

Supporting information

Cubane Cu₄I₄(phosphine)₄ Complexes as New Co-initiator for Free Radical Photopolymerization: Towards Aromatic Amine-Free Systems

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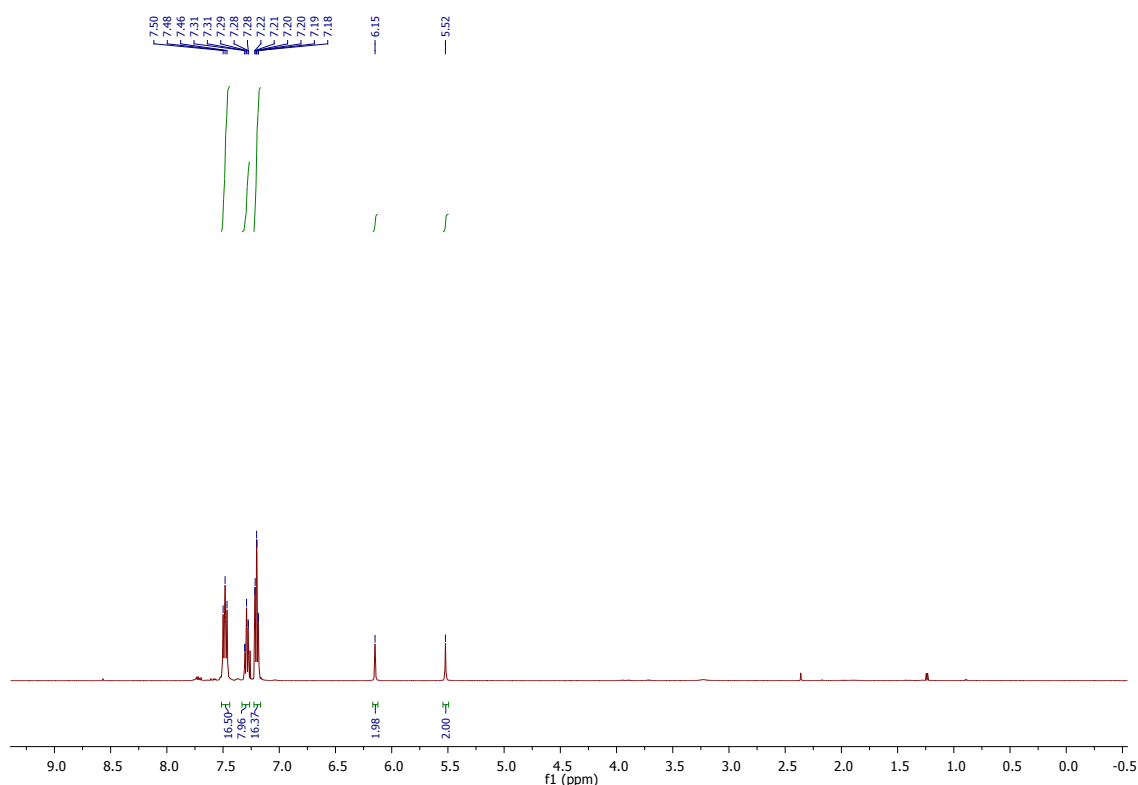


Figure S1. ¹H NMR (500 MHz, CDCl₃, 20 °C) recorded for compound Cu2.

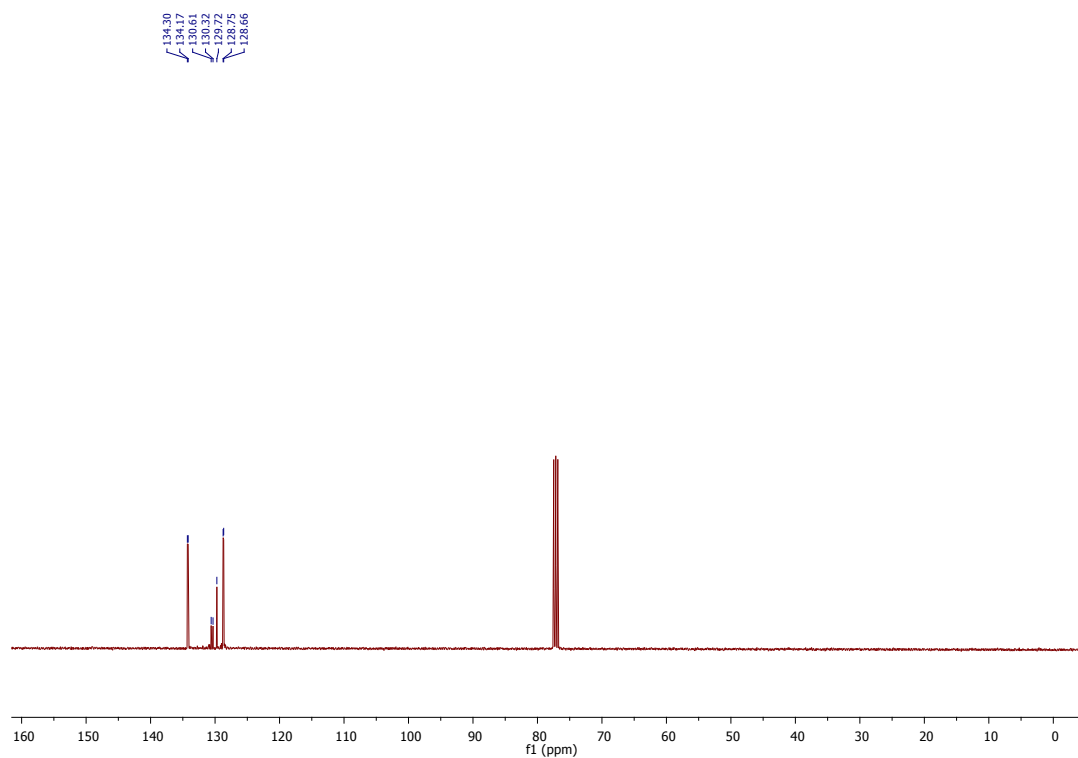


Figure S2. ^{13}C NMR (125 MHz, CDCl_3 , 20 $^\circ\text{C}$) recorded for compound **Cu2**.

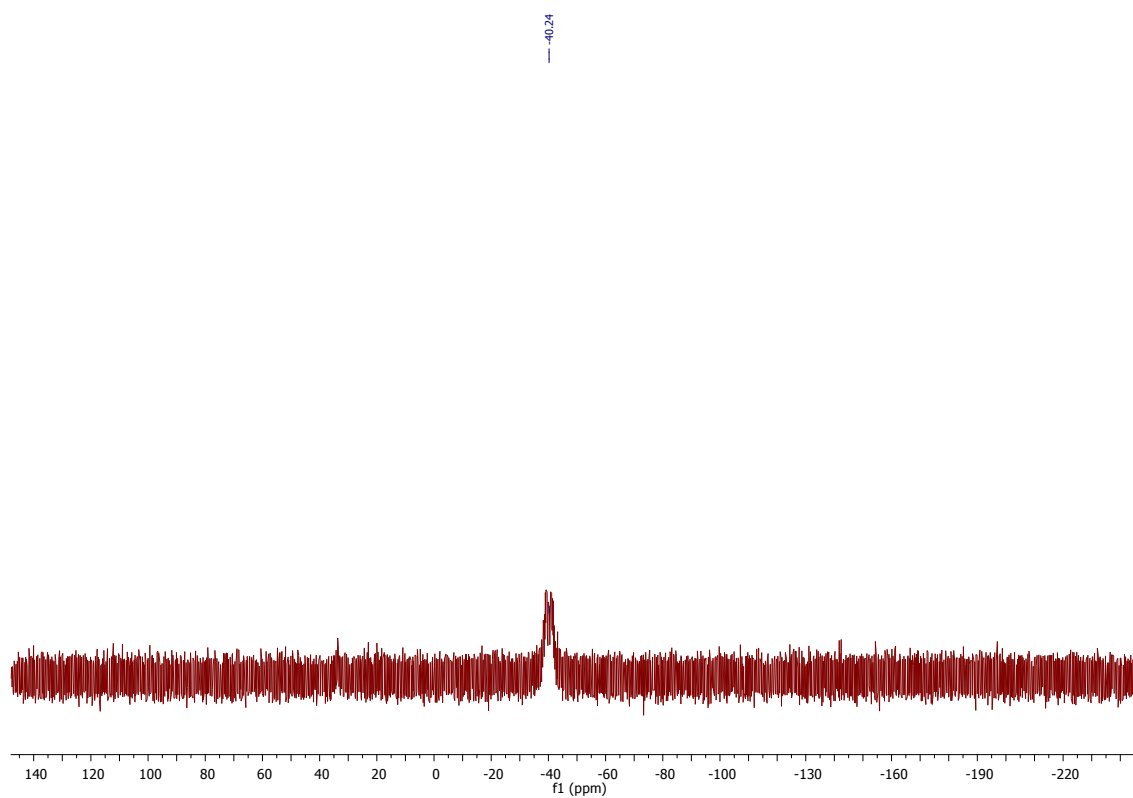


Figure S3. ^{31}P NMR (202 MHz, CDCl_3 , 20 $^\circ\text{C}$) recorded for compound **Cu2**.

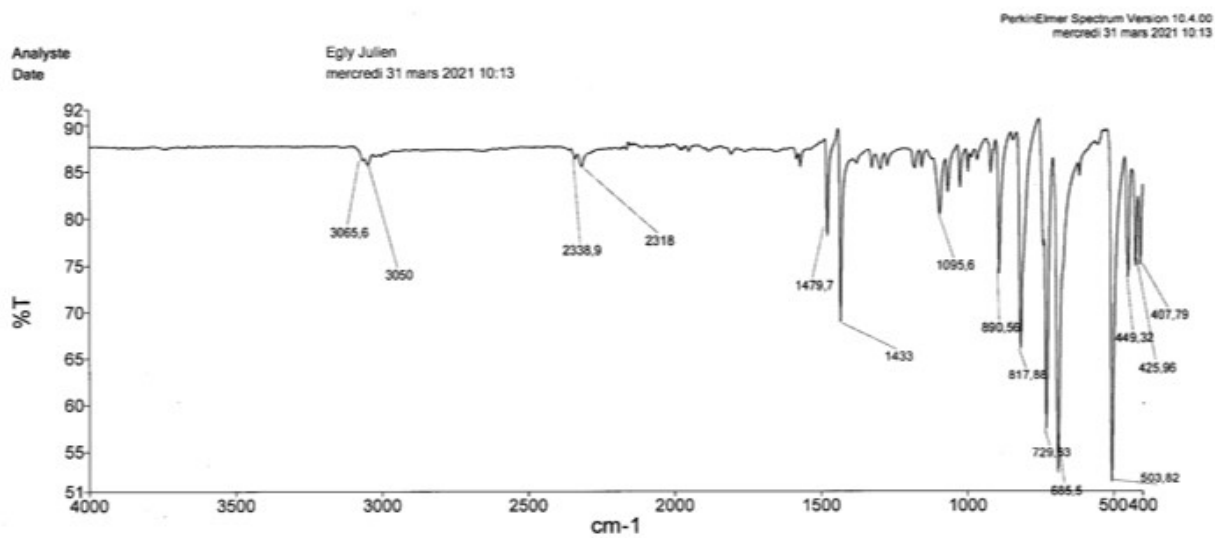


Figure S4. FT-IR spectrum of compound **Cu2** in the solid state.

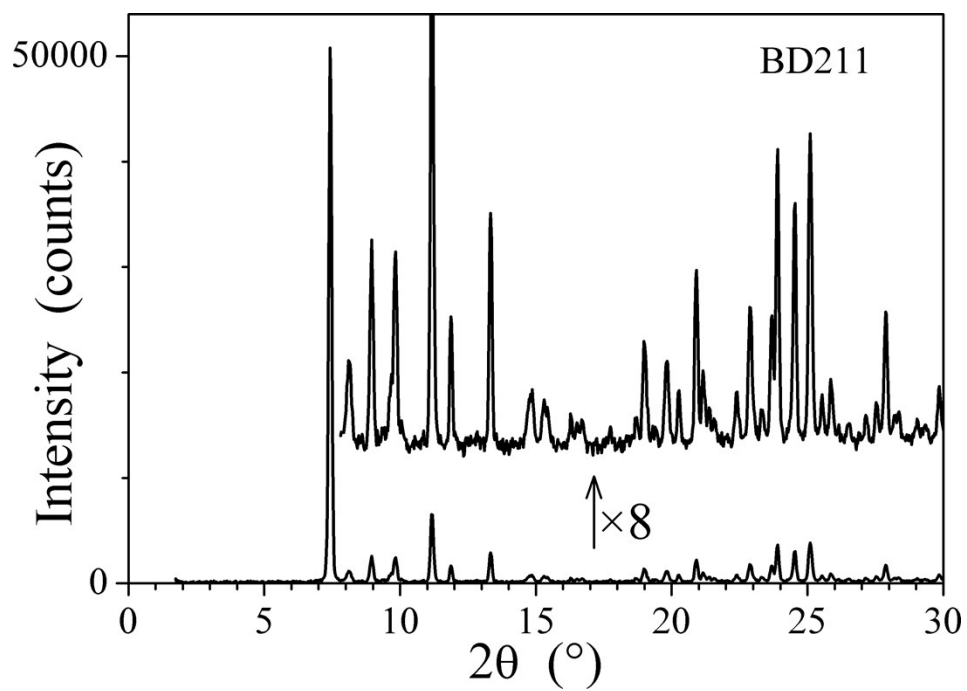


Figure S5. X-Ray powder diffraction analysis recorded for a solid-state sample of compound **Cu2**.

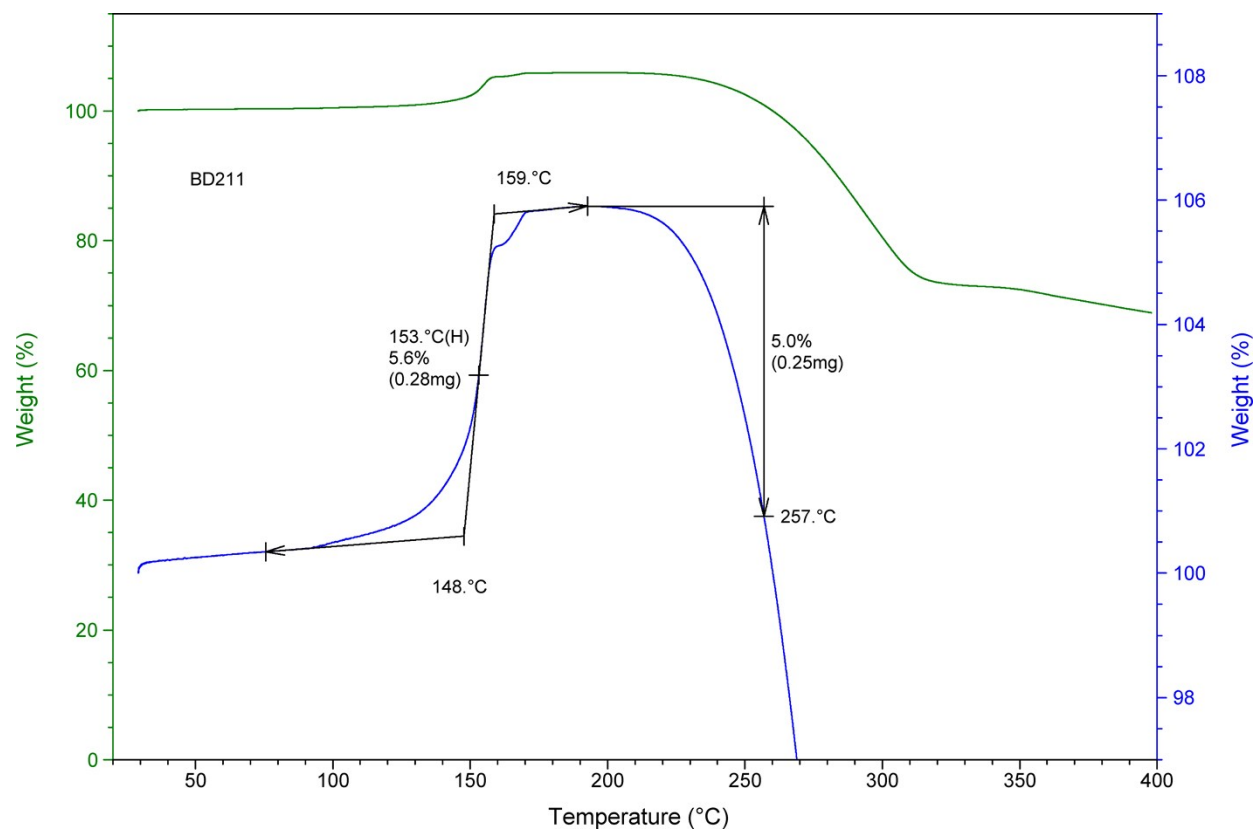


Figure S6. ATG analysis for a sample of compound **Cu2**.

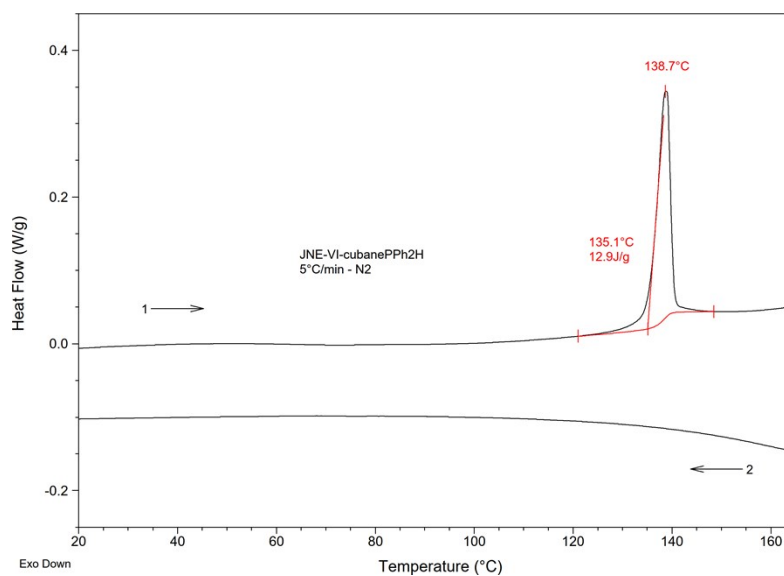


Figure S7. DSC analysis recorded for a solid-state sample of compound **Cu2**.

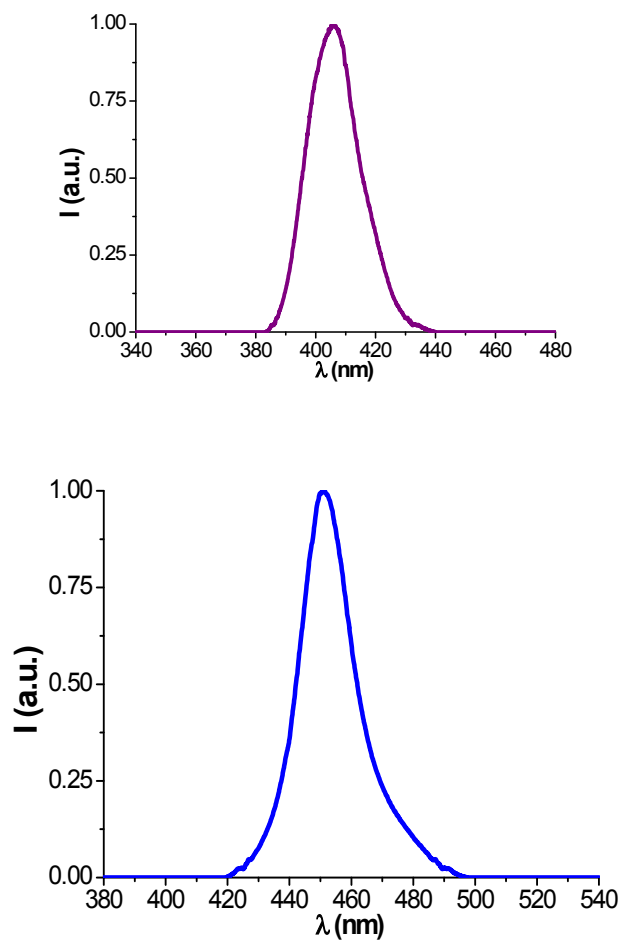


Figure S8. The emission spectra of the LED centered at 405 nm and 455 nm.

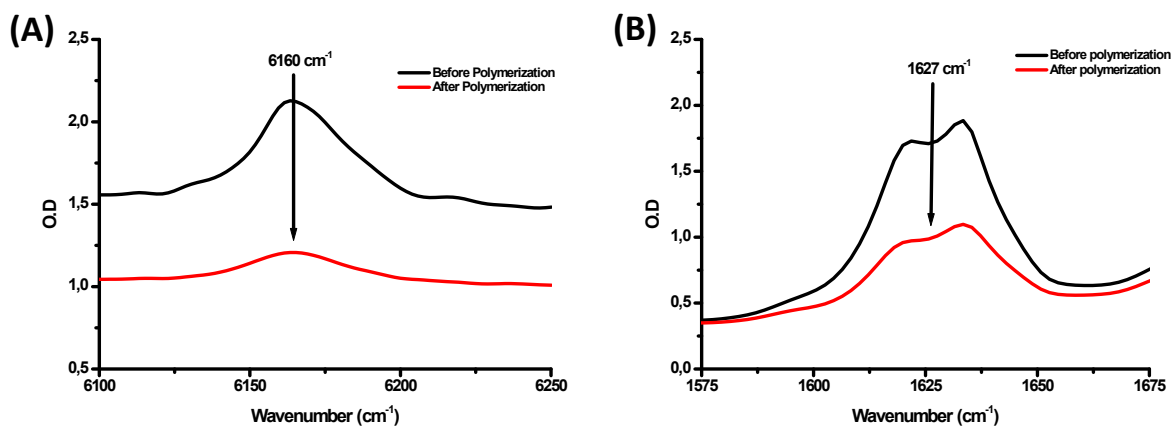


Figure S9. (A) IR spectra recorded before and after polymerization when using ITX\Cu2 (1%\1% w\w) system in TMPTA for thick sample, upon exposure to LED light $\lambda=405$ nm. (B) IR spectra recorded before and after polymerization when using ITX\Cu2 (1%\1% w\w) system in TMPTA for thin sample, upon exposure to LED light ($\lambda=405$ nm).

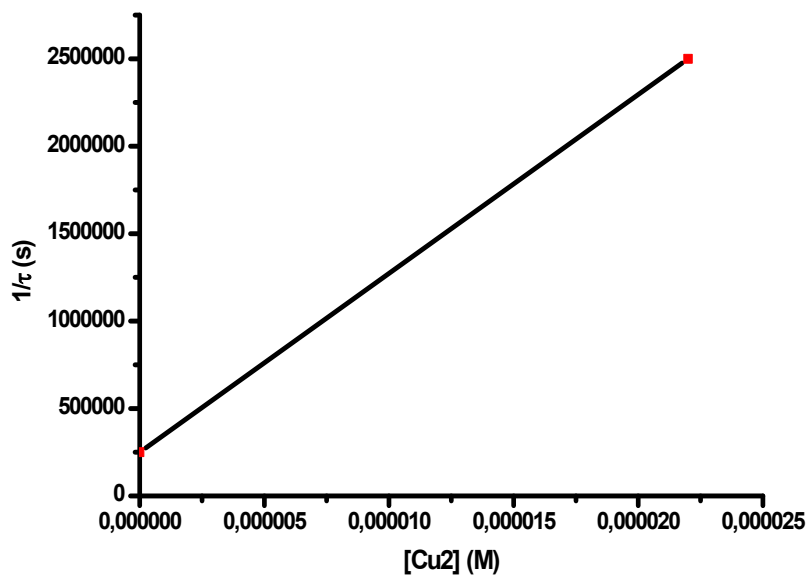


Figure S10. Determination of the Stern Volmer quenching data.

Table S1. G' and G'' for TMPTA based polymer (from Figure 9).

	G' (MPa)	G'' (MPa)
ITX/EDB	395	7.9
ITX/ Cu2	304	8.5