

Supporting Information

Supramolecular architectures featuring antenna effect in solid state DSSC, an artificial leaf case study

Georgios Charalambidis,^a Kostas Karikis,^a Evangelos Georgilis,^b Bilel Louahem M'Sabah,^c Yann Pellegrin,^d Aurélien Planchat,^d Bruno Lucas,^c Anna Mitraki,^{*b} Johann Bouclé,^{*c} Fabrice Odobel,^{*d} Athanassios G. Coutsolelos^{*a}

^aUniversity of Crete, Department of Chemistry, Bioinorganic Chemistry Laboratory, Heraklion, Crete, Greece.

^bUniversity of Crete, Department of Materials Science and Technology and Institute of Electronic Structure and Laser (I.E.S.L.) Foundation for Research and Technology - Hellas (FO.R.T.H.), Heraklion, Crete, Greece.

^cUniversité de Limoges, CNRS, XLIM, UMR 7252, 123 Avenue Albert Thomas, F-87000 Limoges, France.

^dUniversité LUNAM, Université de Nantes, CNRS, Chimie et Interdisciplinarité: Synthèse, Analyse, Modélisation (CEISAM), UMR CNRS 6230, 2 rue de la Houssinière, 44322, Nantes cedex 3, France.

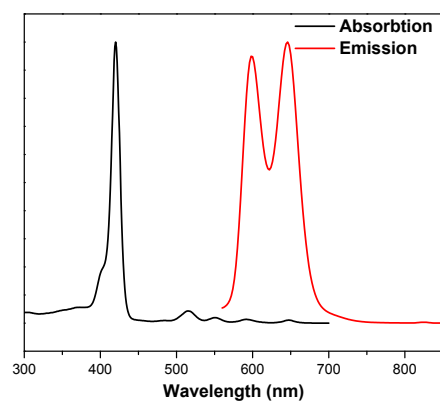


Figure S1. Normalized absorption spectrum (black line) of **FF-H₂P-COOH** and emission spectrum (red line) of **FF-ZnP** ($\lambda_{\text{exc}} = 550 \text{ nm}$) in DCM.

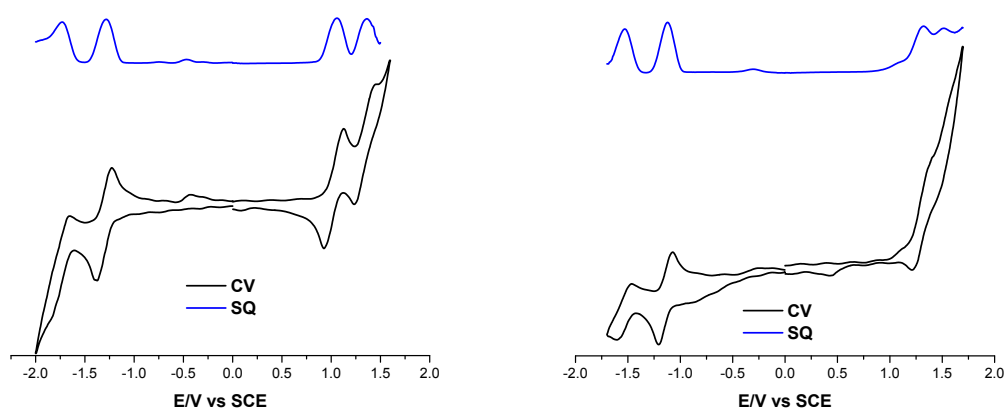


Figure S2. Cyclic (CV) and square wave (SQ) voltammograms of **FF-ZnP** (Left) and **FF-H₂P-COOH** (Right).

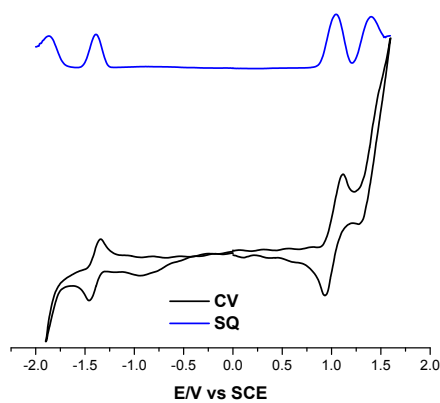


Figure S3. Cyclic (CV) and square wave (SQ) voltammograms of **FF-ZnP-COOH**.

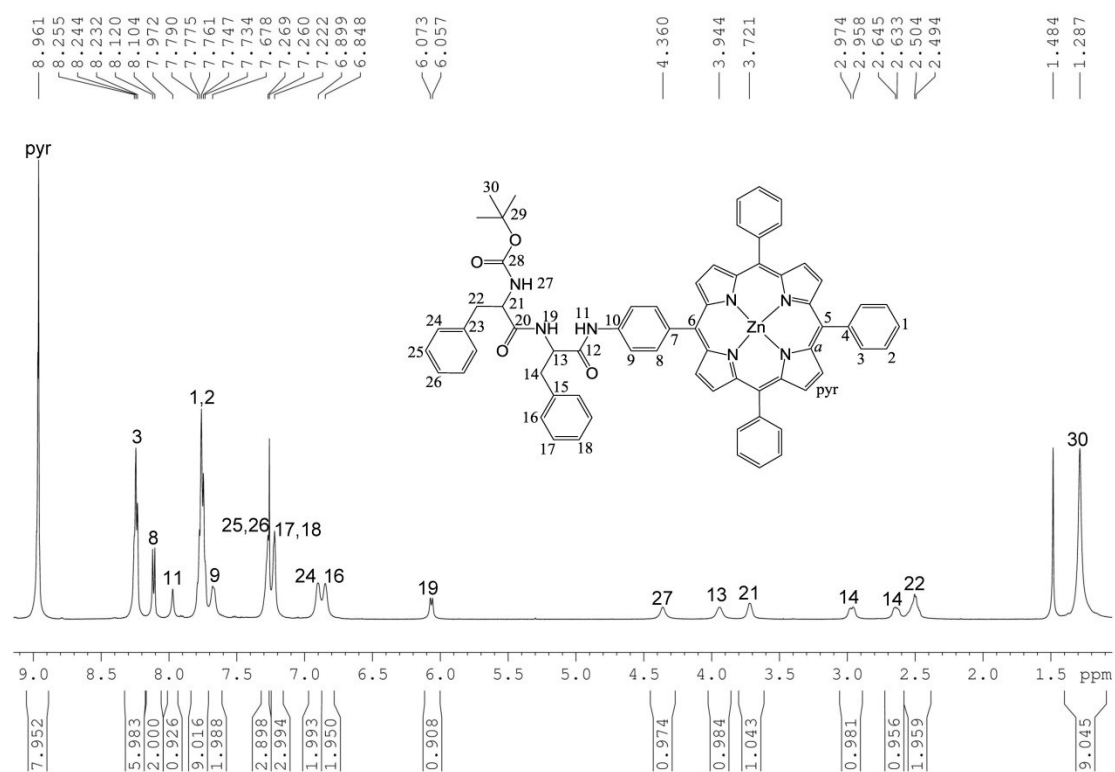


Figure S4. ¹H NMR spectrum of compound **FF-ZnP** in CDCl₃.

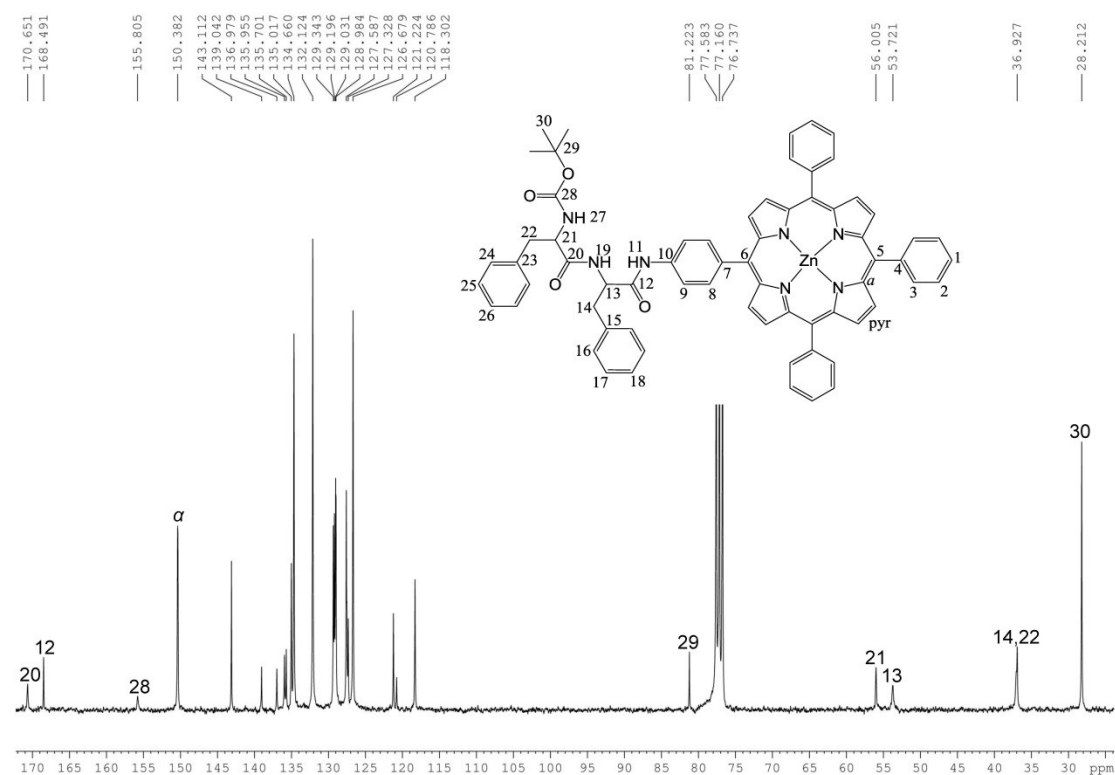
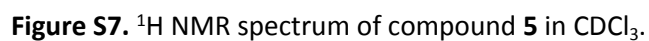


Figure S5. ¹³C NMR spectrum of compound **FF-ZnP** in CDCl₃.



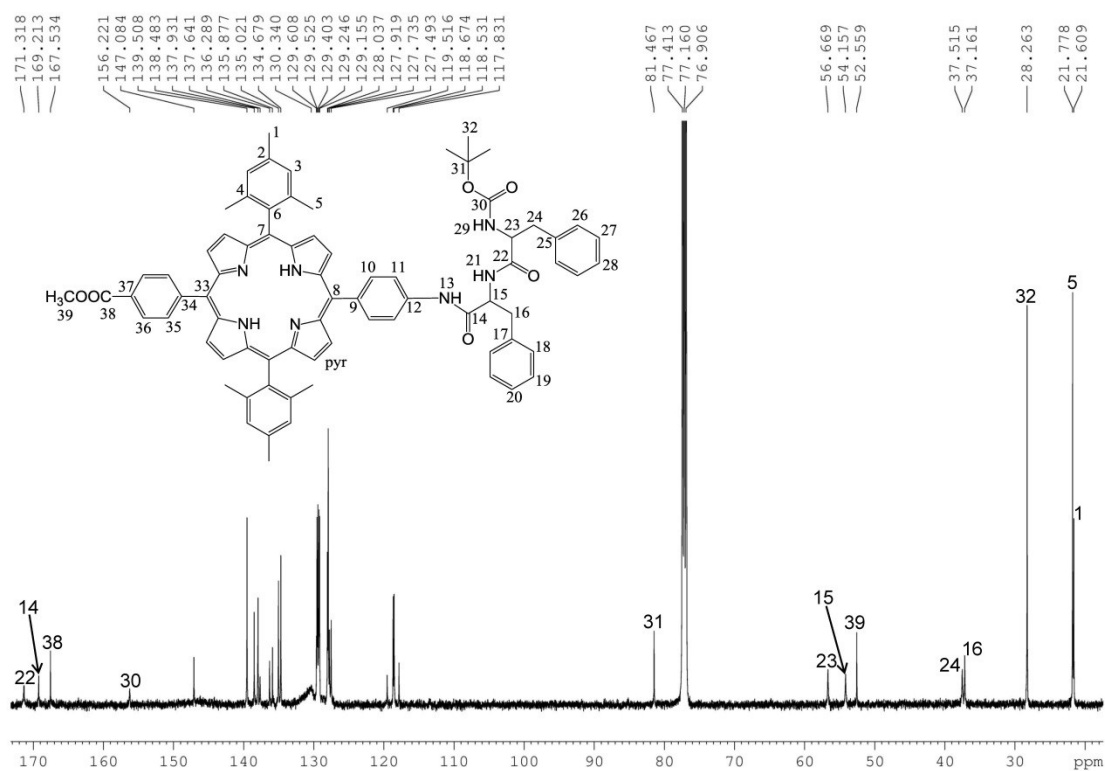


Figure S8. ^{13}C NMR spectrum of compound **5** in CDCl_3 .

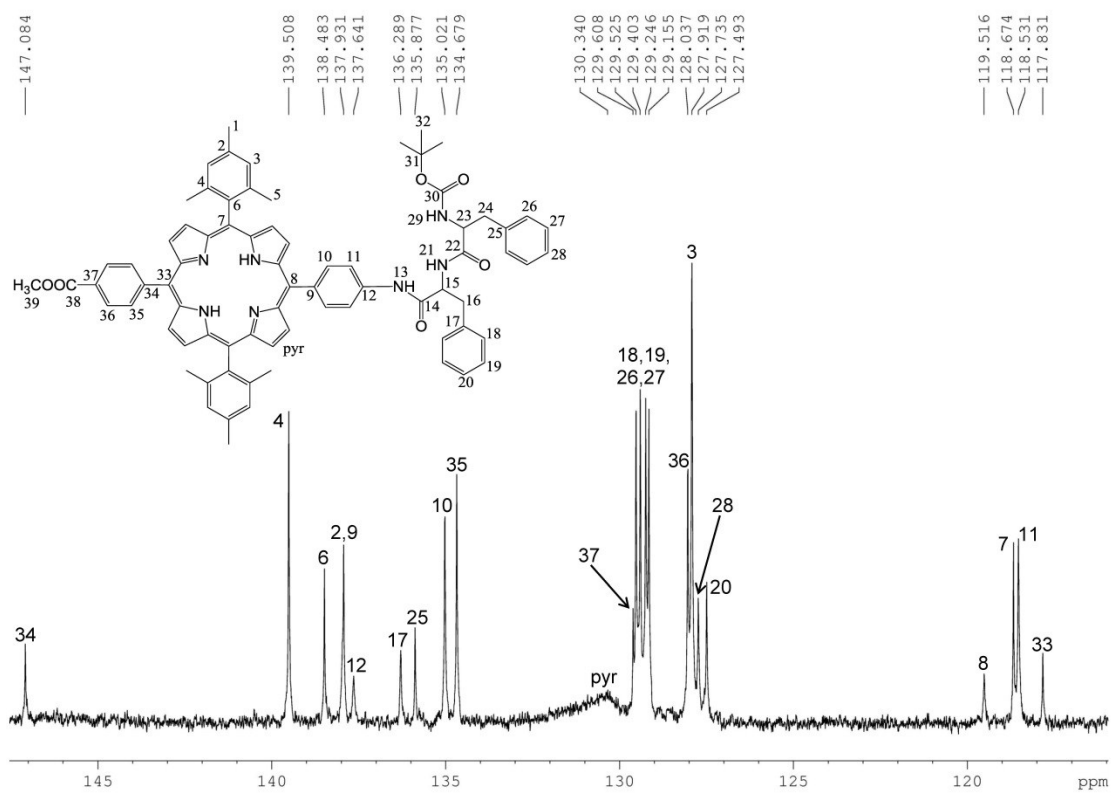


Figure S9. Aromatic region of the ^{13}C NMR spectrum for compound **5** in CDCl_3 .

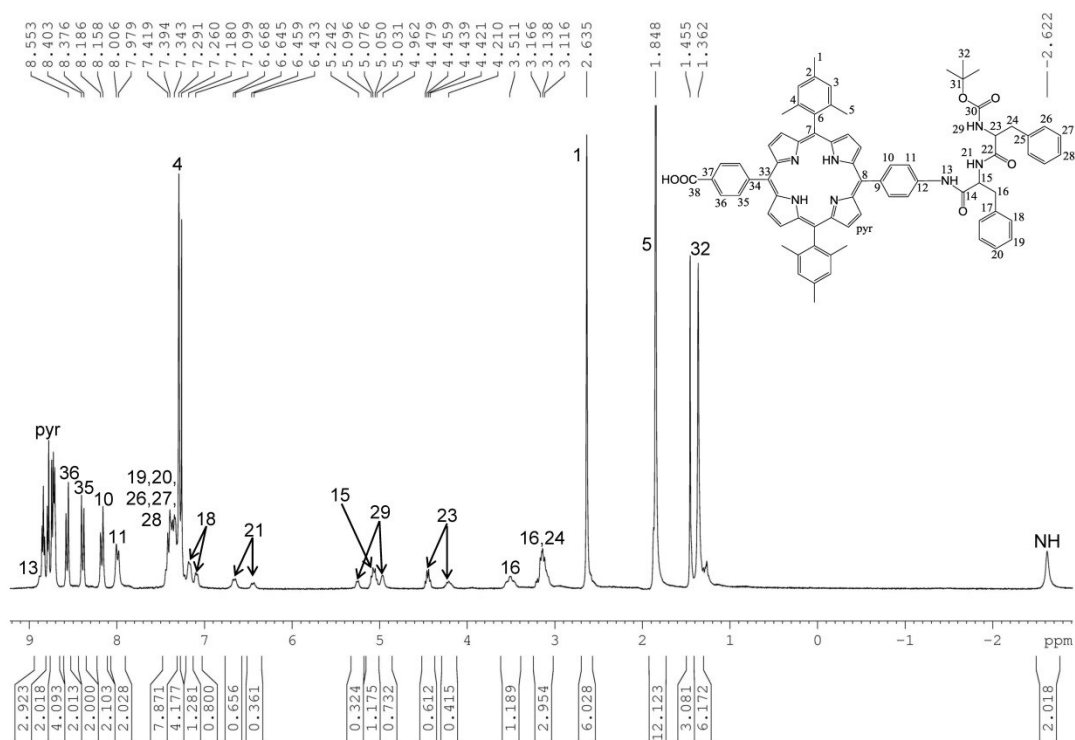


Figure S10. ^1H NMR spectrum of compound **FF-H₂P-COOH** in CDCl_3 .

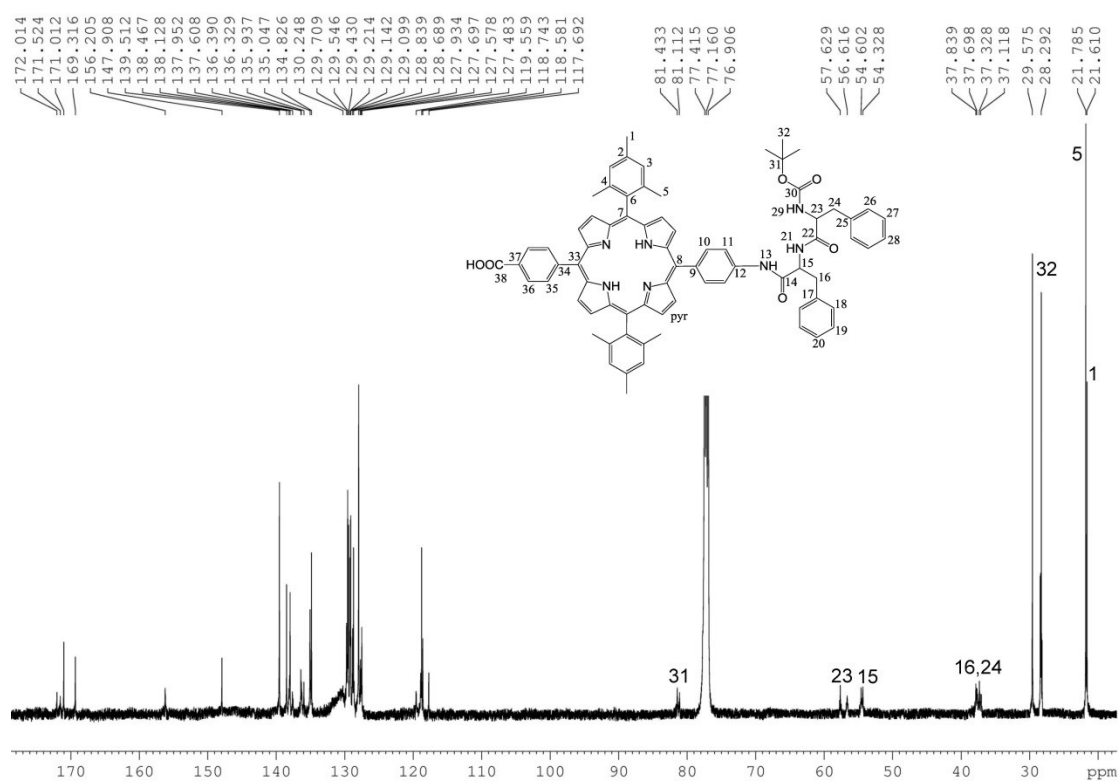


Figure S11. ^{13}C NMR spectrum of compound **FF-H₂P-COOH** in CDCl_3 .

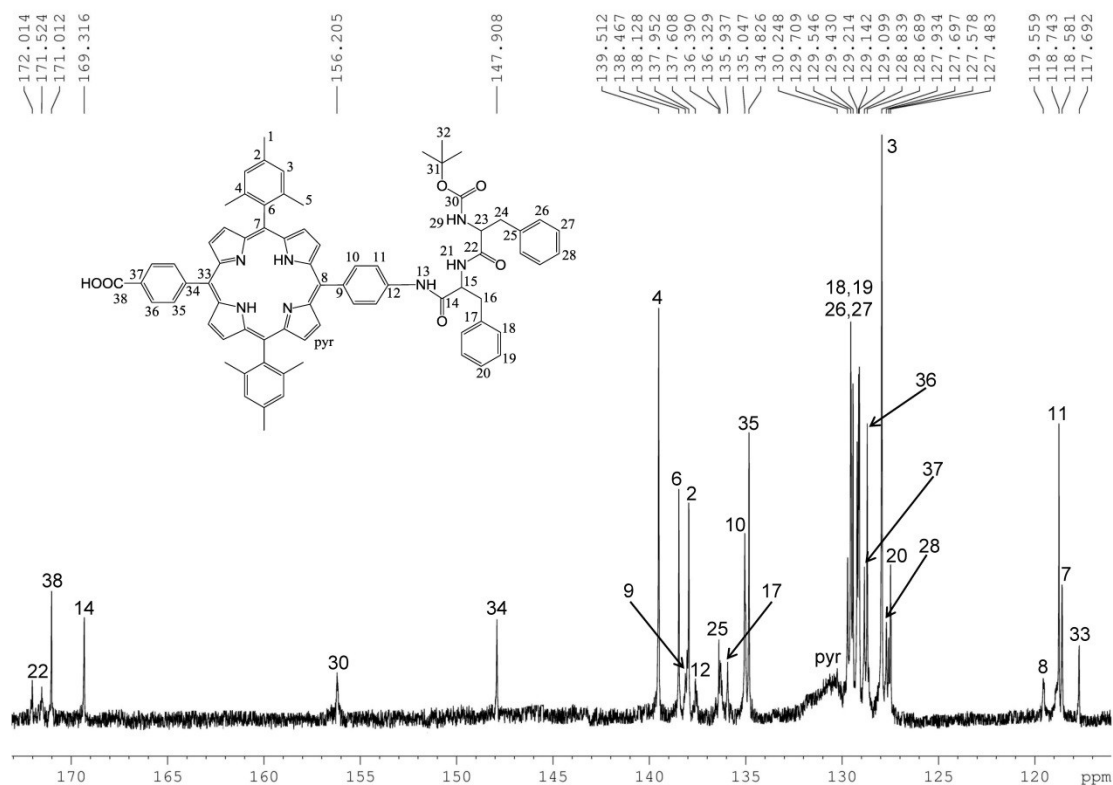


Figure S12. Aromatic region of the ^{13}C NMR spectrum for compound **FF-H₂P-COOH** in CDCl_3 .

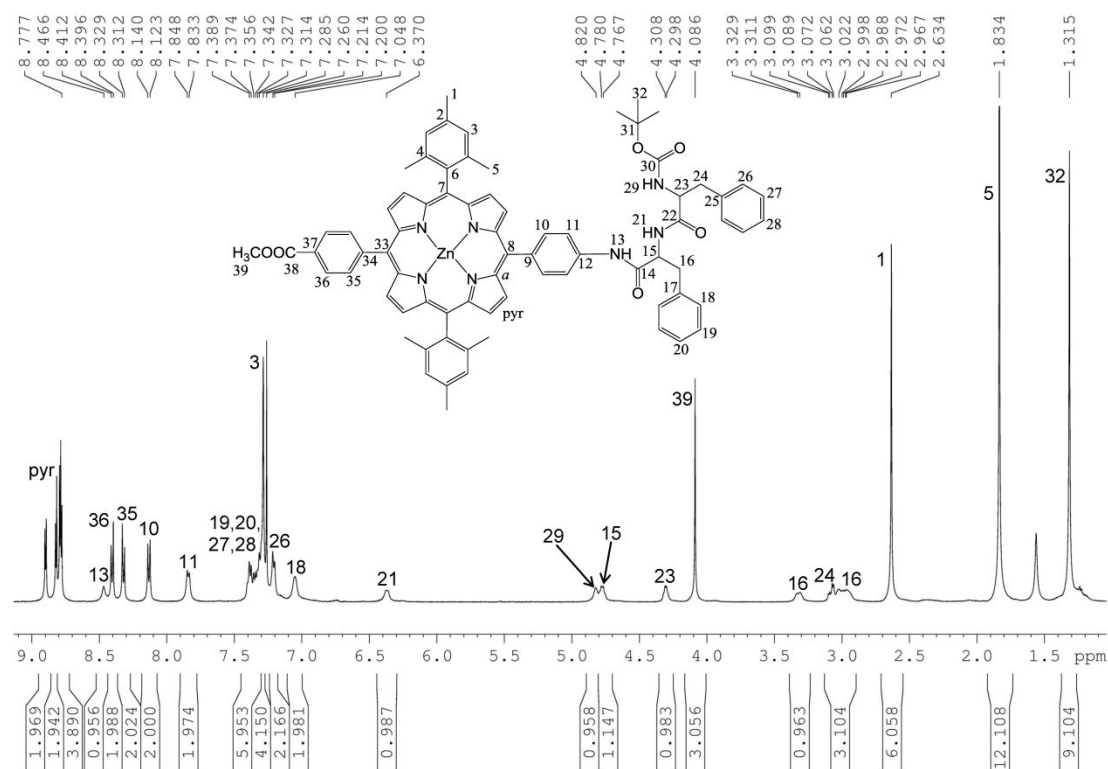


Figure S11. ^1H NMR spectrum of compound **7** in CDCl_3 .

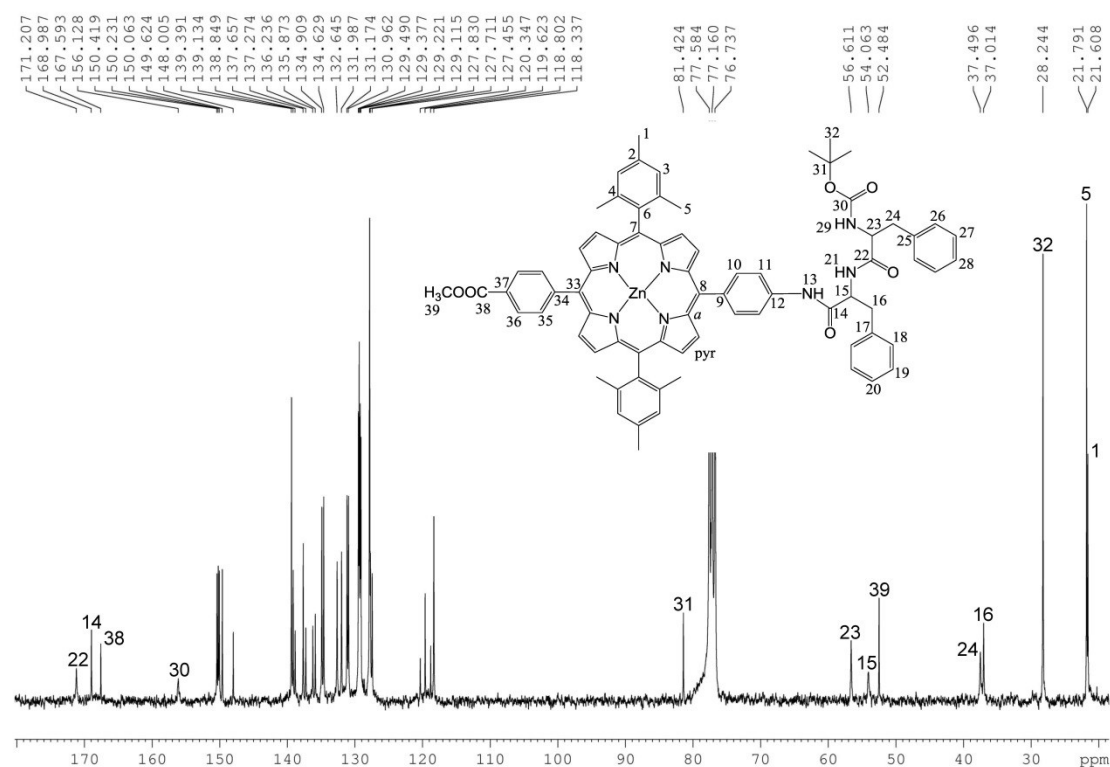


Figure S12. ^{13}C NMR spectrum of compound **7** in CDCl₃.

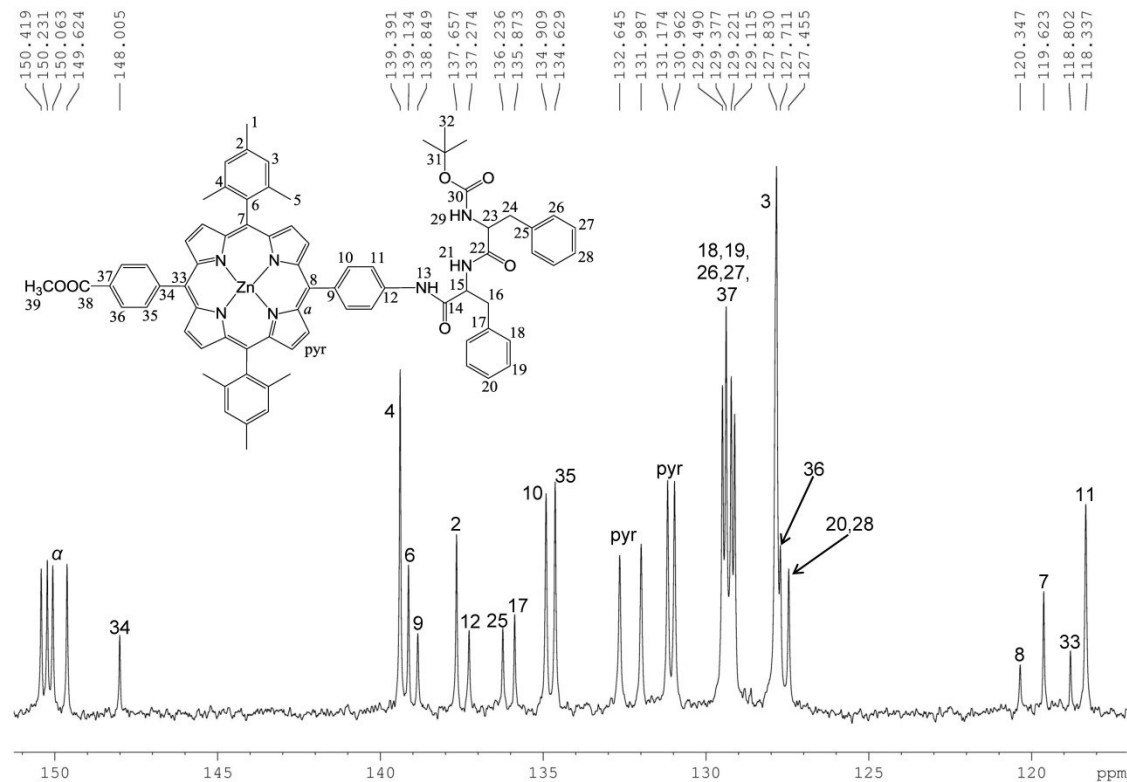


Figure S13. Aromatic region of the ^{13}C NMR spectrum for compound **7** in CDCl₃.

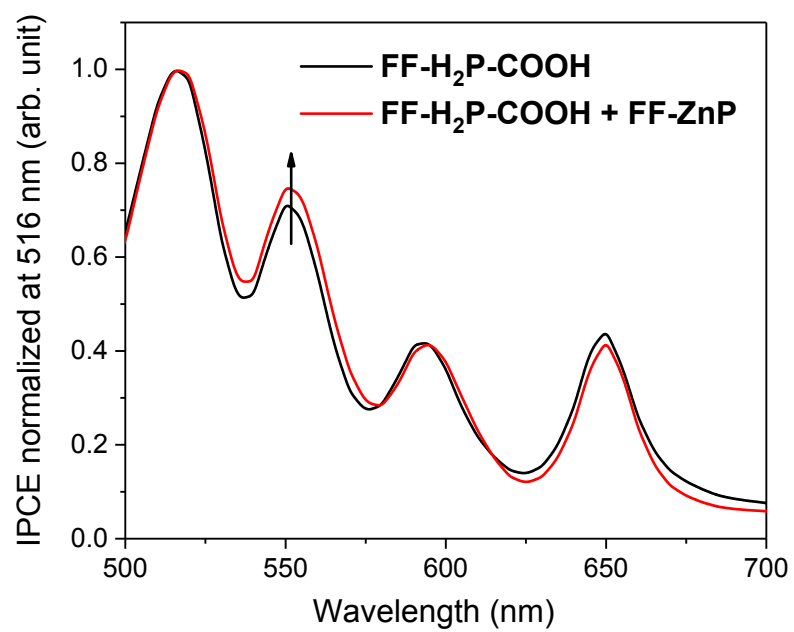


Figure S14. Normalised IPCE spectra of solar cells based on **FF-H₂P-COOH** (black curve) and **FF-H₂P-COOH+FF-ZnP** (red curve).