A general, eco-friendly synthesis procedure of self-assembled ZnO-based materials with multifunctional properties

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Electronic supplementary information

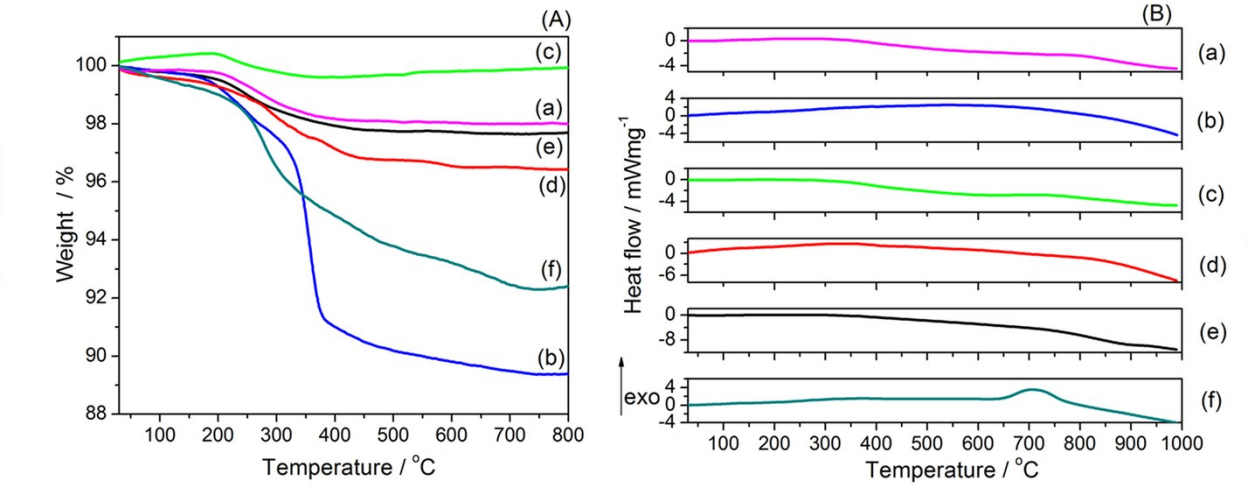


Figure 1. TG (A) and DSC (B) curves of (a) ZnO_S, (b) ZnO_MC, (c) ZnO_G, (d) ZnO_F, (e) ZnO_D, (f) ZnO_ST.

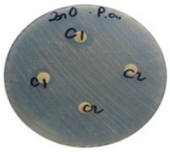
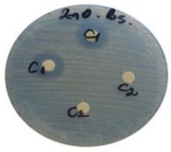
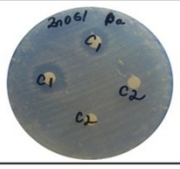
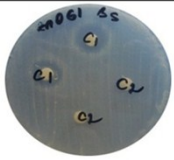
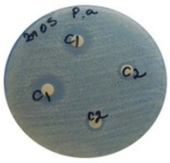
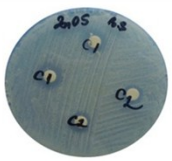
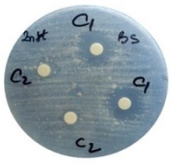
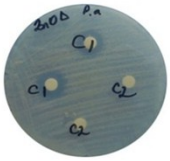
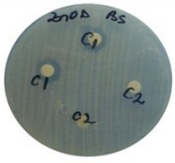
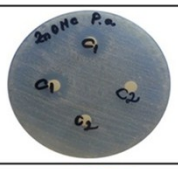
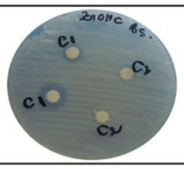
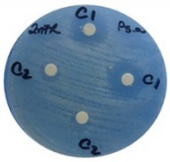
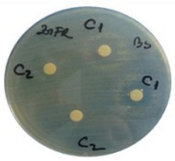
Sample	Pseudomonas acruginosa	Bacillus subtilis
ZnO		
ZnO_G		
ZnO_S		
ZnO_ST		
ZnO_D		
ZnO_MC		
ZnO_F		

Figure 2. Petri plates assays of inhibitory effect of ZnO_SAC composites against bacterial strains (72 hours).

Experimental disc agar diffusion assay

The bacterial strains inoculated on Luria Bertani medium were incubated for 48 hours at 37^{o} C, till the optical density reached 0.140 at 590 nm (OD_{590}) corresponding to 1.95 x 10^{8} CFU/ml. (spectrophotometer BioMate). Subsequently, Petri plates with LB medium were inoculated with freshly prepared bacterial suspension, and sterile paper discs of 6 mm diameter placed on solid medium surface were impregnated with 25 µl of each ZnO_SAC solutions. The plates containing bacterial strains and ZnO based composite were incubated at 25 – 27 ºC, for 72 hours. The diameter of the inhibition zones were measured on two perpendicular directions. The experiments were performed in triplicate under the same conditions.

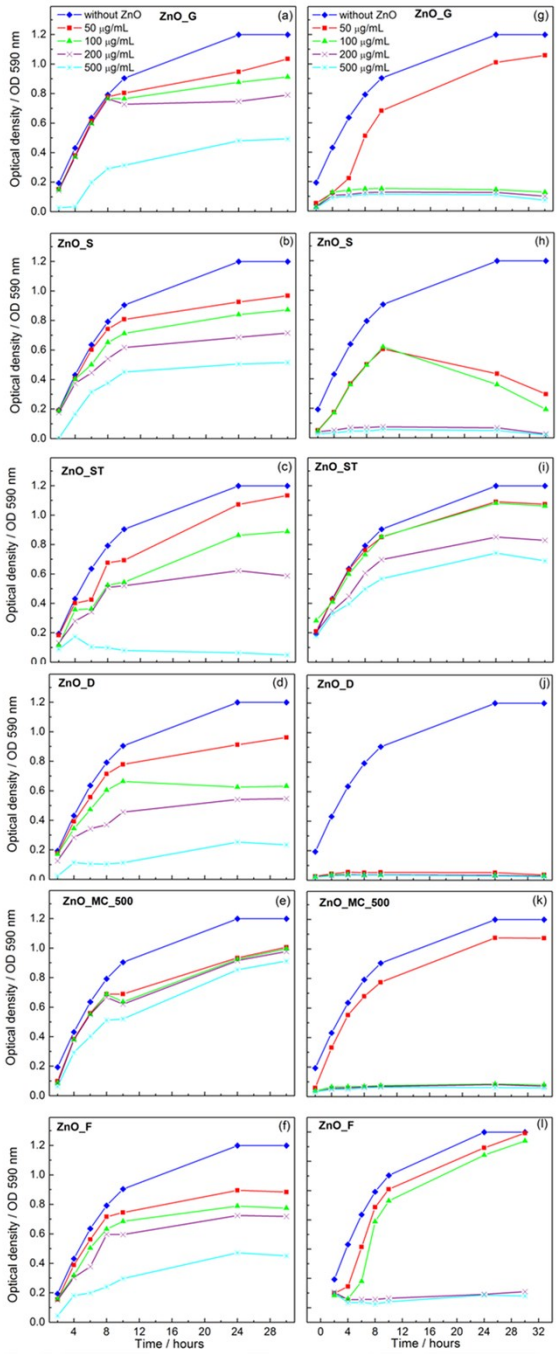


Figure 3. Temporal grow curves of *P. aeruginosa* (a - f) and *B. subtilis* (g - l) in the presence of different concentrations of ZnO_SAC composites.