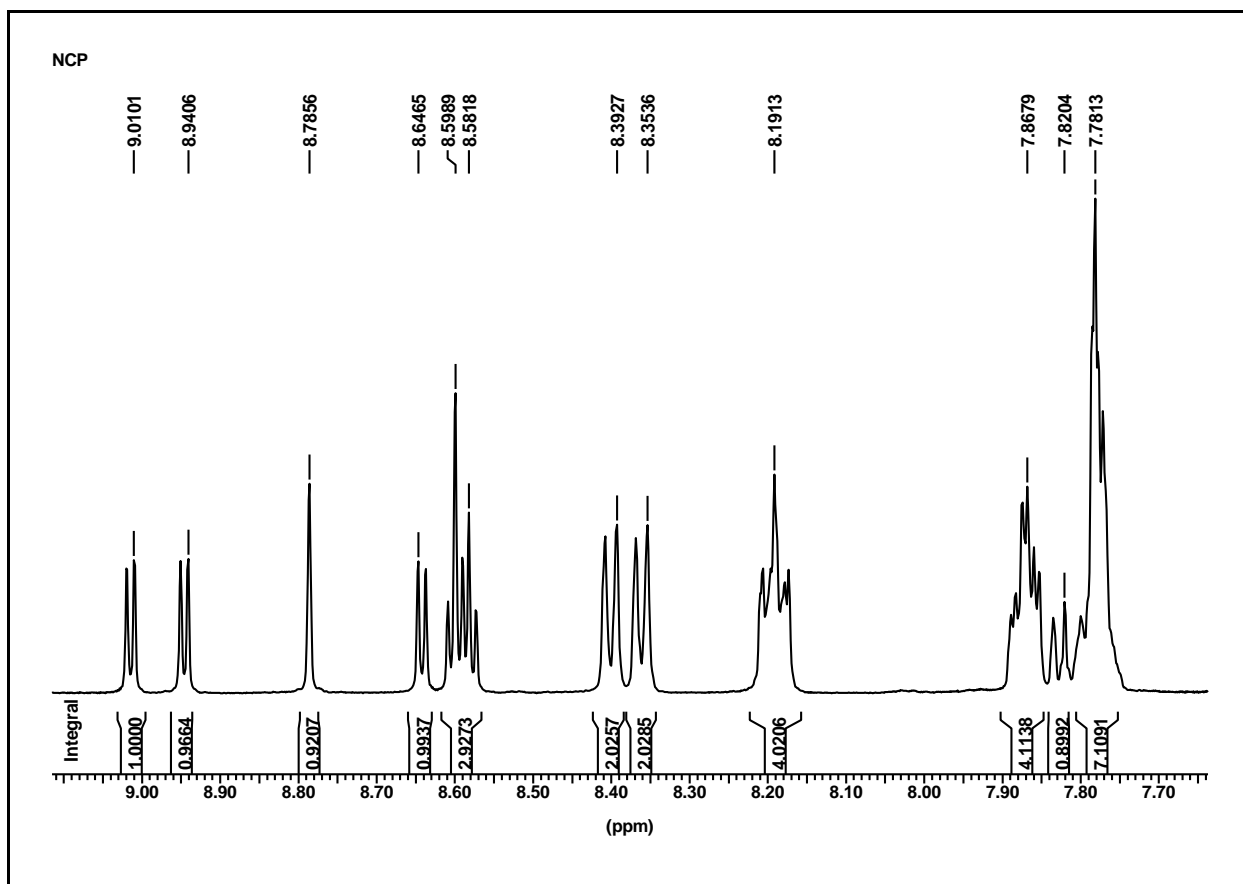
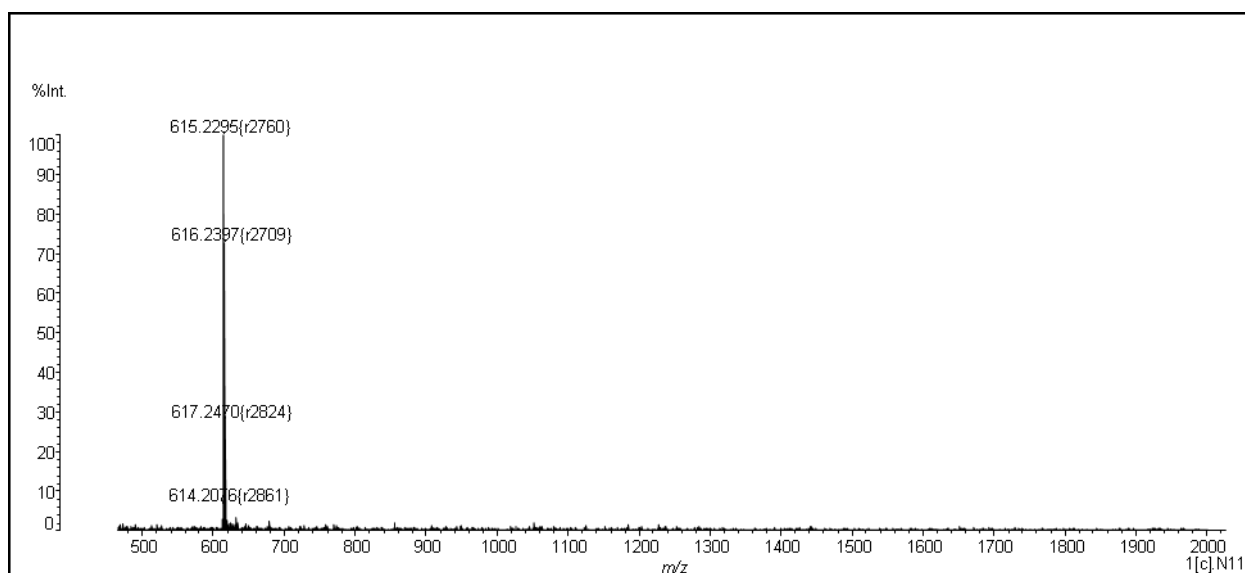


## Supporting Information

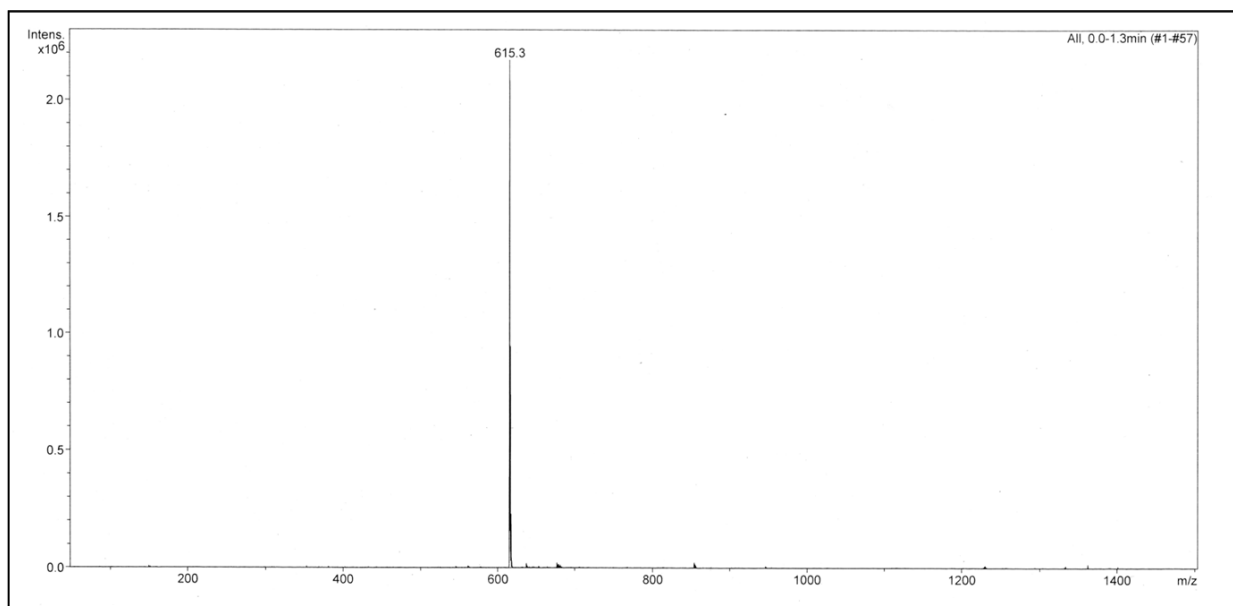


$^1\text{H}$  NMR (500 MHz;  $\text{CDCl}_3$ ),  $\delta\text{H}$  ppm : 8.92 (d, 1H,  $\beta$ -pyrrole); 8.85 (d, 1H,  $\beta$ -pyrrole); 8.69 (s, 1H, “confused pyrrole”); 8.54 (d, 1H,  $\beta$ -pyrrole); 8.52-8.47 (m, 3H,  $\beta$ -pyrrole); 8.30 (d, 2H, orto-Ph); 8.26 (d, 2H, orto-Ph); 8.12-8.06 (m, 4H, orto-Ph); 7.80-7.65 (m, 12H, meta-Ph, para-Ph); -2.51 (br s, 2H, inner NH); -5.08 (s, 1H, inner CH).

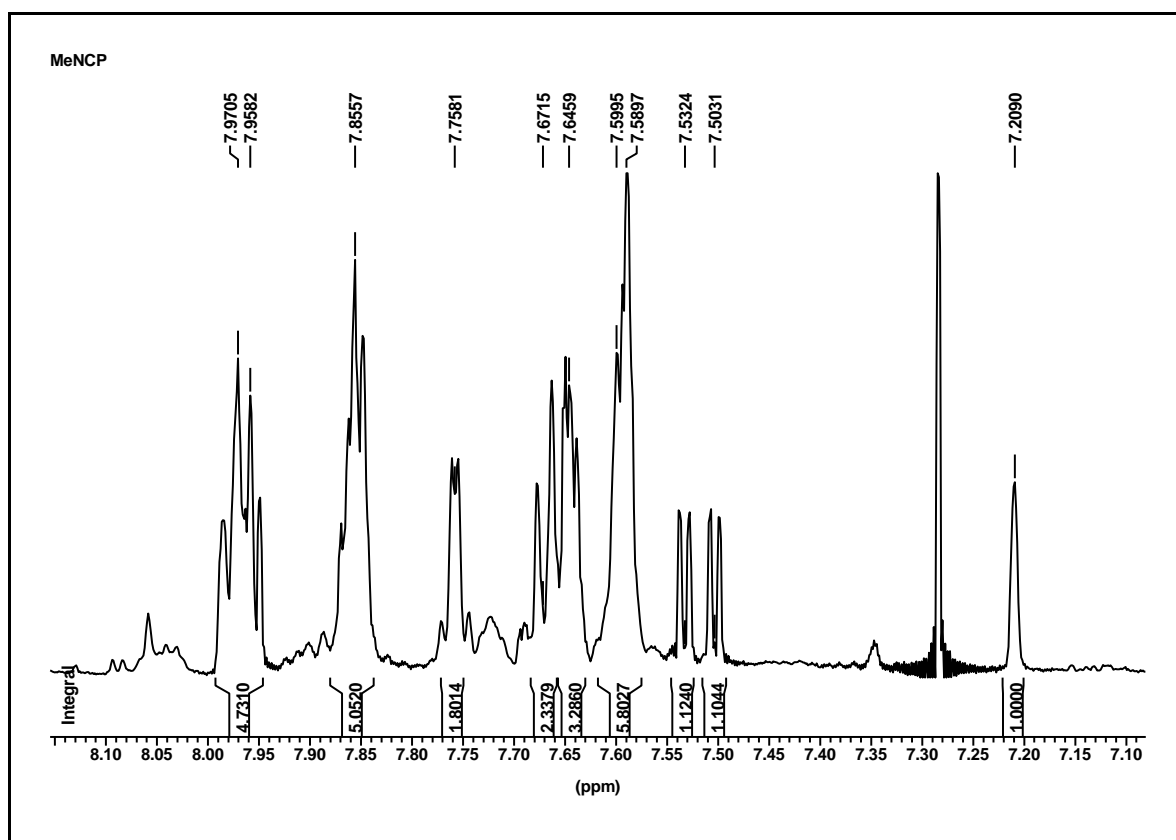
**Fig. S1.**  $^1\text{H}$  NMR spectrum of 5,10,15,20-tetraphenyl-(2-aza-21-carbaporphyrin) in  $\text{CDCl}_3$ .



**Fig. S2.** MALDI-TOF spectrum of 5,10,15,20-tetraphenyl-(2-aza-21-carbaporphyrin).

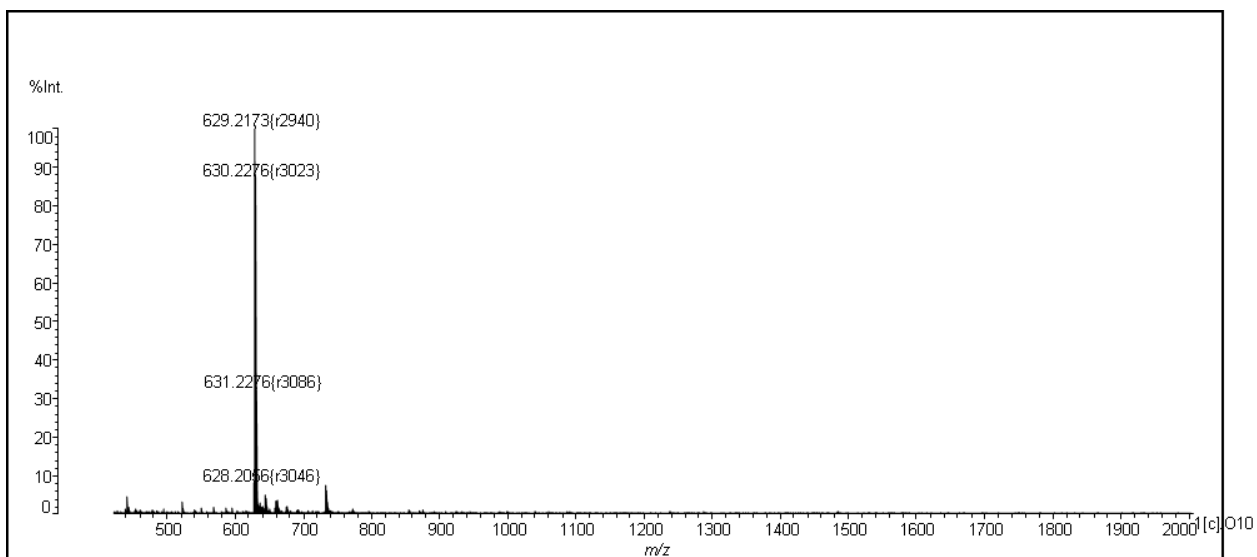


**Fig. S3.** ESI- MS spectrum of 5,10,15,20-tetraphenyl-(2-aza-21-carbaporphyrin)

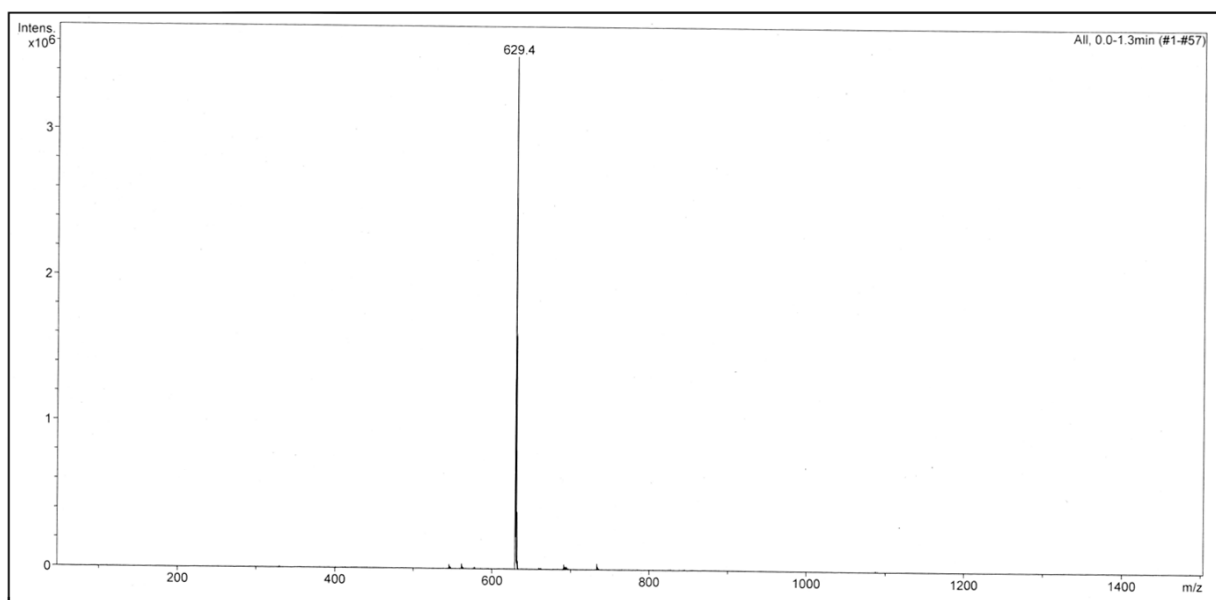


<sup>1</sup>H NMR (500 MHz; CDCl<sub>3</sub>), δH ppm : 7.98 (m, 4H, orto-Ph) ; 7.95 (d, 1H, β-pyrrole ) ; 7.86 (m, 5H, β-pyrrole, orto-Ph) ; 7.76 (d, 2H, β-pyrrole) ; 7.67 (d, 2H, orto-Ph) ; 7.65 (m, 4H, orto-Ph, meta-Ph) ; 7.59 (m, 6H, meta-Ph, para-Ph) ; 7.53 (d, 1H, β-pyrrole) ; 7.50 (d, 1H, β-pyrrole) ; 7.21 (s, 1H, “confused pyrrole”) ; 3.7 (s, 1H, inner NH ) ; 3.41 (s, 3H, -CH<sub>3</sub>) ; 0.9 ( s, 1H, inner CH)

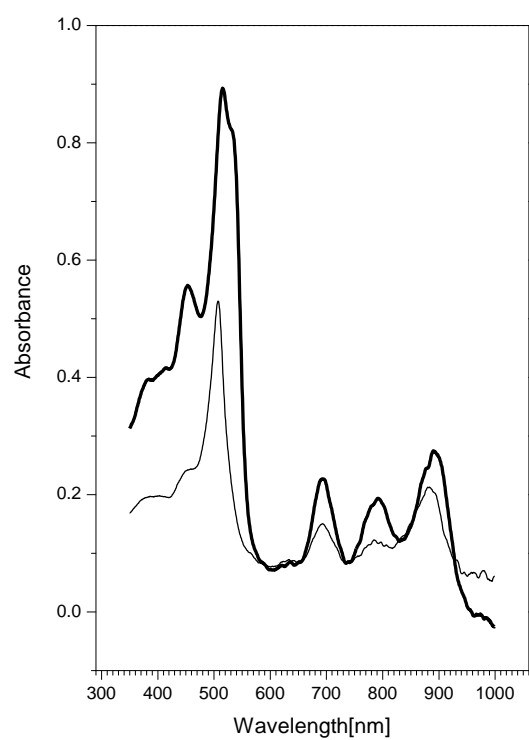
**Fig. S4.** <sup>1</sup>H NMR spectrum of 2-N- methyl -5,10,15,20- tetraphenyl-21-carbaporphyrin.



**Fig. S5.** MALDI-TOF spectrum 2-N- methyl -5,10,15,20- tetraphenyl-21-carbaporphyrin



**Fig. S6.** ESI- MS spectrum of 2-N- methyl -5,10,15,20- tetraphenyl-21-carbaporphyrin.



**Fig. S7.** UV-Vis spectra of J-aggregate suspension in water at pH1:  $\text{H}_2\text{MeIP}(\text{PhSO}_3\text{H})_4$  (thick line) and  $\text{H}_2\text{IP}(\text{PhSO}_3\text{H})_4$  (thin line).