

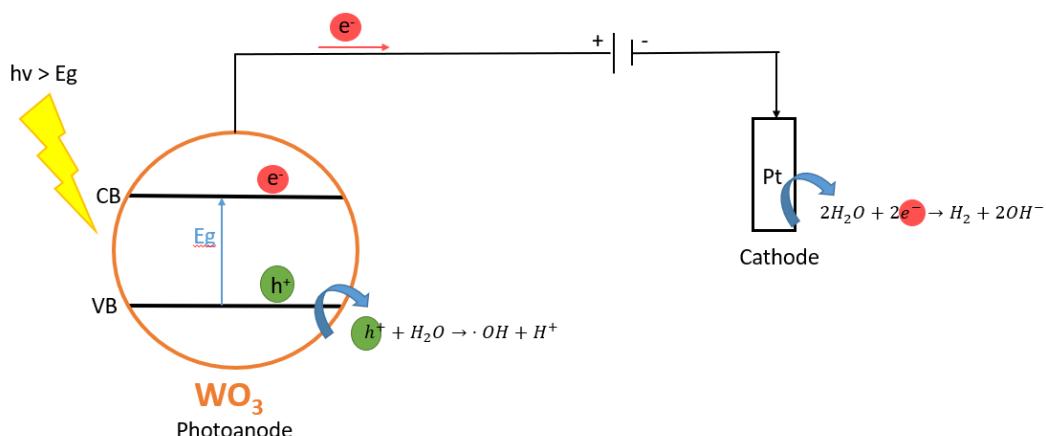
*Supplementary Materials*

# Characterization and Comparison of $\text{WO}_3/\text{WO}_3\text{-MoO}_3$ and $\text{TiO}_2/\text{TiO}_2\text{-ZnO}$ Nanostructures for Photoelectrocatalytic Degradation of the Pesticide Imazalil

Mireia Cifre-Herrando, Gemma Roselló-Márquez, Pedro José Navarro-Gázquez, María José Muñoz-Portero, Encarnación Blasco-Tamarit and José García-Antón \*

Ingeniería Electroquímica y Corrosión (IEC), Instituto Universitario de Seguridad Industrial, Radiofísica y Medioambiental (ISIRYM), Universitat Politècnica de València, C/Camino de Vera s/n, 46022 Valencia, Spain

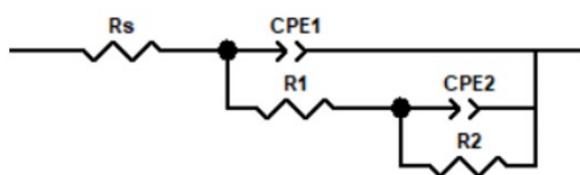
\* Correspondence: jgarciaaa@iqn.upv.es



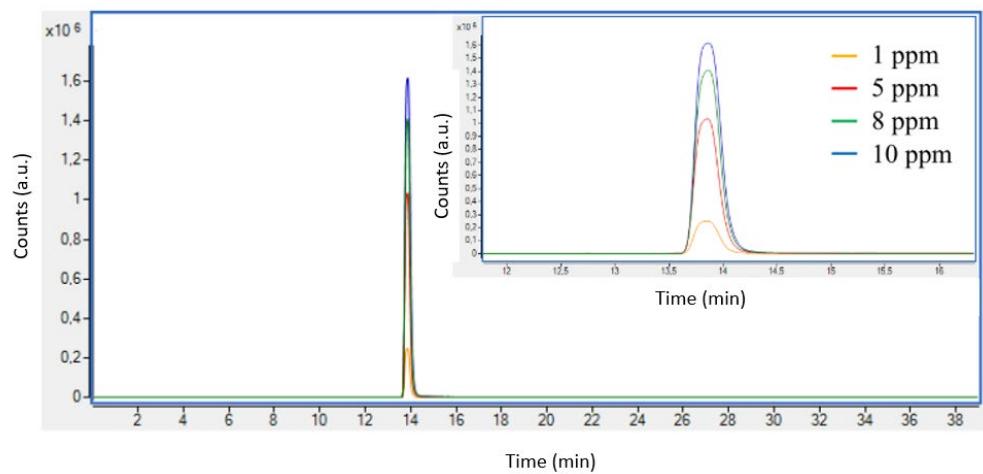
**Figure S1.** Scheme of PEC mechanism.

**Table S1.** Average crystal size, expressed as D (nm), for the different studied samples:  $\text{WO}_3$ ,  $\text{WO}_3\text{-Mo}$ ,  $\text{TiO}_2$  and  $\text{TiO}_2\text{-ZnO}$ .

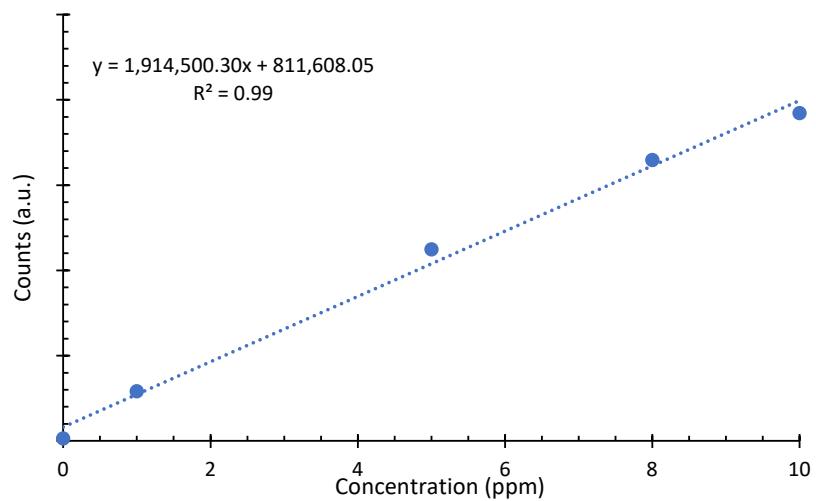
Sample	Peak		D (nm)
	Associated to	Plane	
$\text{WO}_3$ -	$\text{WO}_3$ -	020	43.3
$\text{WO}_3\text{-Mo}$	$\text{MoO}_3$	110	43.2
	$\text{WO}_3$	020	40.4
$\text{TiO}_2$	$\text{TiO}_2$	101	26.2
$\text{TiO}_2\text{-ZnO}$	$\text{TiO}_2$	101	25.5
	$\text{ZnO}$	101	44.2



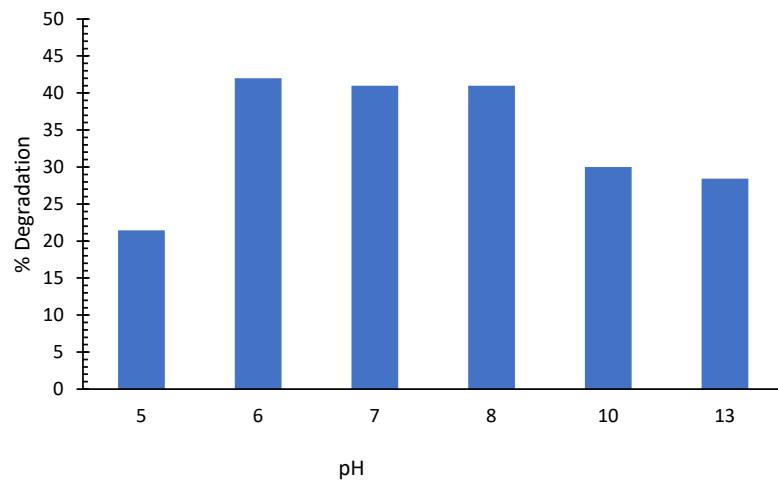
**Figure S2.** Equivalent circuit for the nanostructures synthesized.



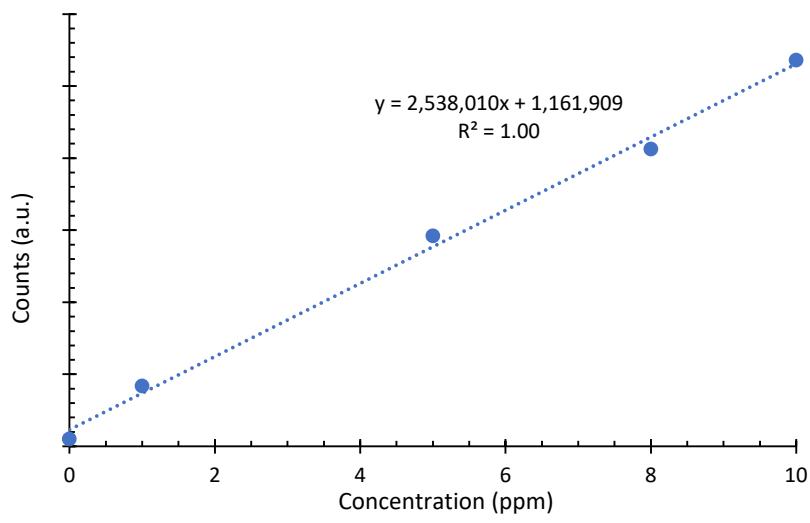
**Figure S3.** EIC chromatogram for the Imazalil standards in 0.1 M NaOH and inset of the magnification of the peak.



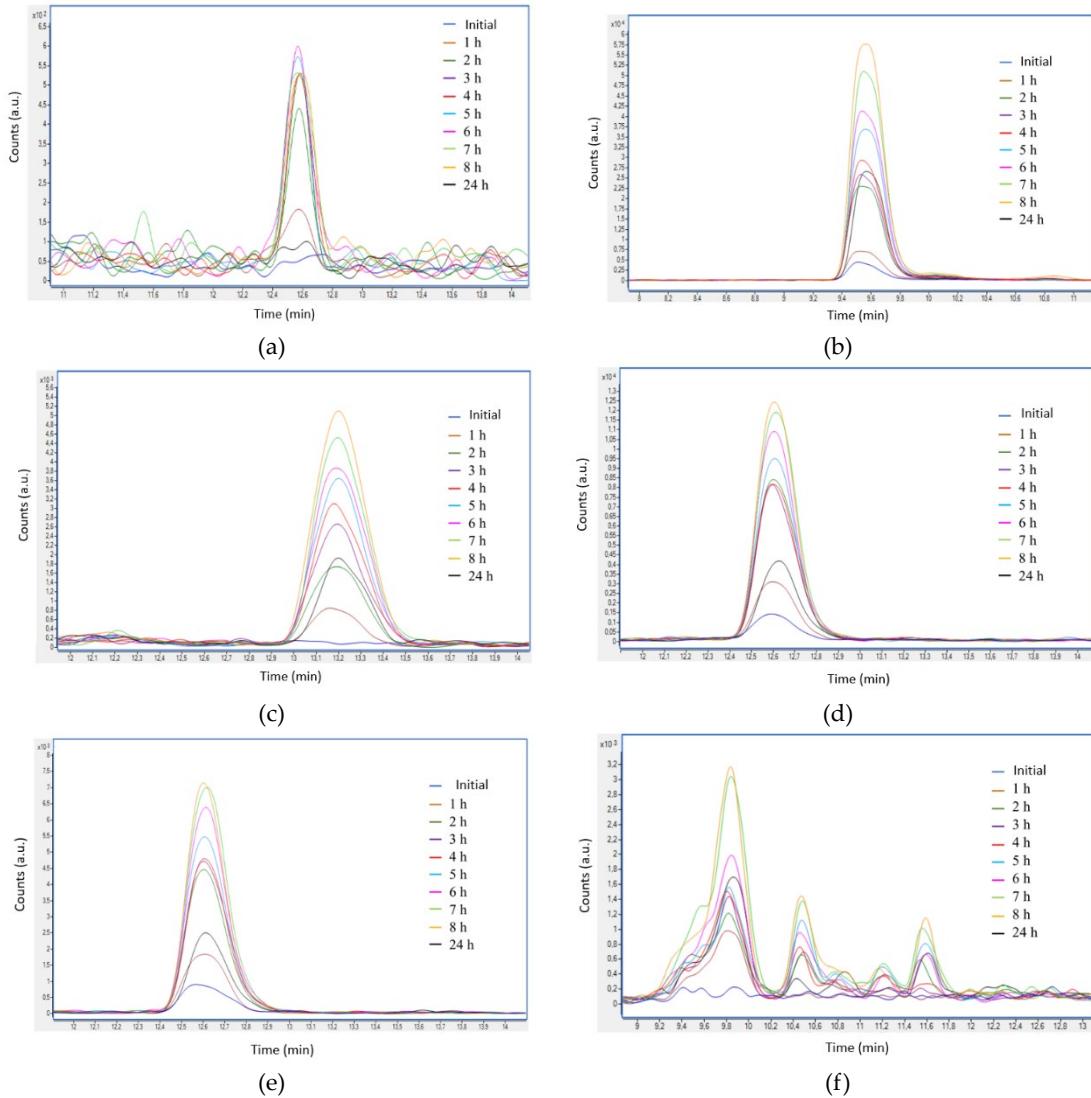
**Figure S4.** Calibration line for Imazalil standards in 0.1 M NaOH solution obtained with UHPLC-MS-QTOF.

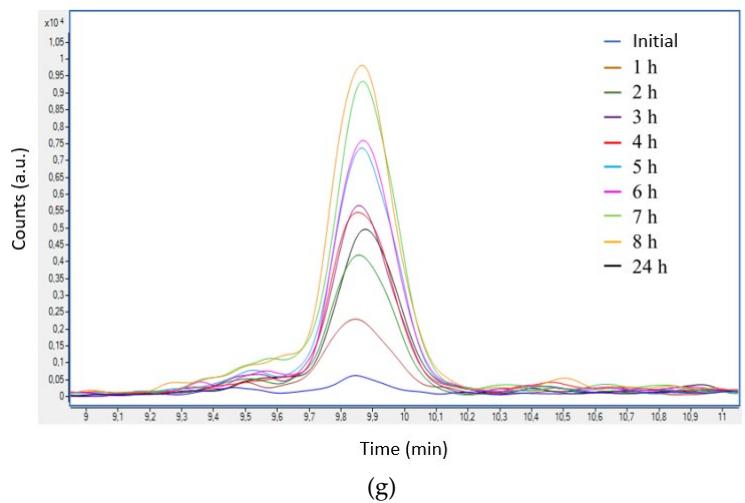


**Figure S5.** Influence of pH on the percentage of PEC degradation of Imazalil.



**Figure S6.** Calibration line for Imazalil standards in 0.1 M Na<sub>2</sub>SO<sub>4</sub> solution obtained with UHPLC-MS-QTOF.





(g)

**Figure S7.** EIC chromatograms for (a) Intermediate 1,  $m/z = 246.05$  (b) Intermediate 2  $m/z = 257.02$  (c) Intermediate 3,  $m/z = 273.06$  (d) Intermediate 4,  $m/z = 311.04$  (e) Intermediate 5,  $m/z = 313.03$  (f) Intermediate 6,  $m/z = 329.04$  and (g) Intermediate 7,  $m/z = 331.06$  obtained during the PEC degradation of Imazalil in 0.1 M Na<sub>2</sub>SO<sub>4</sub> using the hybrid TiO<sub>2</sub>-ZnO nanostructure as photoanode.