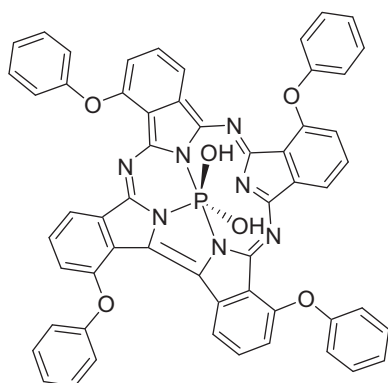


# Spectral data of phosphorus complex of porphyrin derivative C<sub>56</sub>H<sub>34</sub>N<sub>7</sub>O<sub>6</sub>P

## 2. Spectral Studies

### *Spectral Data of Porphyrin Isomers and Expanded Porphyrins*

#### Structure formula



NMR		IR	UV-visible		Remarks	Ref.
Solvent	Peaks $\delta$ [ppm] <sup>a</sup> /J [Hz]	Peaks $\gamma$ [cm <sup>-1</sup> ]	Solvent	Peaks $\lambda$ [nm]/ ( $\epsilon$ [M <sup>-1</sup> cm <sup>-1</sup> ]/ log $\epsilon$ )		
CDCl <sub>3</sub>	<b><sup>1</sup>H NMR</b> 7.12–7.57 (m, 24H (20H+4H), $\phi$ -H, P <sub>c</sub> -H), 7.61–7.97 (m, 4H, P <sub>c</sub> -H), 8.23–8.94 (m, 4H, P <sub>c</sub> -H)	3433, 1574, 1523, 1485, 1400, 1342, 1250, 1207, 1130, 1060, 1026, 991, 937	DMF	446, 461, 611, 640, 673		[10Zha1]

#### Symbols and abbreviations

Short Form	Full Form
NMR	nuclear magnetic resonance
IR	infrared
UV-Visible	ultraviolet–visible
$\delta$	chemical shift
$\gamma$	absorption band
$\lambda$	wavelength
$\epsilon$	molar absorptivity

## References

[10Zha1] Zhang, X.-F., Huang, J., Zhao, H., Zheng, X., Junzhong, Z.: J. Photochem. Photobiol. A.: Chem. **215**, 96 (2010)