

## SUPPLEMENTARY MATERIAL

### **Application of a Micro-Meso-Structured Reactor (NETmix) to Promote Photochemical UVC/H<sub>2</sub>O<sub>2</sub> Processes - Oxidation of As(III) to As(V)**

Belisa A. Marinho<sup>1,2</sup>, M. J. Martín de Vidales<sup>1,3</sup>, Luciana P. Mazur<sup>1,2</sup>, L. Paulista<sup>1</sup>,  
Raquel O. Cristóvão<sup>1,\*</sup>, Diego A. Mayer<sup>4</sup>, José M. Loureiro<sup>1</sup>, Rui A.R. Boaventura<sup>1</sup>,  
Madalena M. Dias<sup>1</sup>, José Carlos B. Lopes<sup>1</sup>, Vítor J. P. Vilar<sup>1,\*</sup>

*<sup>1</sup>Laboratory of Separation and Reaction Engineering - Laboratory of Catalysis and  
Materials (LSRE-LCM), Department of Chemical Engineering, Faculty of Engineering,  
University of Porto, Rua do Dr. Roberto Frias, 4200-465, Porto, Portugal*

*<sup>2</sup>CAPES Foundation, Ministry of Education of Brazil, Brasília – DF 70040-020, Brazil*

*<sup>3</sup>Technical University of Madrid, Calle Ramiro de Maeztu, 7, 28040 Madrid, Spain*

*<sup>4</sup>Laboratório de Transferência de Massa e Simulação Numérica de Sistemas Químicos,  
Federal University of Santa Catarina, PO Box 476, CEP 88040-900 Florianópolis, SC,  
Brazil*

\*Corresponding authors:

Raquel O. Cristóvão:

*Tel:* +351 22 041 3606; *E-mail:* raquel.cristovao@fe.up.pt

Vítor J. P. Vilar:

*Tel:* +351 91 825 7824; *E-mail:* vilar@fe.up.pt

Fax: +351 22 508 1674

**Table S1 – NETmix geometrical characteristics.**

<b>NETmix</b>	
<b><i>Window</i></b>	
Length (cm)	13.6
Width (cm)	7.6
<b><i>Chambers</i></b>	
Diameter (mm)	6.5
<b><i>Channels</i></b>	
Length (mm)	2
Width (mm)	1
Quartz slab thickness (mm)	5
Geometry depth (mm)	3
Total volume (cm <sup>3</sup> )	23
Total illuminated volume (cm <sup>3</sup> )	16.7