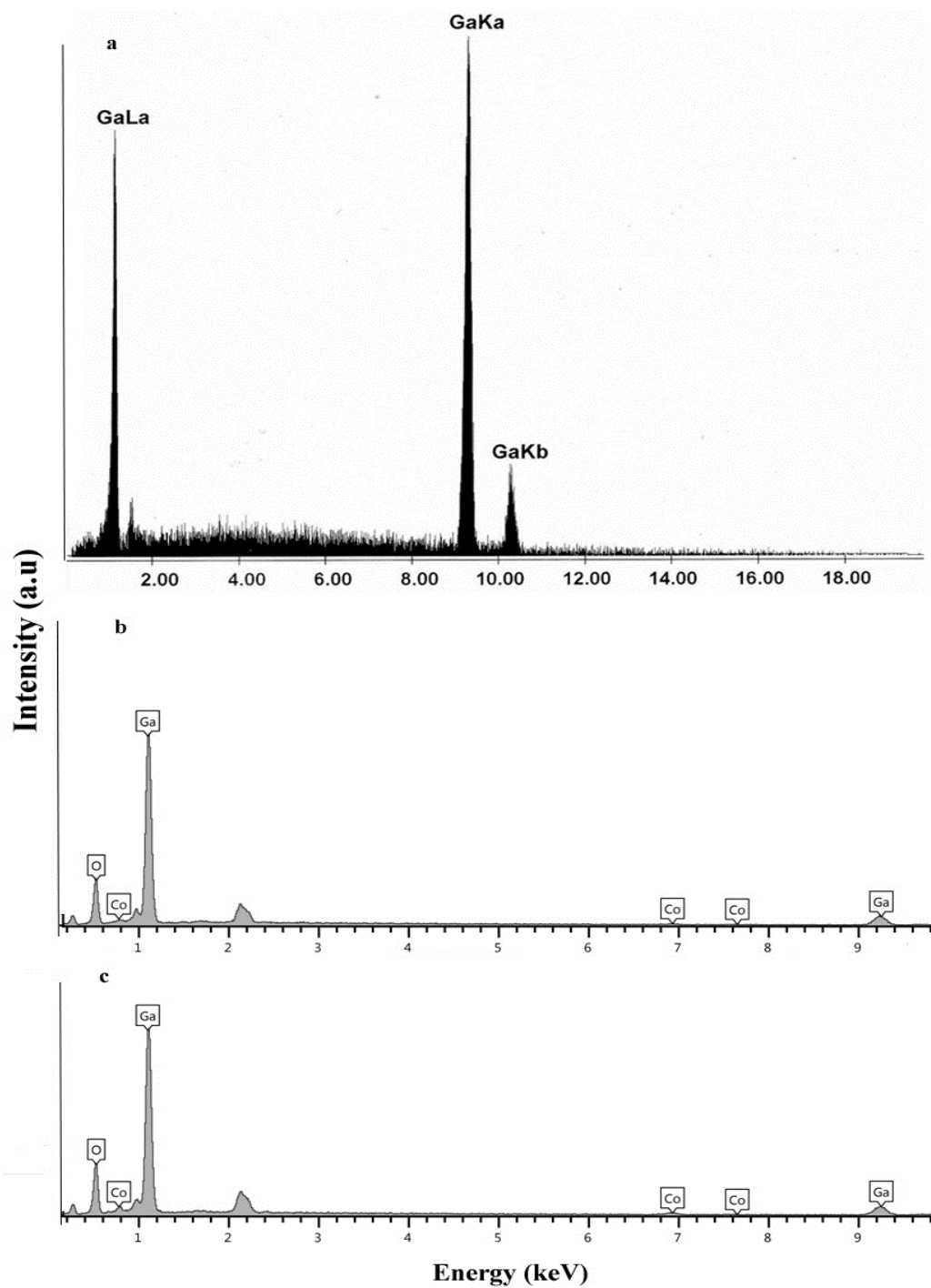


## Supporting Information

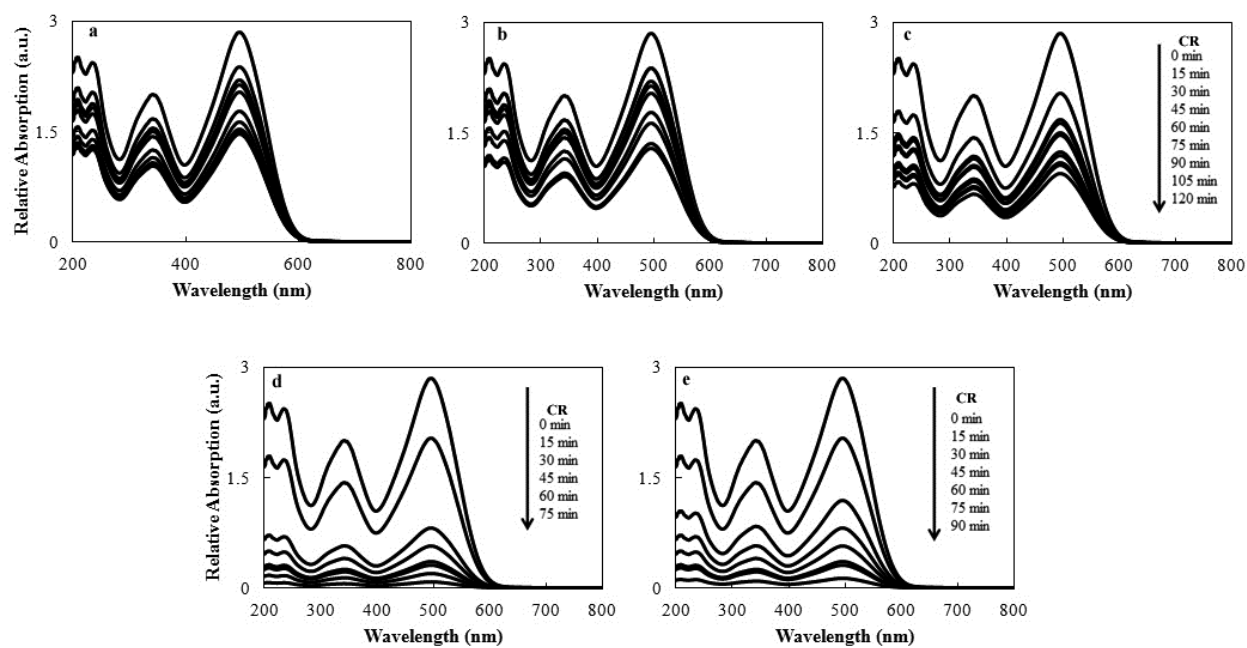
### **Fast photocatalytic degradation of congo red using CoO-doped $\beta$ -Ga<sub>2</sub>O<sub>3</sub> nanostructures**

Minoo Bagheri<sup>a</sup>, Ali Reza Mahjoub <sup>a,\*</sup>, Abbas Ali Khodadadi <sup>b,\*</sup> and Yadollah Mortazavi<sup>c</sup>

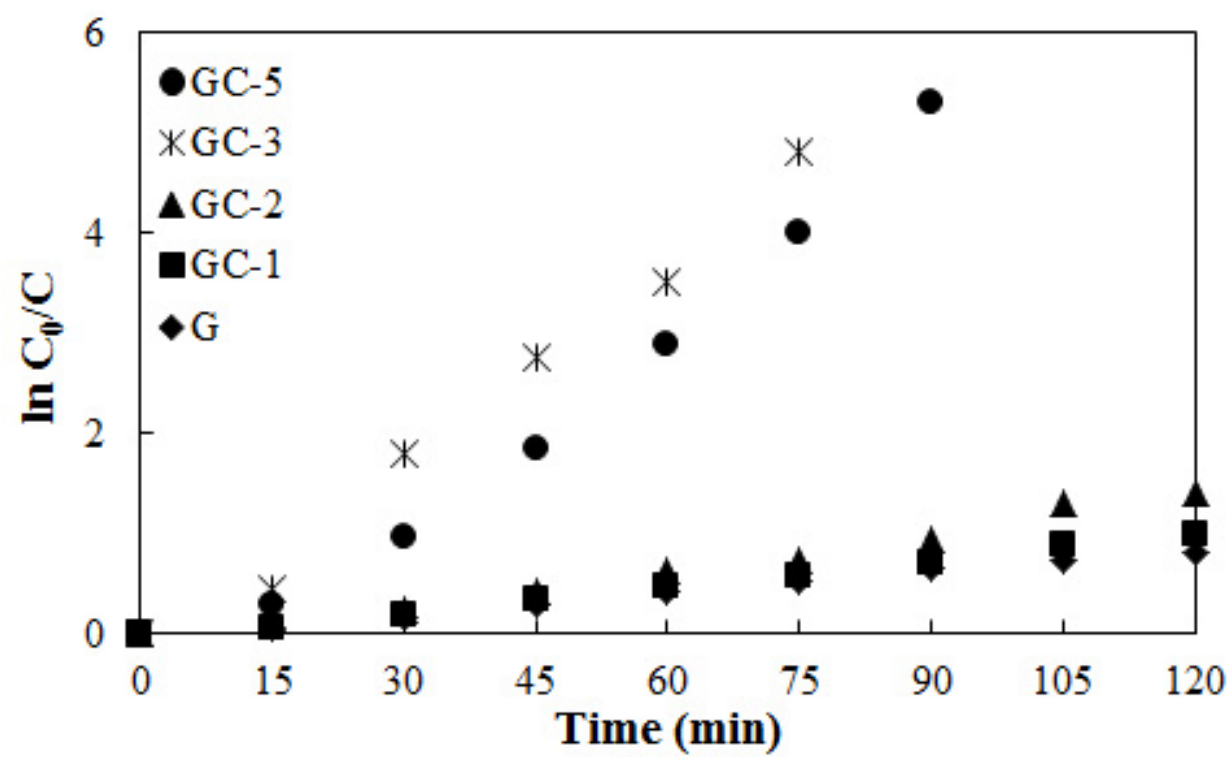
**Fig. S1.** EDX analysis of a)  $\text{Ga}_2\text{O}_3$  (G), b) 3 wt% CoO-  $\text{Ga}_2\text{O}_3$  and c) 5 wt% CoO-  $\text{Ga}_2\text{O}_3$  samples.



**Fig. S2** Absorption spectra of a solution of 30ppm CR in the presence of a) G, b) GC-1 c) GC-2, GC-3 and d) GC-5 samples under UV light irradiation.



**Fig. S3** Reaction kinetics of photocatalytic degradation of CR.



**Fig. S4** Change of COD removal efficiency in the process of GC-3 photocatalyst.

