

**Photocatalytic evaluation of CuO and ZnO crystallites synthesized hydrothermally using binary Eugenol /iso-eugenol mixtures. Isomer effect on capping propensity of biogenic agents**

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**Supplementary Data:**

**Fig.S1:** SEM micrographs of CuO and ZnO series materials

**Fig.S2:** Particle size distribution plots of CuO series and ZnO series materials

**Fig. S3:** Absorption spectra of CuO and ZnO series materials

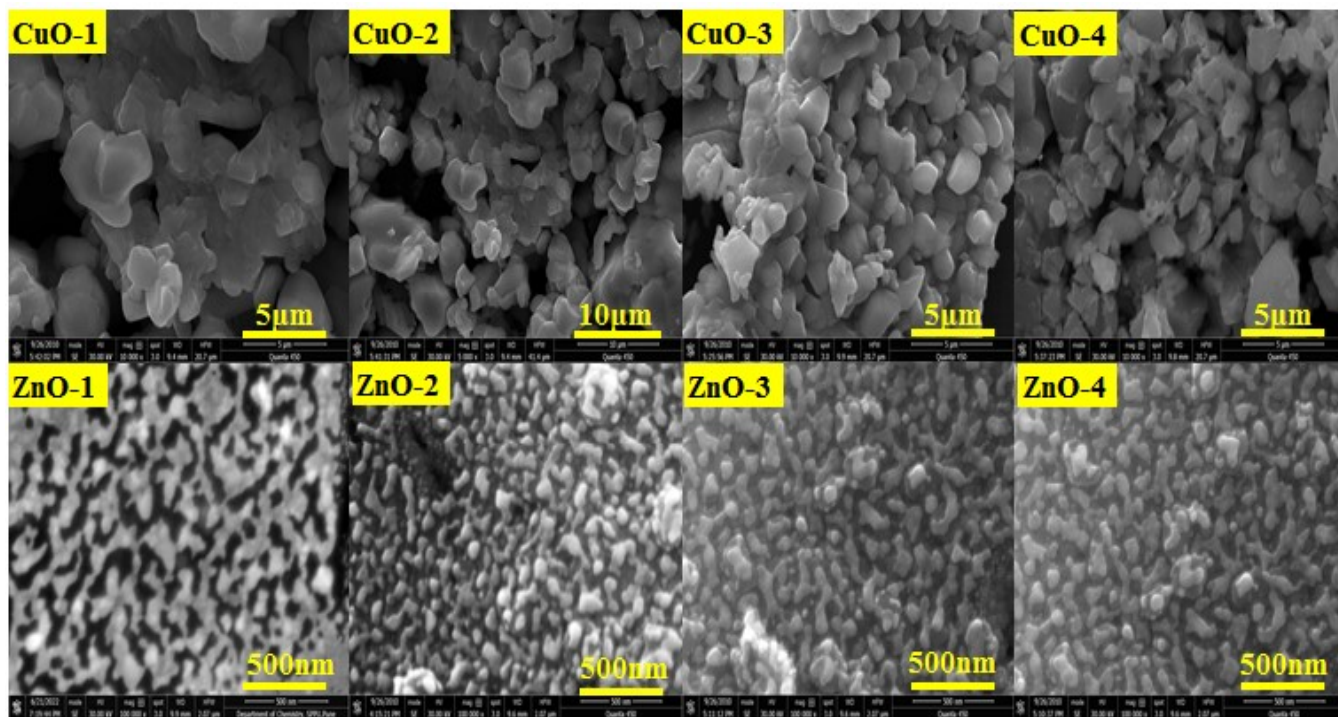
**Figure S4:** Tauc plots of CuO and ZnO series photocatalysts

**Figure S5:** Degradation plots of M.B, PAN,C.V and DCP-IP using CuO series photocatalysts

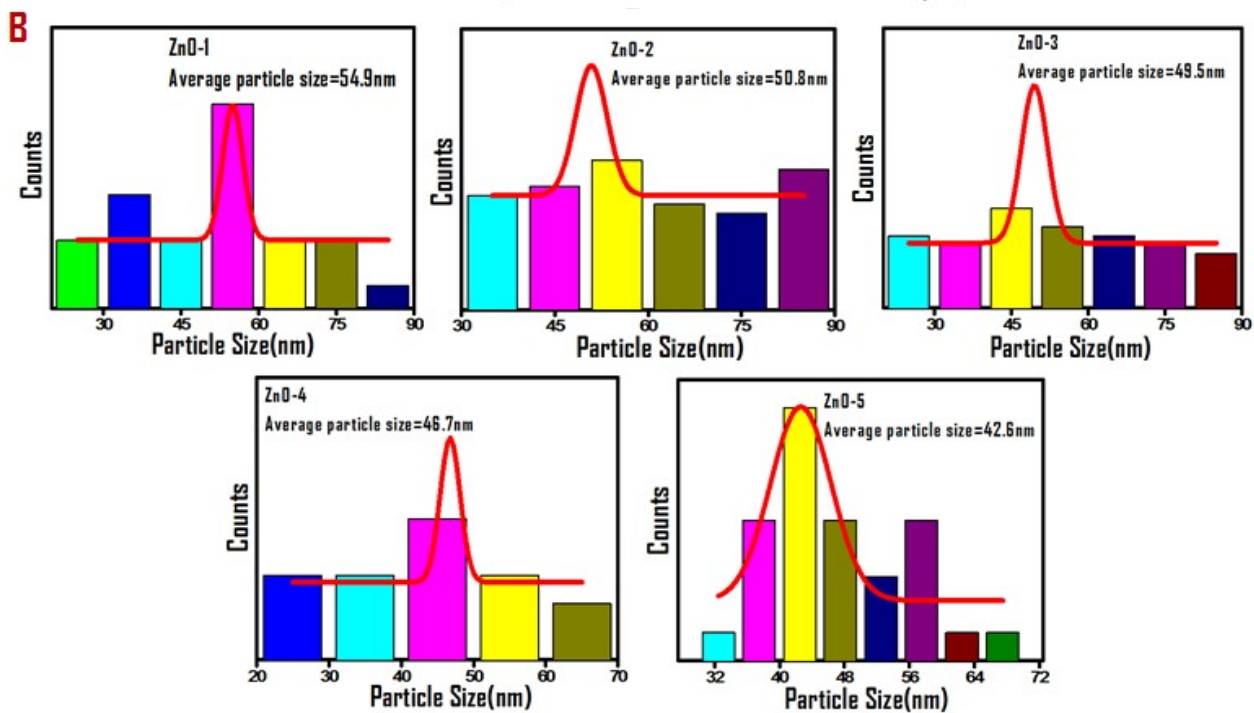
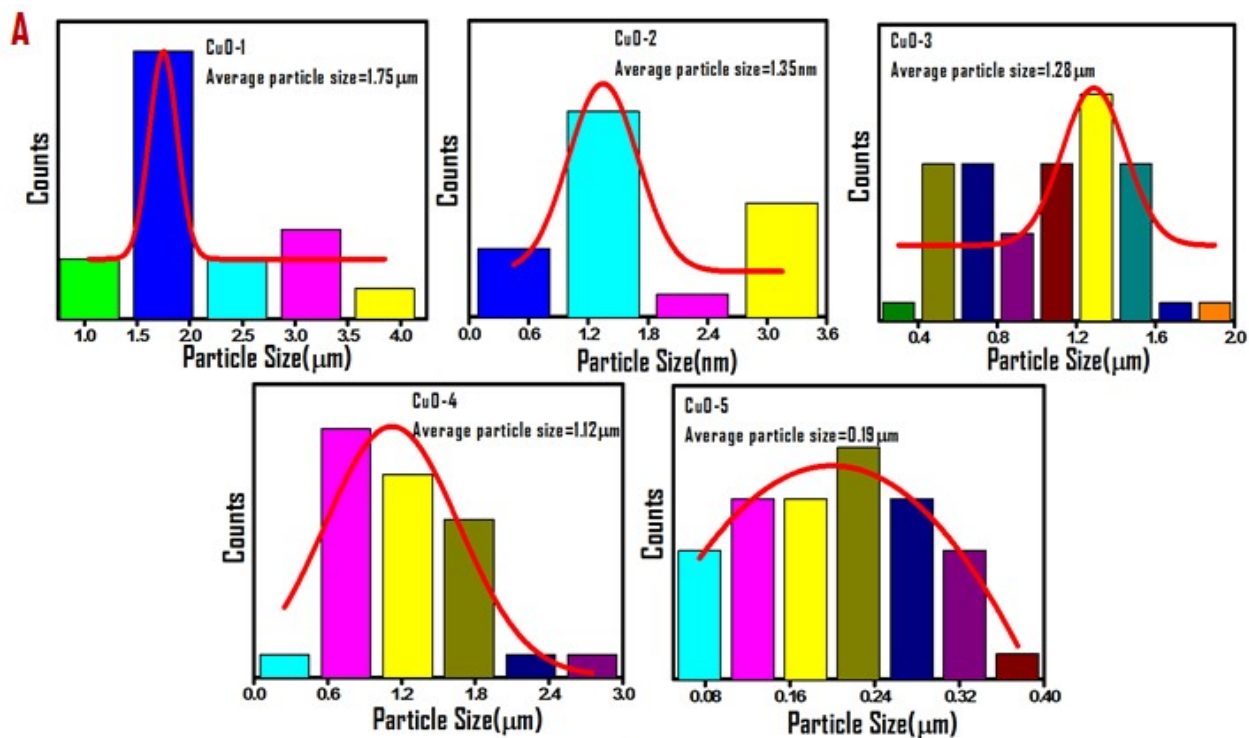
**Figure S6:** Degradation plots of M.B, PAN,C.V and DCP-IP using ZnO series photocatalysts

**Figure S7:** Kinetic plots for NBT degradation

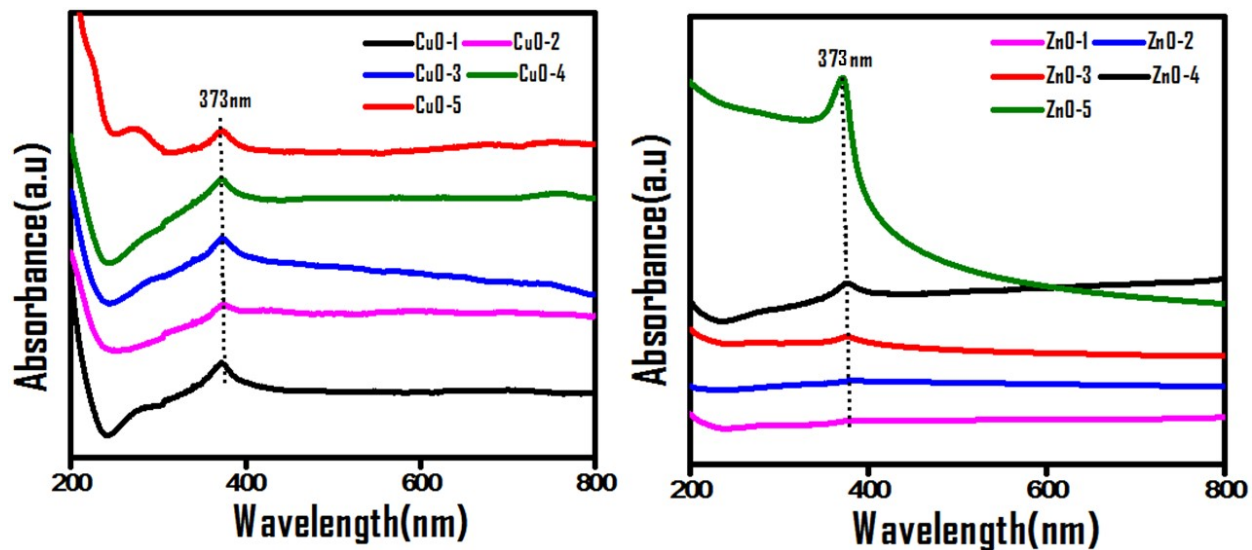
**Fig.S8** FTIR spectra depicting oxidation of benzaldehyde using CuO-5 and ZnO-5 catalysts



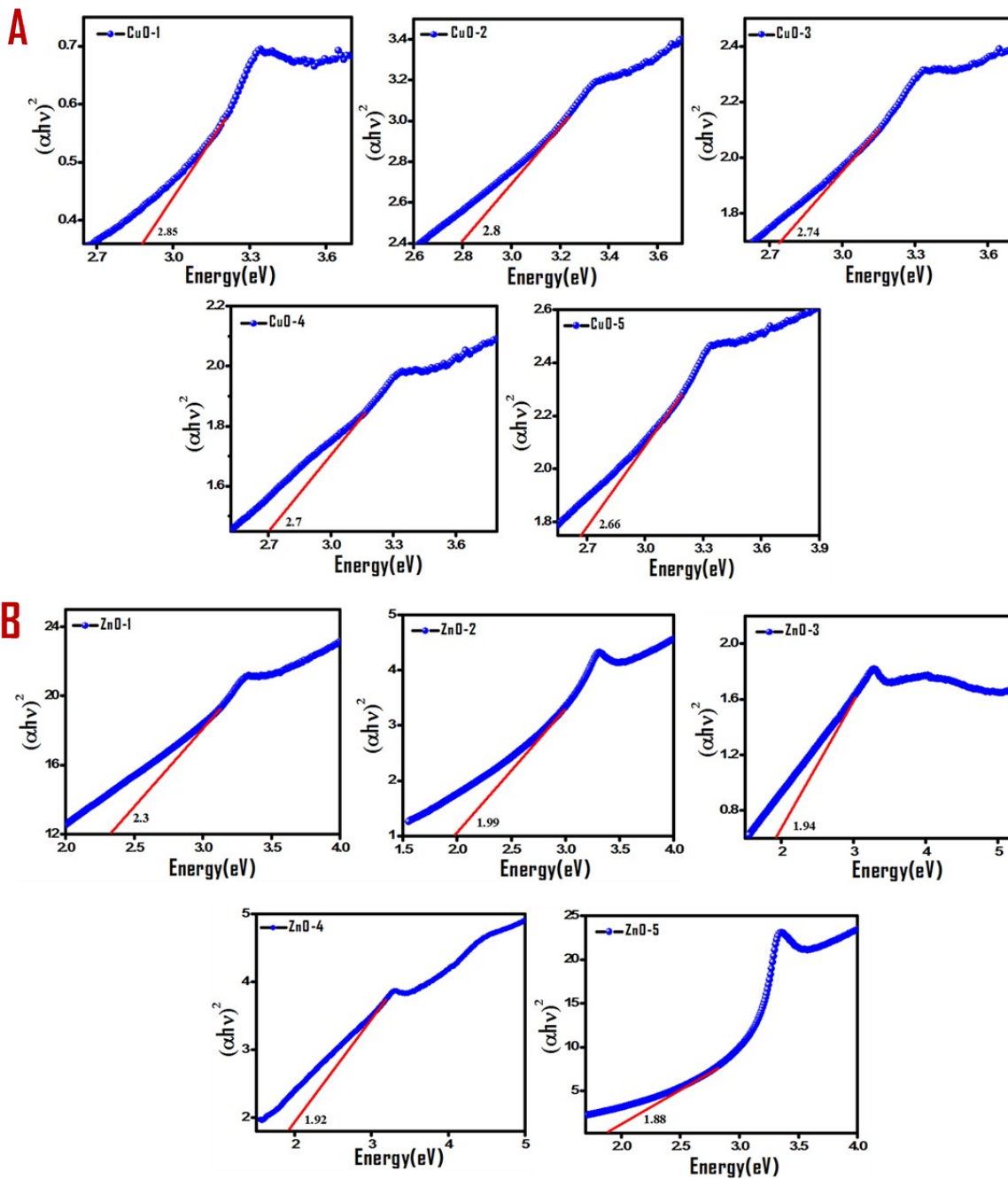
**Fig.S1** SEM micrographs of CuO and ZnO series materials depicting fine granular and peanut shaped morphology of CuO and ZnO crystallites using different binary EIM mixtures.



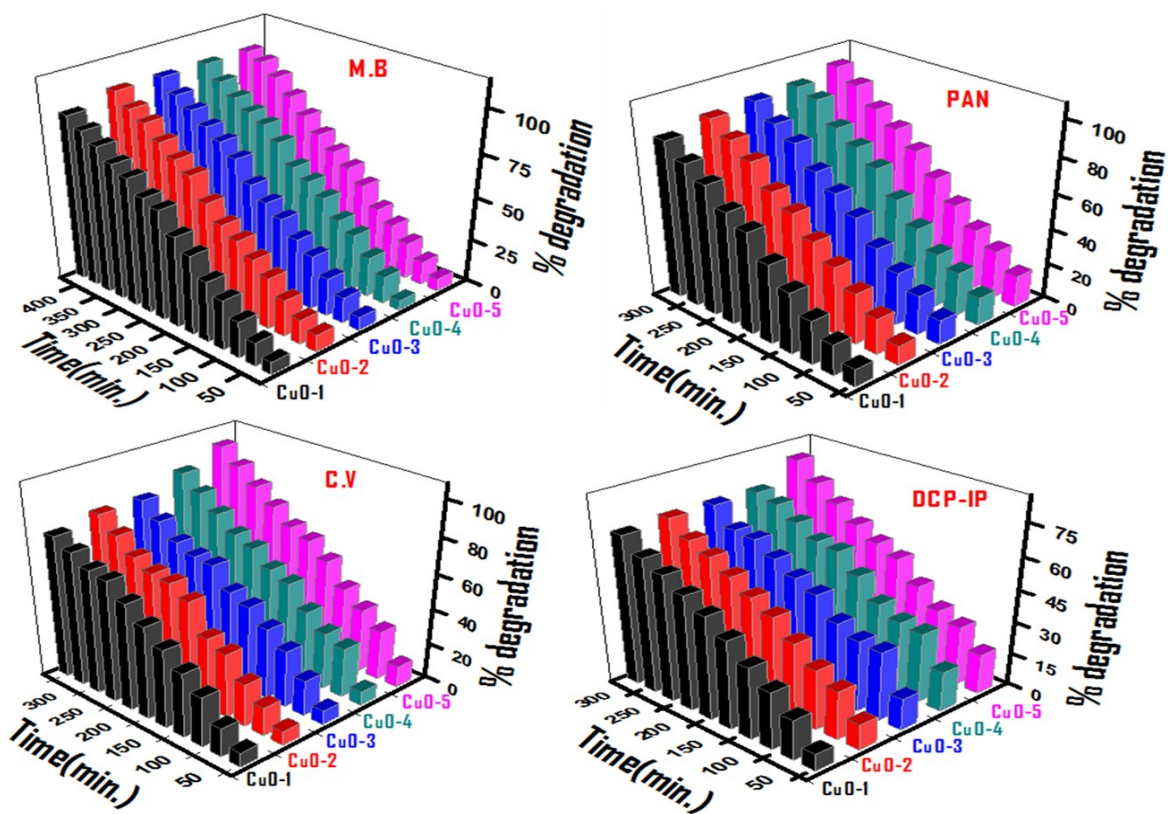
**Fig.S2** Particle size distribution plots of: (A) CuO series (B) ZnO series materials synthesized using different binary EIM mixtures (1,5 represent pure isoeugenol and eugenol respectively) (Gaussian curve fitting red line).



**Fig.S3** Absorption spectra of CuO and ZnO series materials depicting distinctive peak at 373nm corresponding to CuO and ZnO (1,5 represent pure isoeugenol and eugenol respectively).



**Fig.S4** Tauc plots for calculating energy band gaps of (A) CuO series photocatalysts and (B) ZnO series photocatalysts (1,5 represent pure isoeugenol and eugenol respectively).



**Fig.S5** Photodegradation rates of M.B, PAN, C.V and DCP-IP dyes in presence of CuO series photocatalysts under natural sunlight (1,5 represent pure isoeugenol and eugenol respectively).

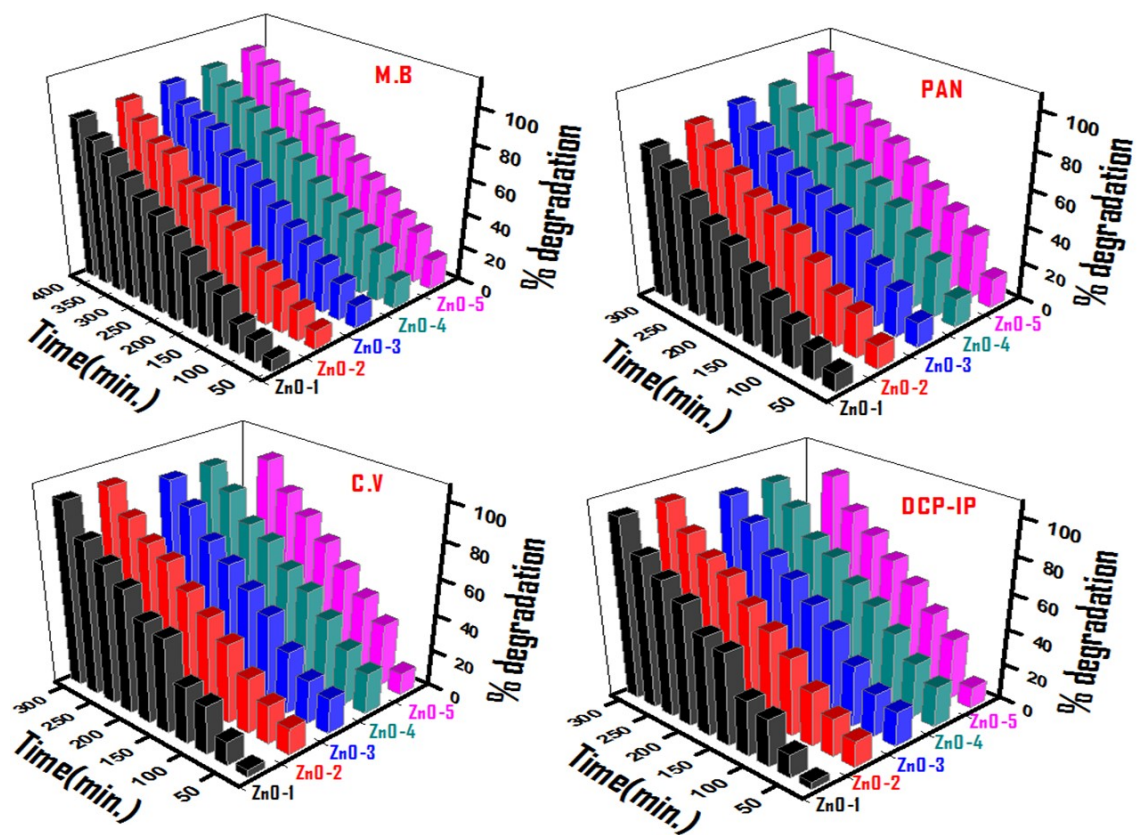


Fig.S6 Photodegradation rates of M.B,PAN,C.V and DCP-IP dyes in presence of ZnO series photocatalysts under natural sunlight (1,5 represent pure isoeugenol and eugenol respectively)

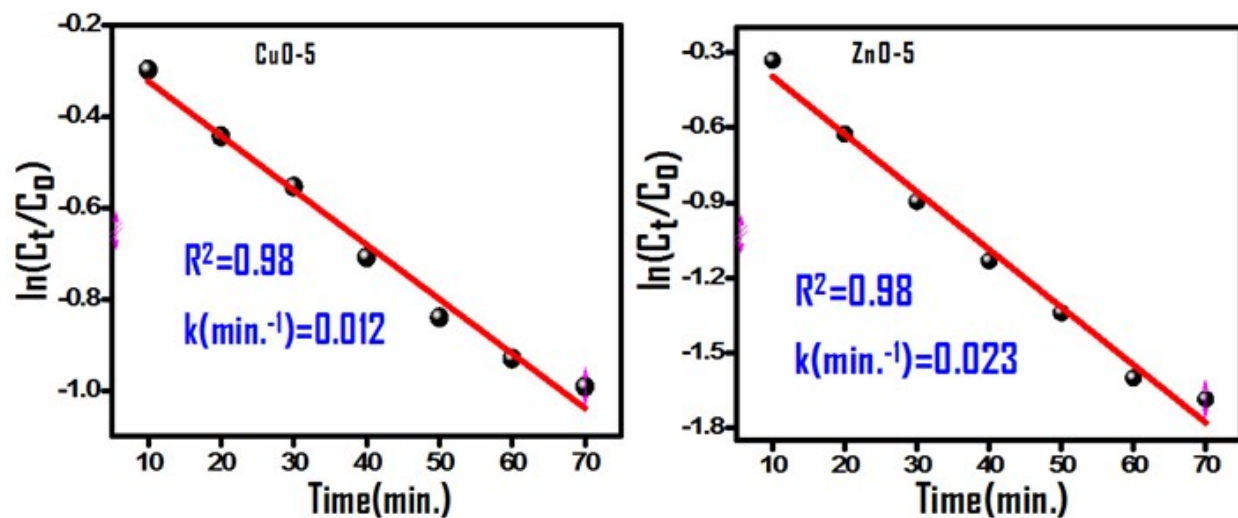


Fig.S7 Pseudo-first order kinetic plots for NBT degradation using CuO-5 and ZnO-5 photocatalysts (5 represents pure eugenol)

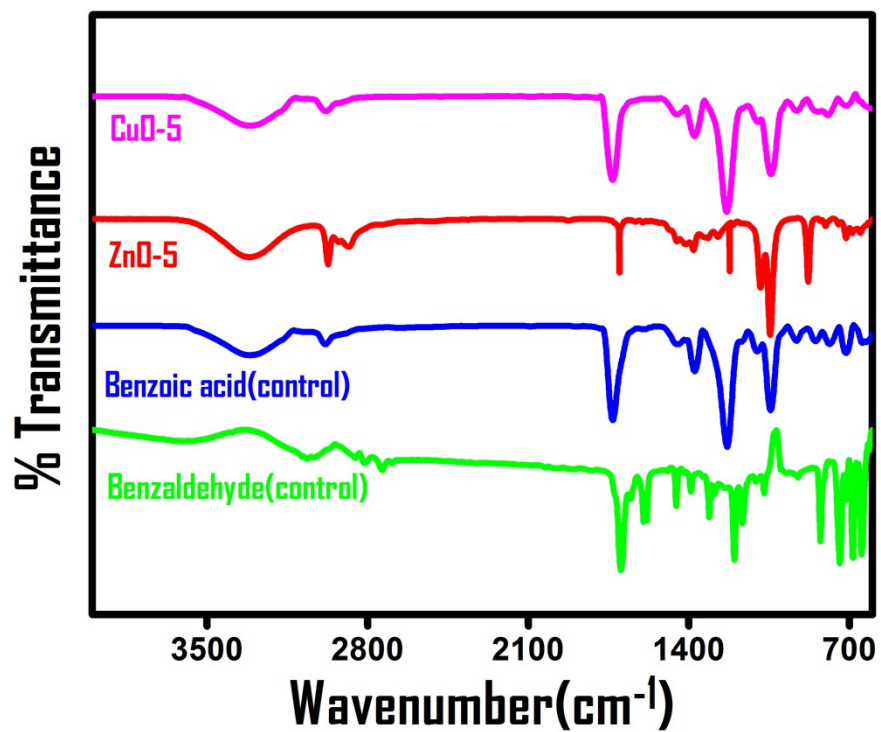


Fig.S8 FTIR spectra depicting oxidation of benzaldehyde to benzoic acid over CuO-5 and ZnO-5 catalyst surfaces (5 represents pure eugenol).