Electronic Supplementary Material (ESI) for Catalysis Science & Technology.

Supporting information

Electron transfer in ZnO-Fe_2O_3 aqueous slurry systems and effects on the visible light photocatalytic activity

H. Lachheb,[a] F. Ajala,[a] A. Hamrouni,[a] A. Houas,[a,c] F. Parrino*[b] and L. Palmisano[b]

a. Unité de Recherche Catalyse et Matériaux pour l'Environnement et les Procédés URCMEP (UR11ES85), Faculté des Sciences de Gabès/Université de Gabès, Campus Universitaire Cité Erriadh, Gabès 6072, Tunisie.

b. "Schiavello-Grillone" Photocatalysis Group, Dipartimento di Energia, Ingegneria dell'Informazione e Modelli Matematici (DEIM), Università di Palermo,Viale delle Scienze, Palermo 90128, Italy.

c. Al Imam Mohammad Ibn Saud Islamic University (IMSIU), College of Sciences, Department of Chemistry, Riyadh 11623, Saudi Arabia.

* **Corresponding author**: francesco.parrino@unipa.it

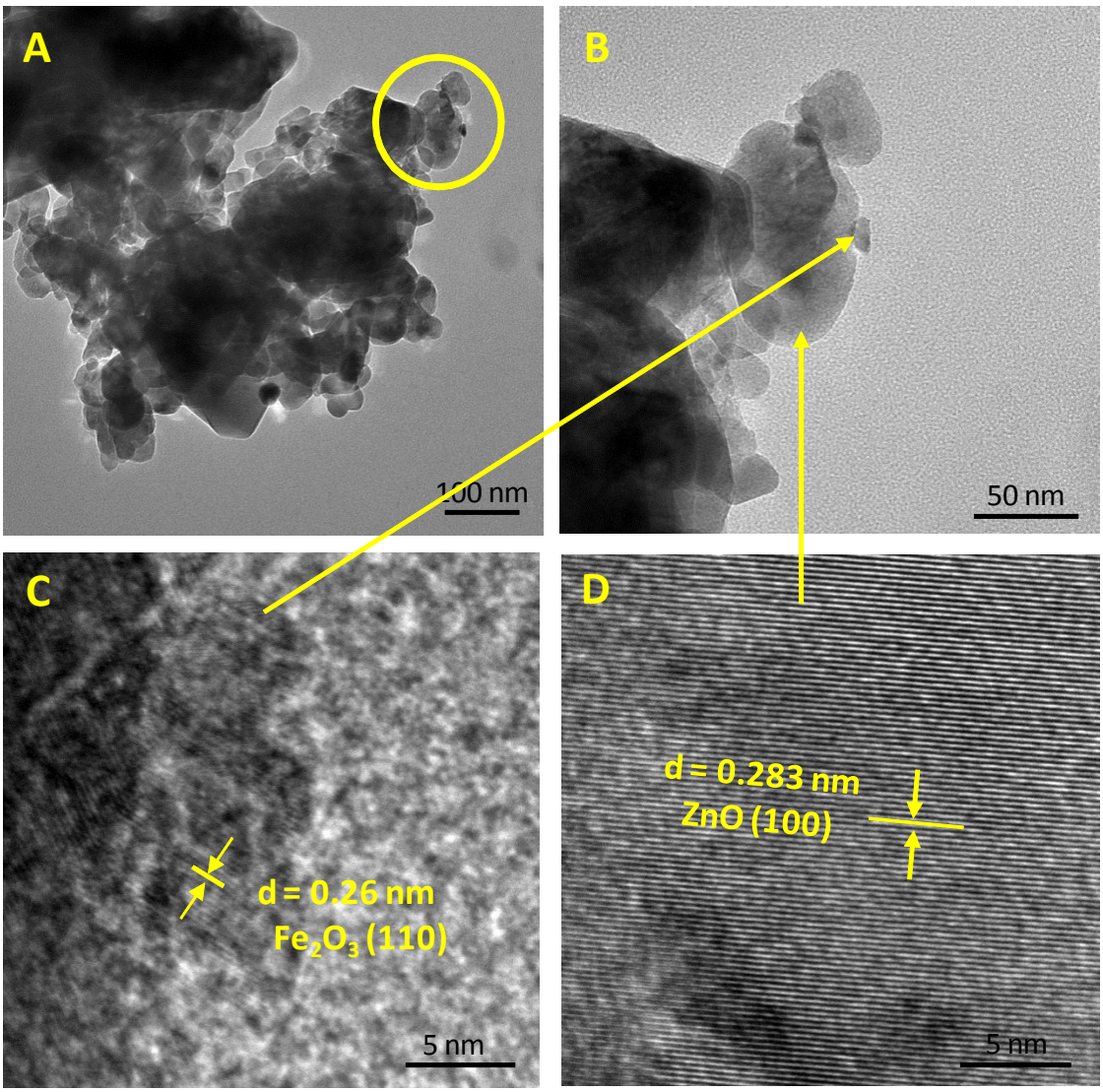

Figure S1: HRTEM images of $ZnFe_{0.1}$ sample.

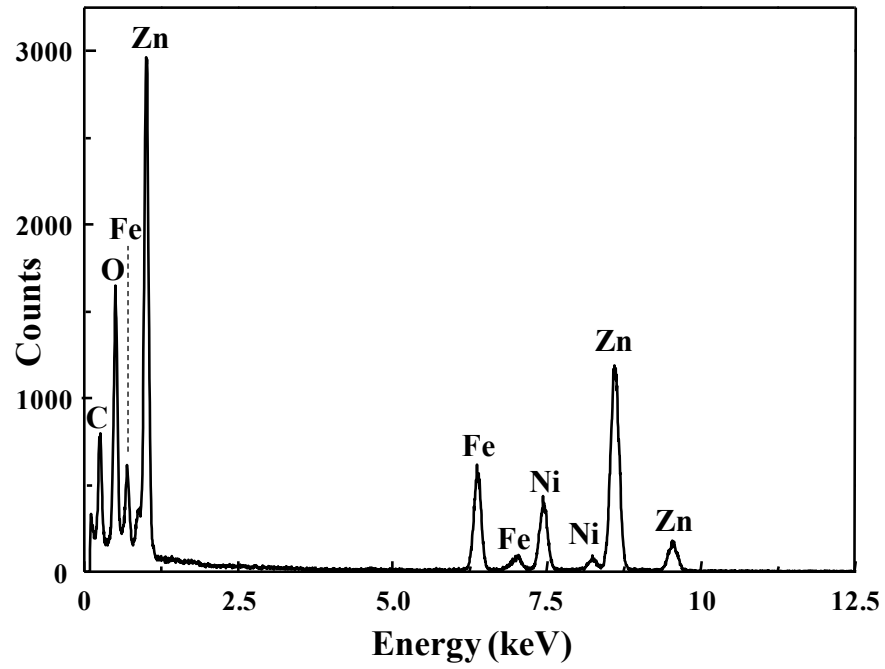

Figure S2: EDS analysis of $ZnFe_{0.1}$ sample.

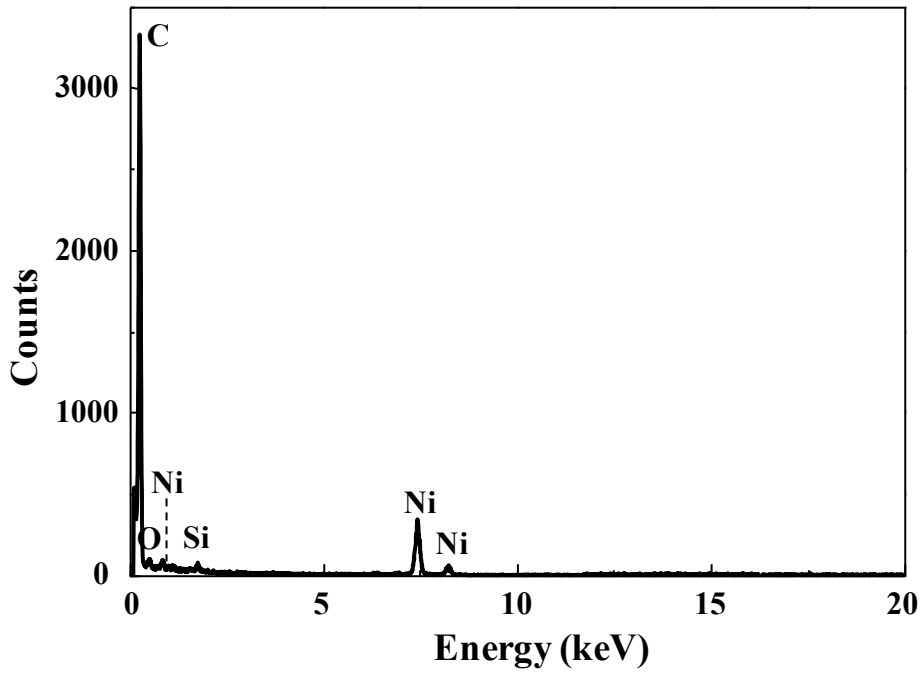

Figure S3: EDS analyses of an empty area.

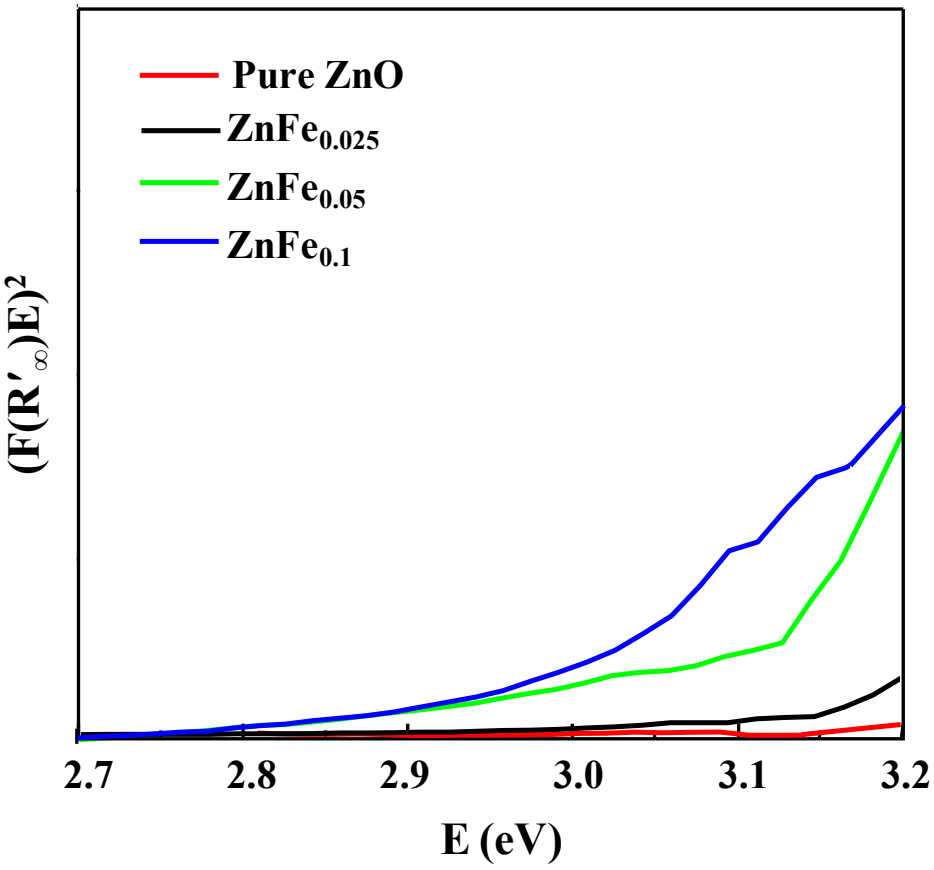

Figure S4: Tauc plot of pure ZnO (red curve), $ZnFe_{0.025}$ (black curve), $ZnFe_{0.05}$ (green curve), and $ZnFe_{0.1}$ (blue curve).