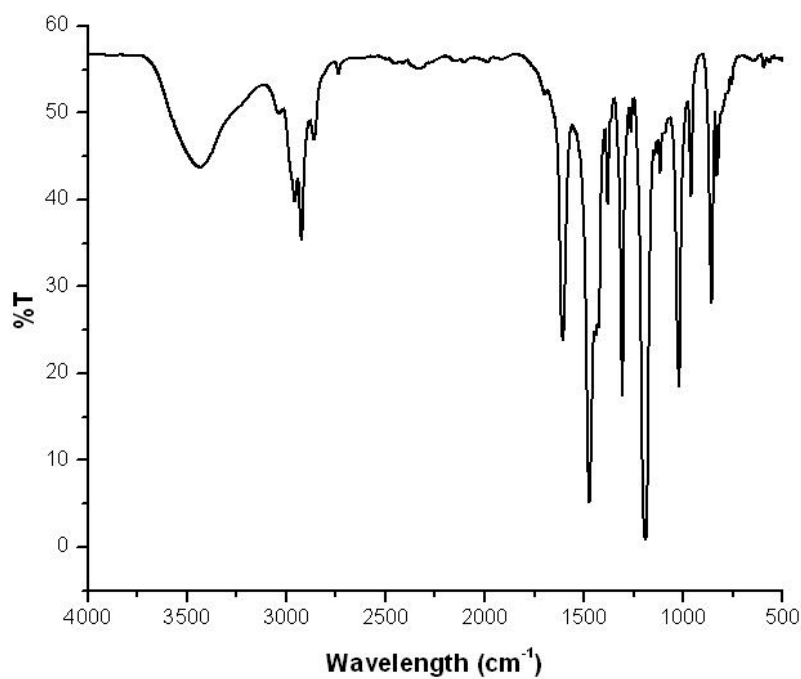


**Figure1. FTIR spectra of PPE (KBr) obtained by using  $[\text{Cu}(\text{bdmpp})(\text{dppi-H})]_2(\text{dppi})_2$  as catalyst.**



**Figure2. FTIR spectra of PPE (KBr) obtained using  $[\text{Cu}(\text{bdmpp})(\text{ppi})]_2$  as catalyst.**

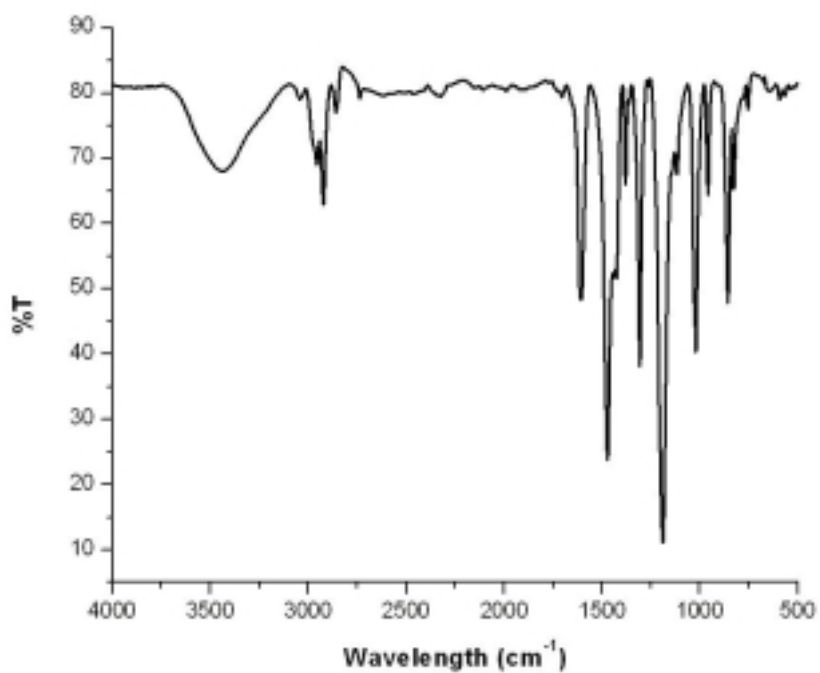


Figure3. FTIR spectra of PPE (KBr) obtained using  $\text{Cu}(\text{dtbp})_2(\text{imz})_4$  as catalyst.

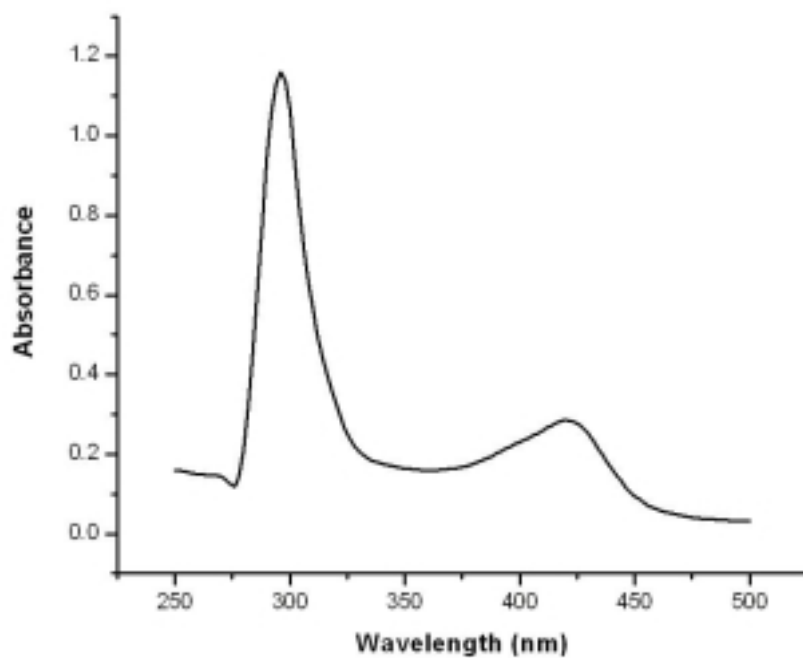


Figure4. UV-visible spectra of polymerization reaction mixture at the end of the reaction using  $[\text{Cu}(\text{bdmpp})(\text{ppi})]_2$  as the catalyst.

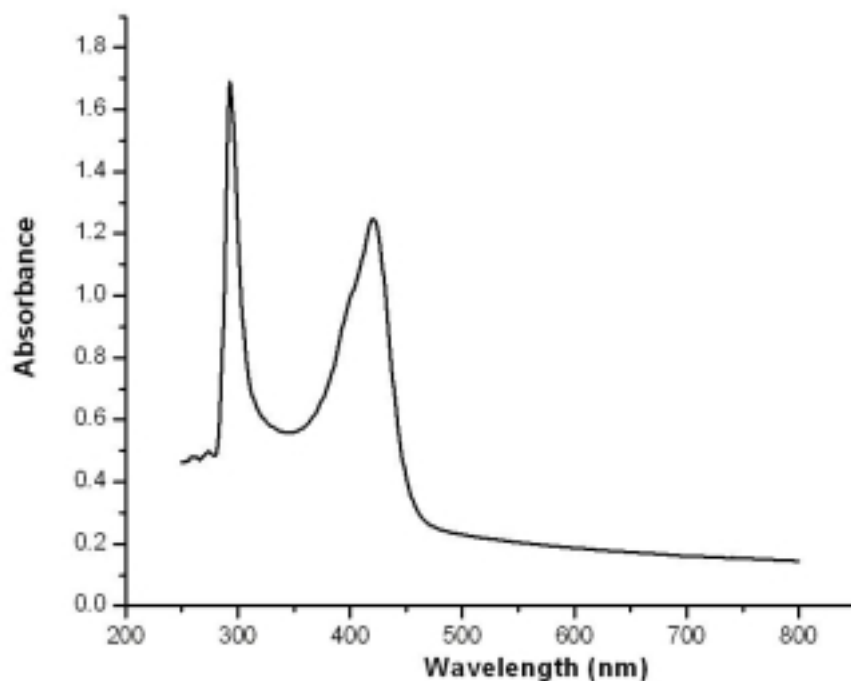


Figure5. UV-visible spectra of polymerization reaction mixture at the end of the reaction using  $[\text{Cu}(\text{bdmpp})(\text{dppi-H})]_2(\text{dppi})_2$  as the catalyst.

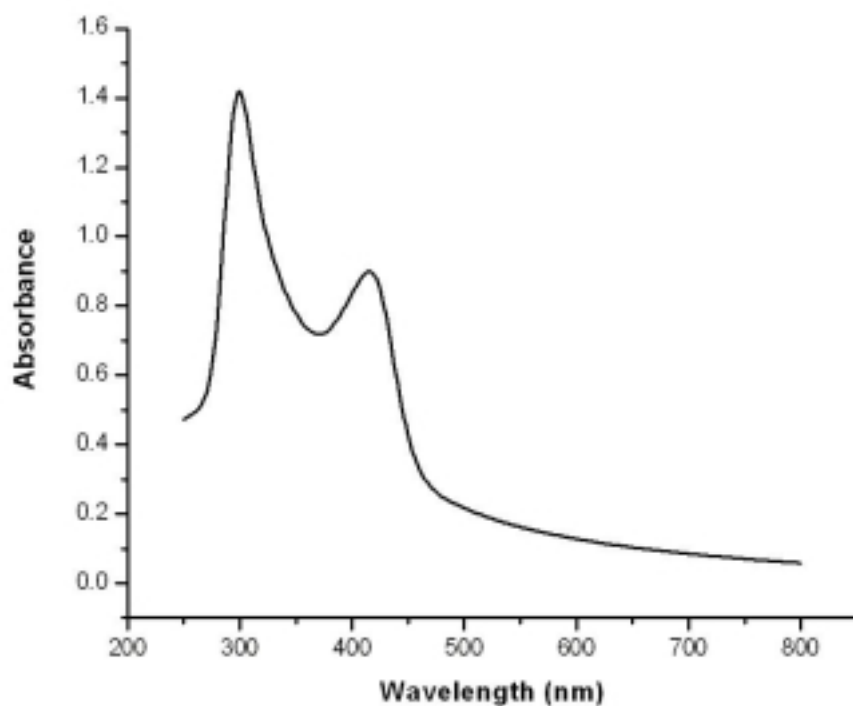


Figure6. UV-visible spectra of polymerization reaction mixture at the end of the reaction using  $\text{Cu}(\text{dtbp})_2(\text{imz})_4$  as the catalyst.

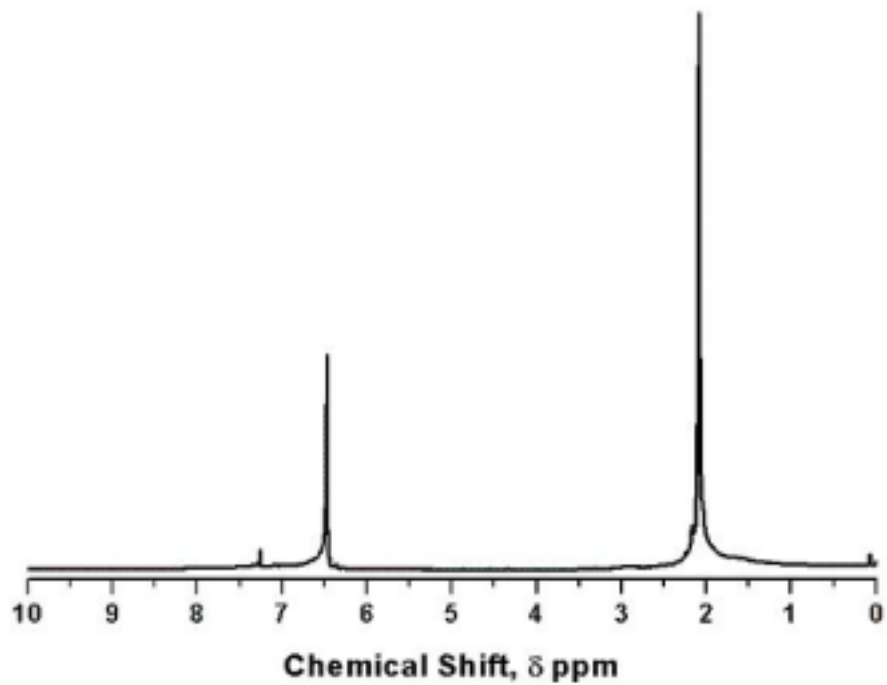


Figure7. <sup>1</sup>H NMR of PPE obtained using [Cu(bdmpp)(dppi-H)]<sub>2</sub>(dppi)<sub>2</sub> as the catalyst.

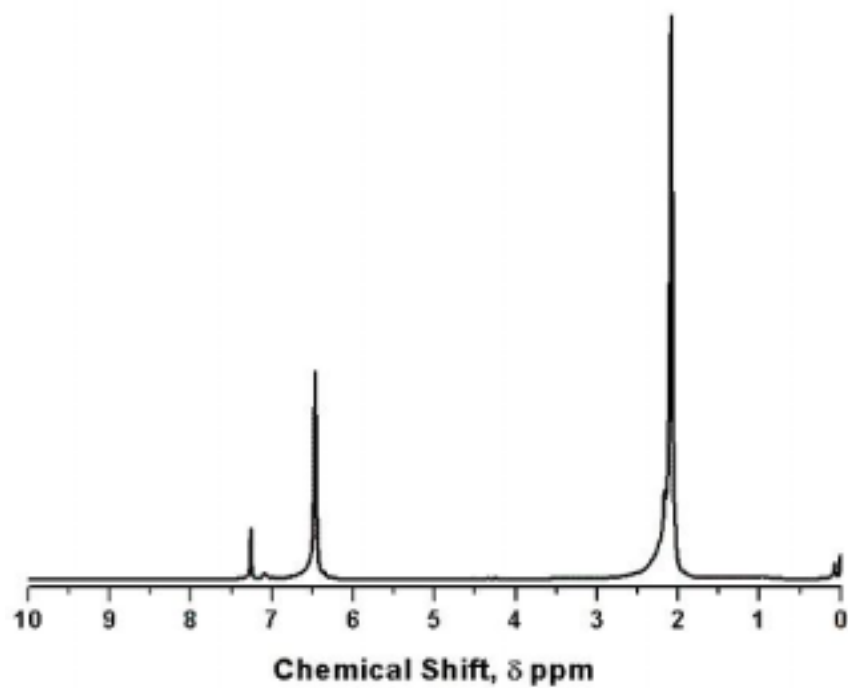
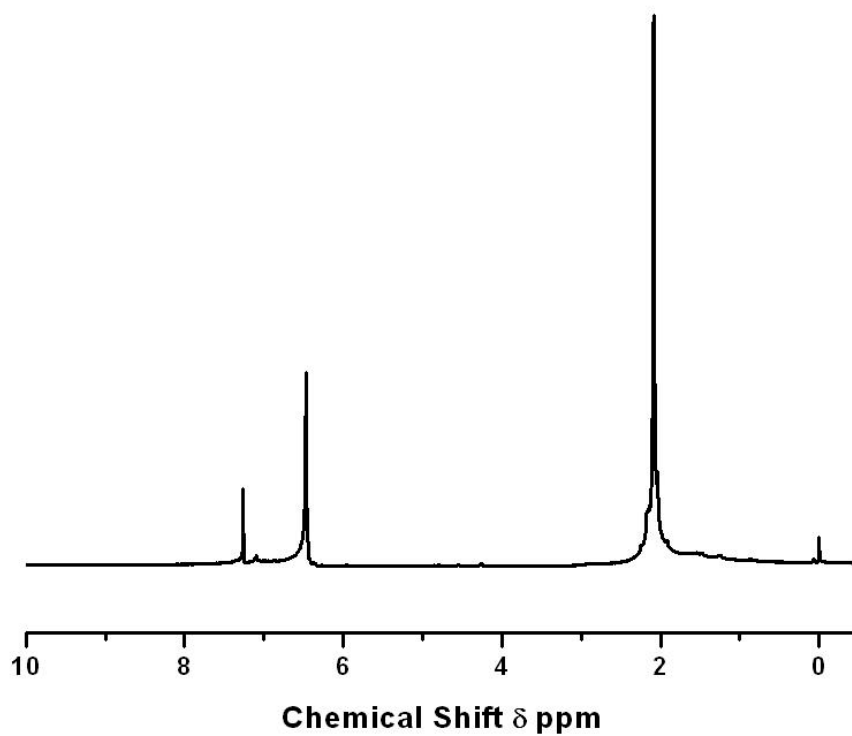
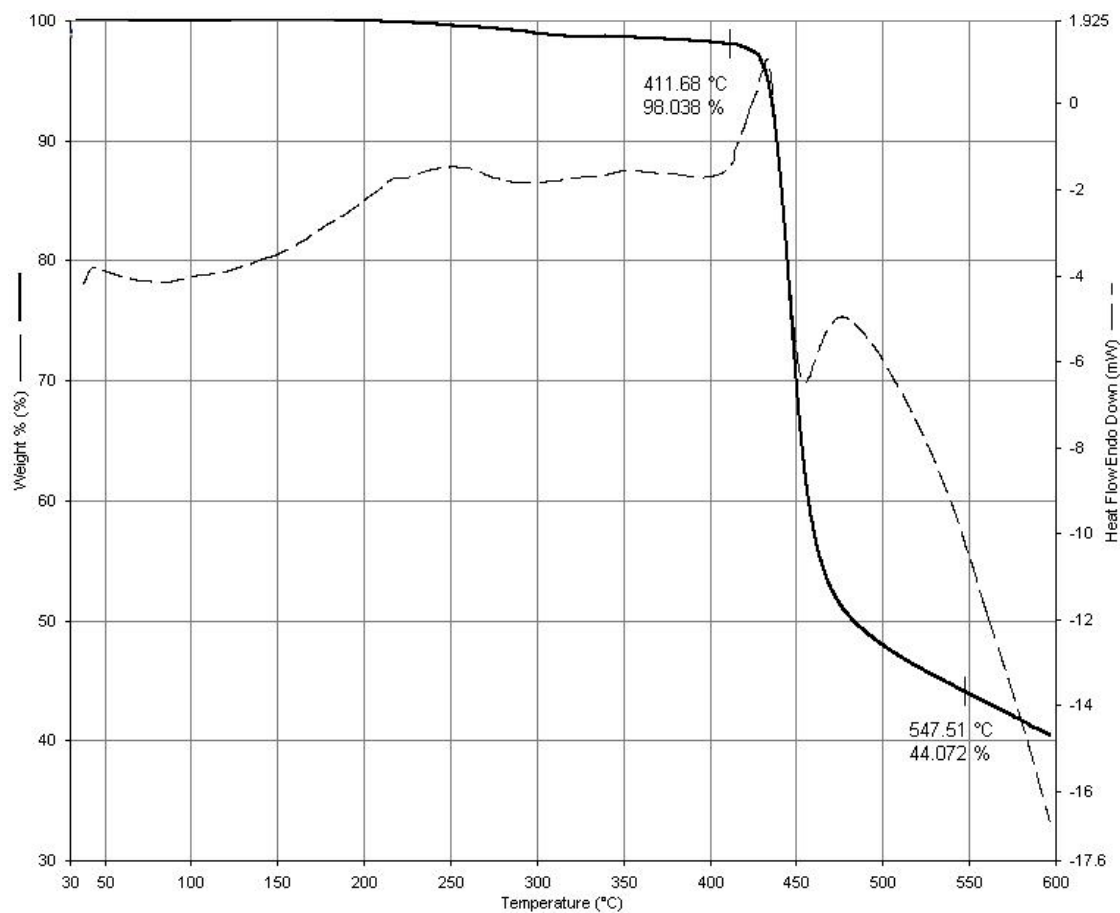


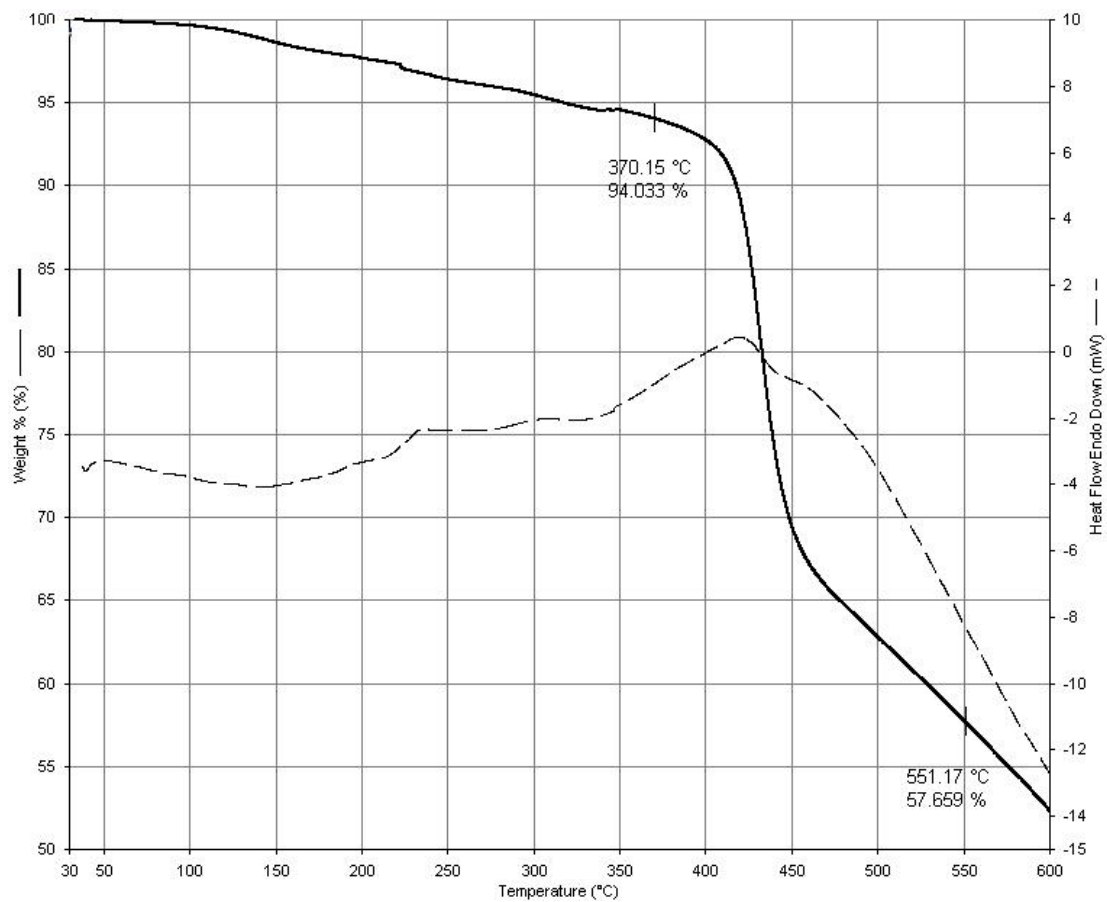
Figure8. <sup>1</sup>H NMR of PPE obtained using [Cu(bdmpp)(ppi)]<sub>2</sub> as the catalyst.



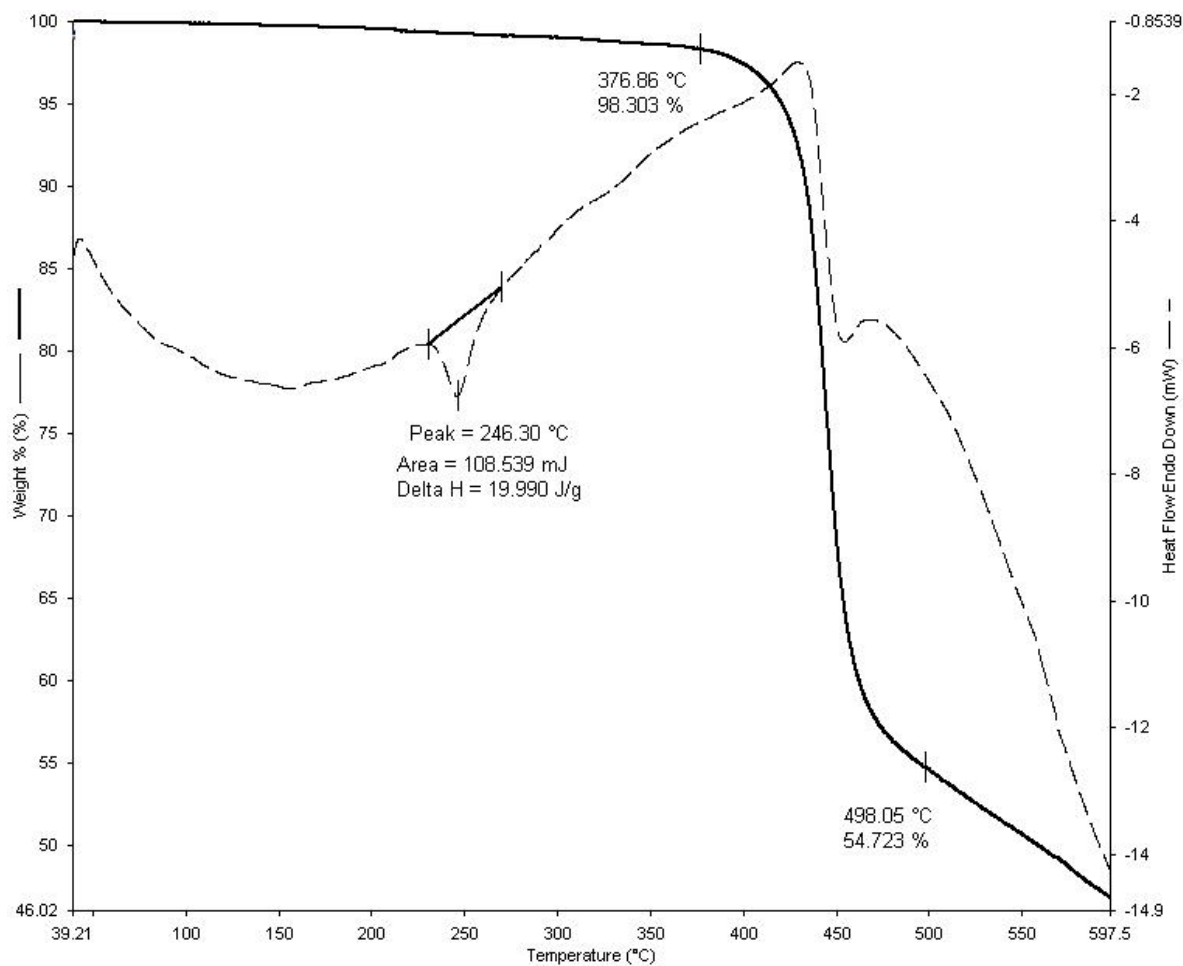
**Figure9.** <sup>1</sup>H NMR of PPE obtained using Cu(dtbp)<sub>2</sub>(imz)<sub>4</sub> as the catalyst.



**Figure10.** TG-DSC diagram of PPE obtained using [Cu(bdmpp)(dppi-H)]<sub>2</sub>(dppi)<sub>2</sub> as catalyst.



**Figure11. TG-DSC diagram of PPE obtained using [Cu(bdmpp)(ppi)]<sub>2</sub> as catalyst.**



**Figure12. TG-DSC diagram of PPE obtained using  $\text{Cu}(\text{dtbp})_2(\text{imz})_4$  as catalyst.**