

Polymer supported Cu(I) catalyst for 'click reaction' in aqueous media

Rafique Ul Islam,^a Abu Taher,^a Meenakshi Choudhary,^a Michael J Witcomb,^b Kaushik Mallick^{a*}

^a Department of Chemistry, University of Johannesburg, P.O. Box 524, Auckland Park 2006, South Africa,

^b DST/NRF Centre of Excellence in Strong Materials, University of the Witwatersrand, Private Bag 3, WITS 2050, South Africa.

* Address correspondence to kaushikm@uj.ac.za

Fig. S1. EDX spectra of Cu(I)-*p*ABA

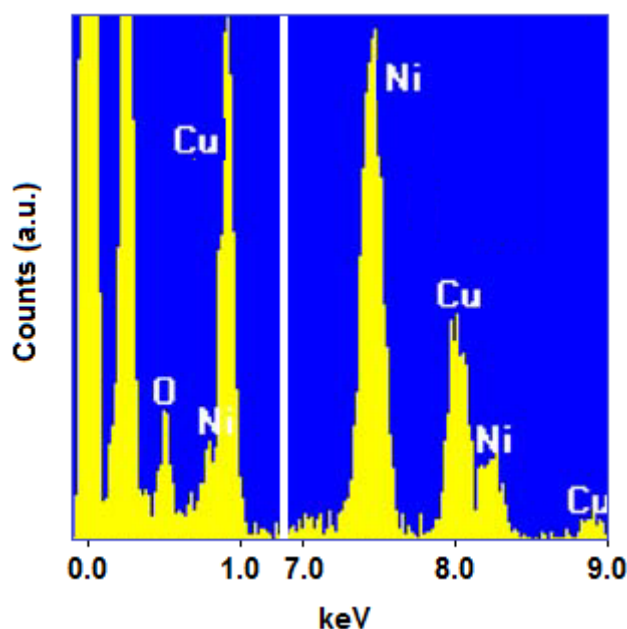


Fig. S2. P-XRD pattern of Cu(I)-*p*ABA

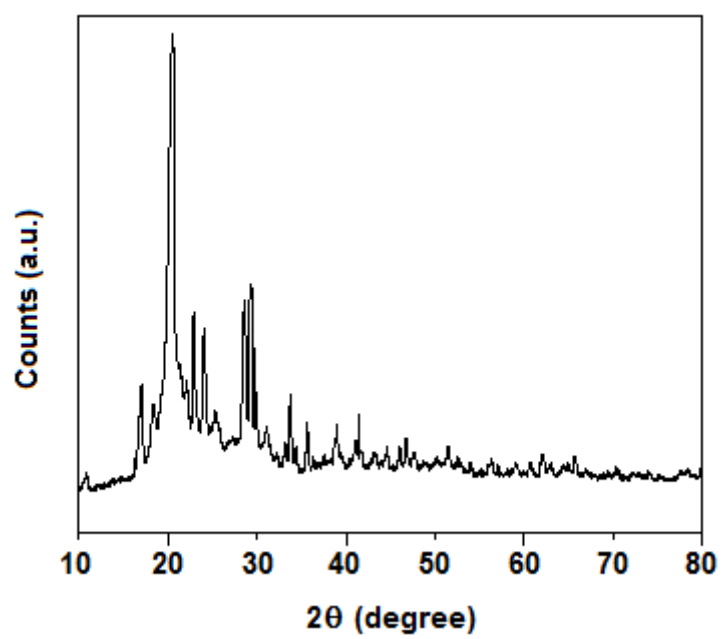
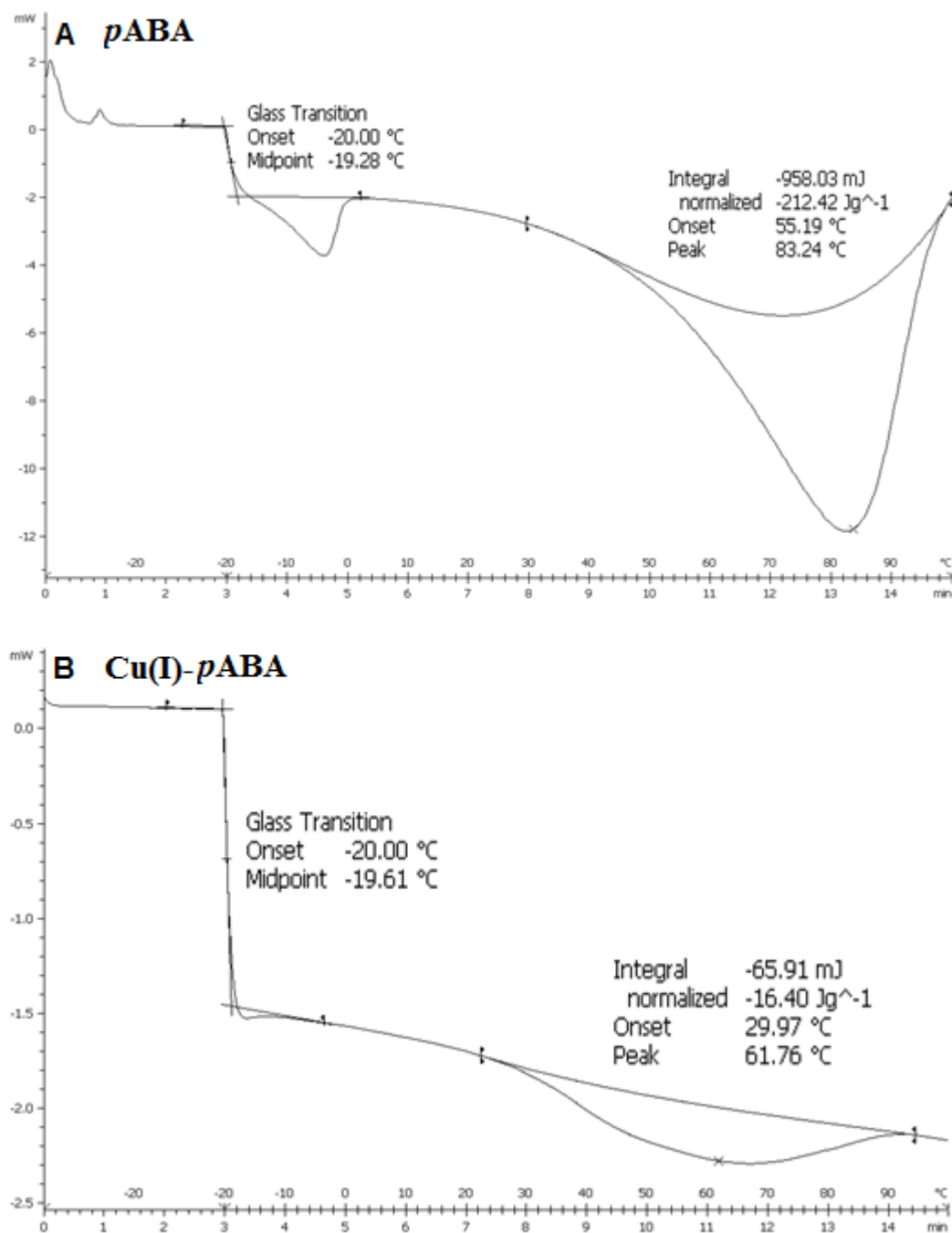


Fig. S3. DSC thermogram of *p*ABA (A) and Cu(I)-*p*ABA (B)



Differential scanning calorimetry (DSC) studies were carried out for the *p*ABA (A) and the Cu(I)-*p*ABA (B) samples maintaining a thermal scan from -20 °C (253.15 K) to +100 °C (373.15 K) in air with a Mettler-Toledo DSC 822 instrument (Fig. S3).

There are two thermal events evident for both the samples. The first event is indicative of a glass transition at $-19.28\text{ }^{\circ}\text{C}$ (253.87 K) and $-19.61\text{ }^{\circ}\text{C}$ (253.54 K) and the second event is indicative of a softening/melting point at $83.24\text{ }^{\circ}\text{C}$ (356.39 K) and $61.76\text{ }^{\circ}\text{C}$ (334.91 K) for *p*ABA and the Cu(I)-*p*ABA respectively. From the DSC thermogram it is clear that the presence of copper reduces the degree of polymer softening process in Cu(I)-*p*ABA sample.