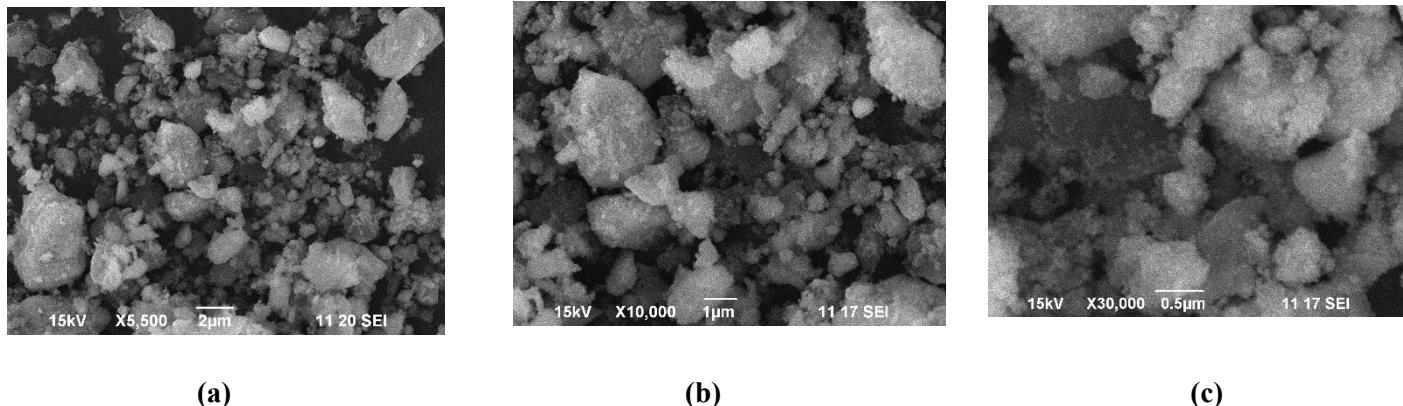
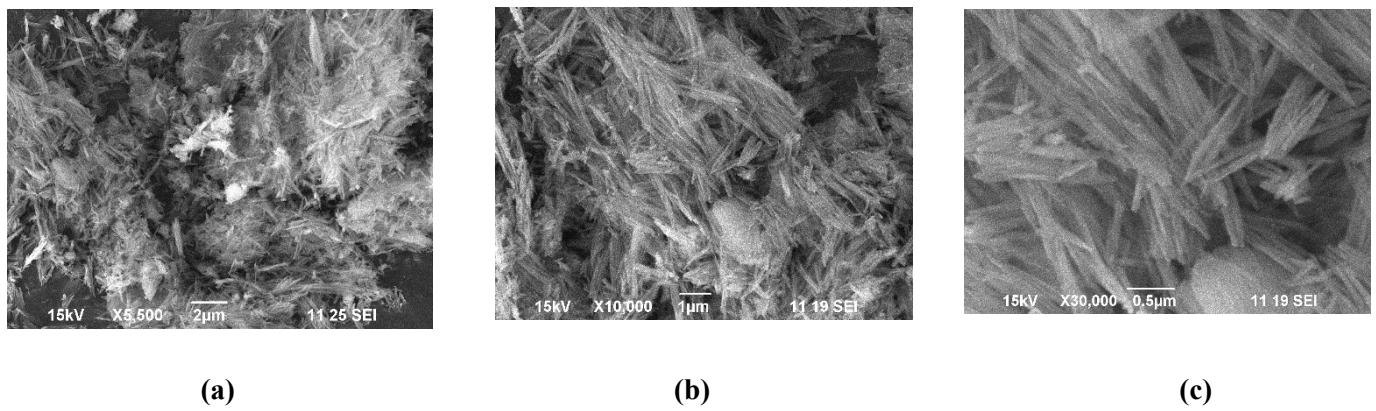


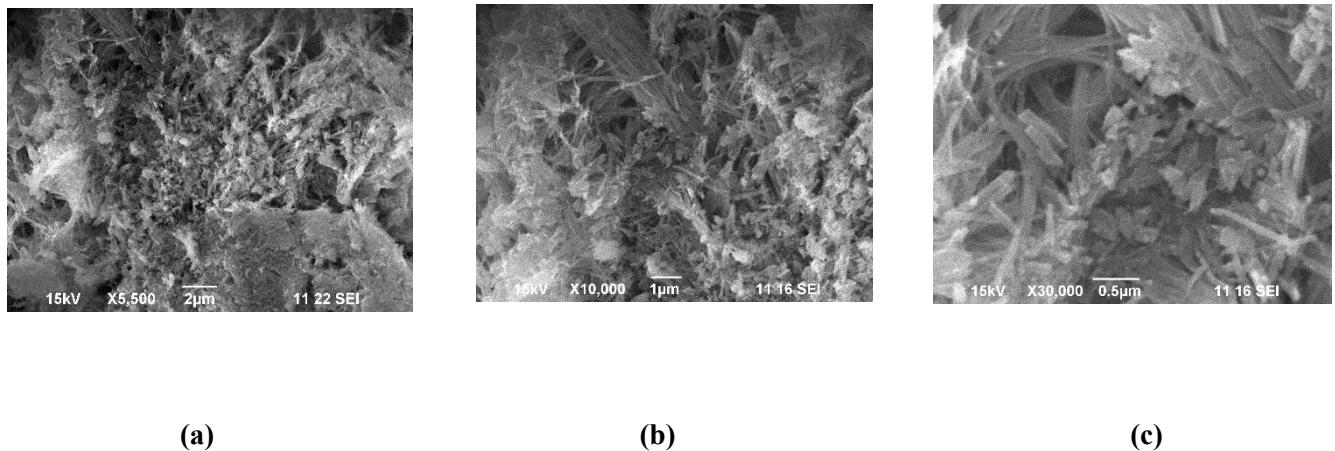
Supplementary Information



**Fig. S1** SEM images of  $\text{Yb}_2\text{O}_3$  NPs at (a)  $\times 5,000$  magnification, (b)  $\times 10,000$  magnification, and (c)  $\times 30,000$  magnification



**Fig. S2** SEM images of  $\text{ZnFe}_2\text{O}_4$  NPs at (a)  $\times 5,000$  magnification, (b)  $\times 10,000$  magnification, and (c)  $\times 30,000$  magnification



**Fig. S3** SEM images of Binary nanocomposite at (a)  $\times 5,000$  magnification, (b)  $\times 10,000$  magnification, and (c)  $\times 30,000$  magnification