

ESI Material

Binary [Cu₂O/MWCNT] and Ternary [Cu₂O/ZnO/MWCNT] Nanocomposites. Formation, Characterization and Catalytic Performance in Partial Ethanol Oxidation.

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Figure 1 XRD of **[Cu₂O/MWCNT]** composite treated at different temperatures

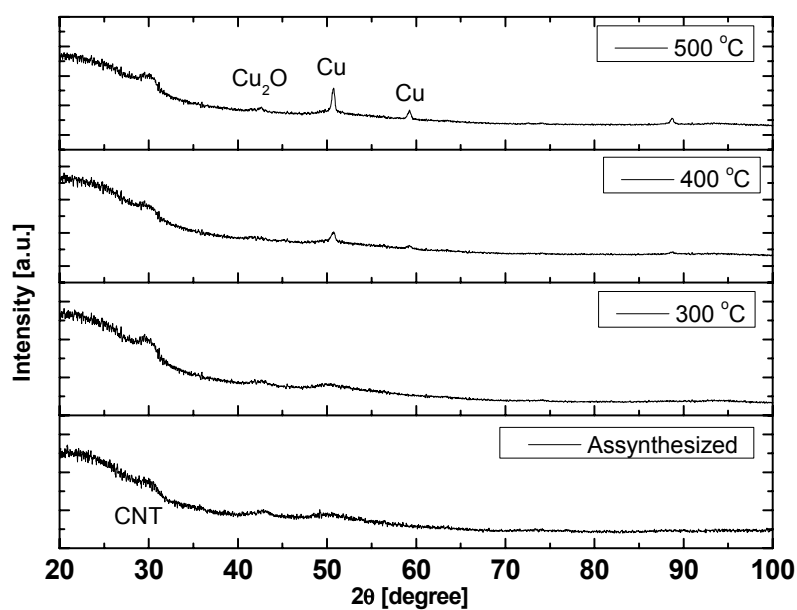


Figure 2 TG of **[Cu₂O/MWCNT]** with different loading and Cu₂O/ZnO/MWCNT composites

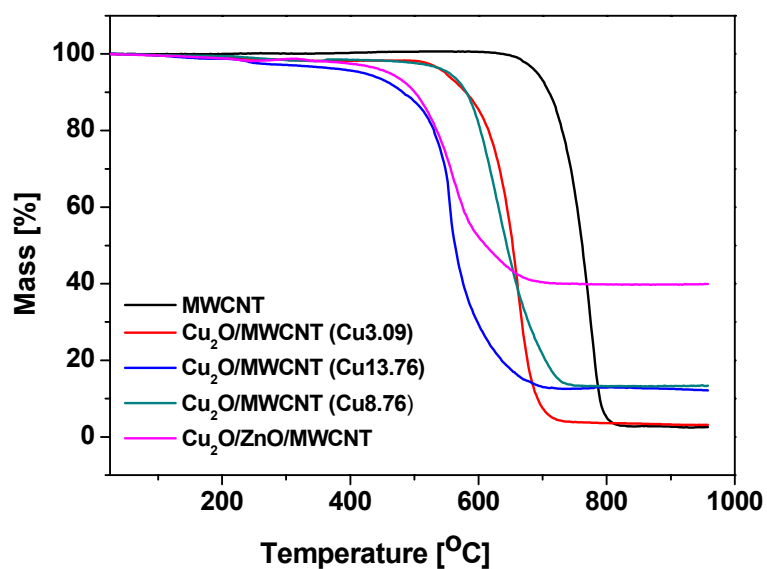
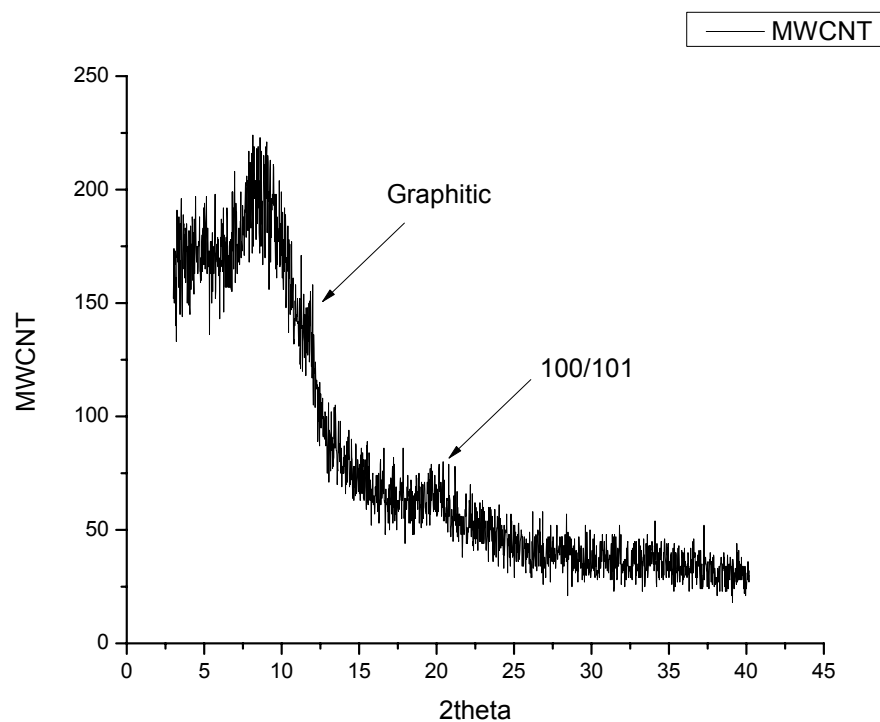


Figure 3a) X-Ray powder diffraction pattern of multiwalled CNTs, (Mo K_{α})

a)



c)

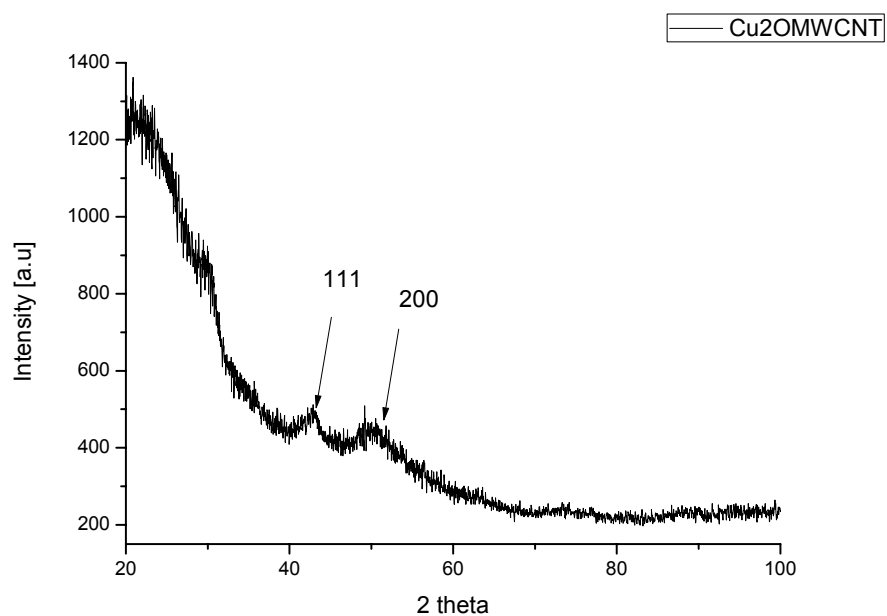


Figure 3 c) X-Ray powder diffraction pattern of [Cu₂O/MWCNT]

d)

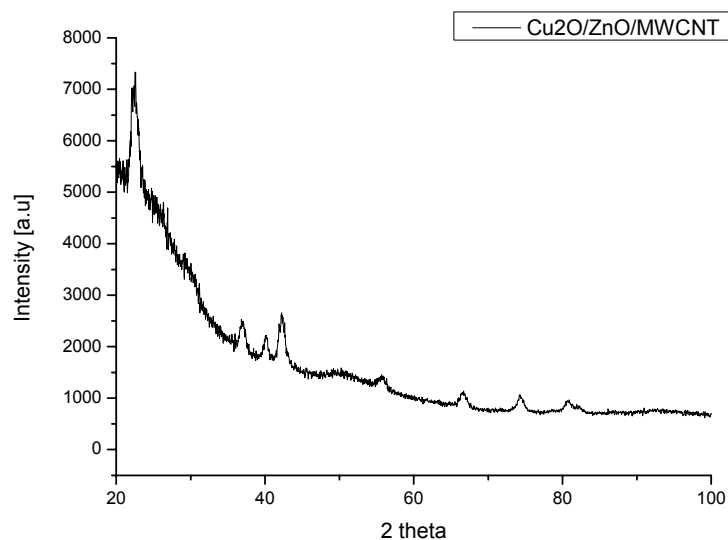
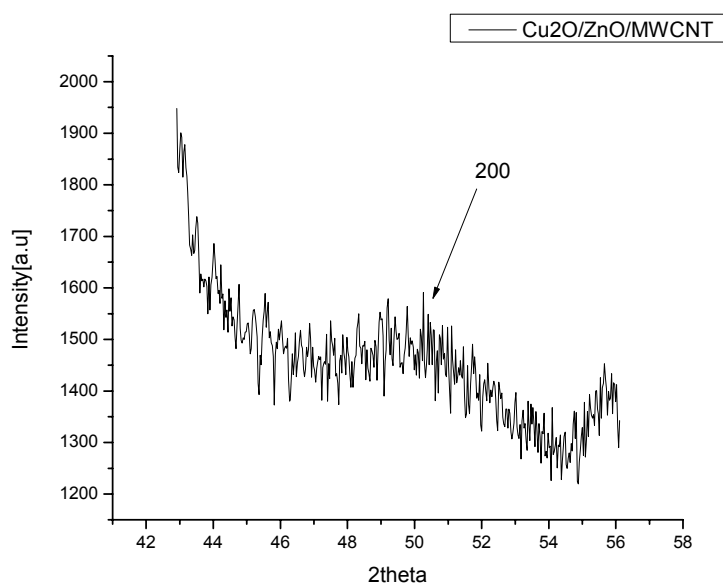


Figure 3d) $[\text{Cu}_2\text{O/ZnO/MWCNT}]$ nanocomposite catalysts, ($^\circ$) ZnO and (#) Cu_2O .

The above XRD pattern (for $[\text{Cu}_2\text{O/ZnO/MWCNT}]$ nanocomposite)has been redrawn in the 2theta region between 42 – 56 deg indicating broad 200 reflex of Cu_2O .



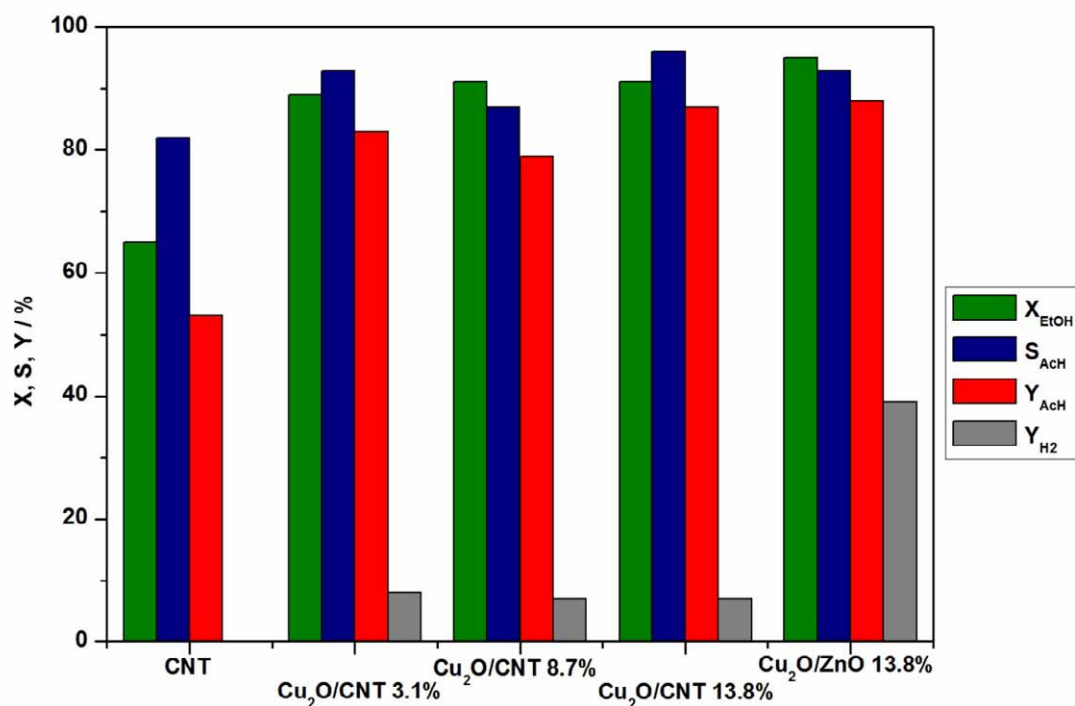


Figure 4 Graphic representation of the results obtained in the partial ethanol oxidation with binary **[$\text{Cu}_2\text{O}/\text{MWCNT}$]** and ternary **[$\text{Cu}_2\text{O}/\text{ZnO}/\text{MWCNT}$]** nanocomposite catalysts. The presentation is a synonymous graphical presentation of table 2 in the main manuscript.