

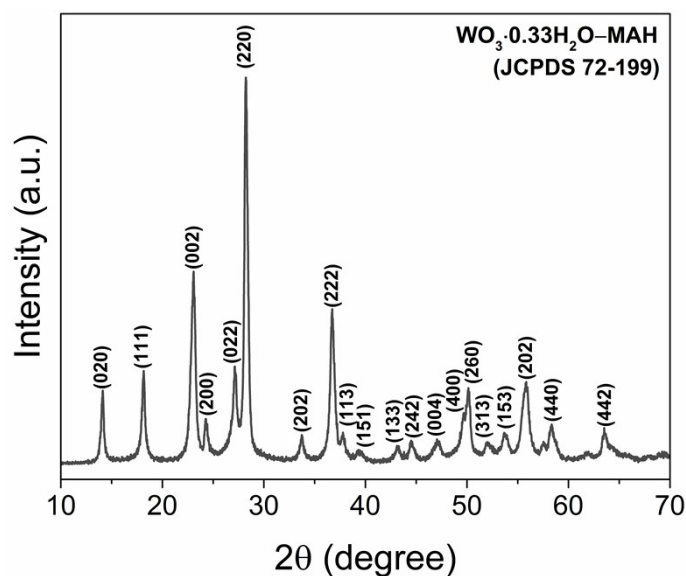
## Electronic Supplementary Information

**Design of nanostructured  $\text{WO}_3 \cdot 0.33\text{H}_2\text{O}$  via combination of ultrasonic spray nozzle and microwave-assisted hydrothermal for enhancing isopropanol gas sensing at room temperature**

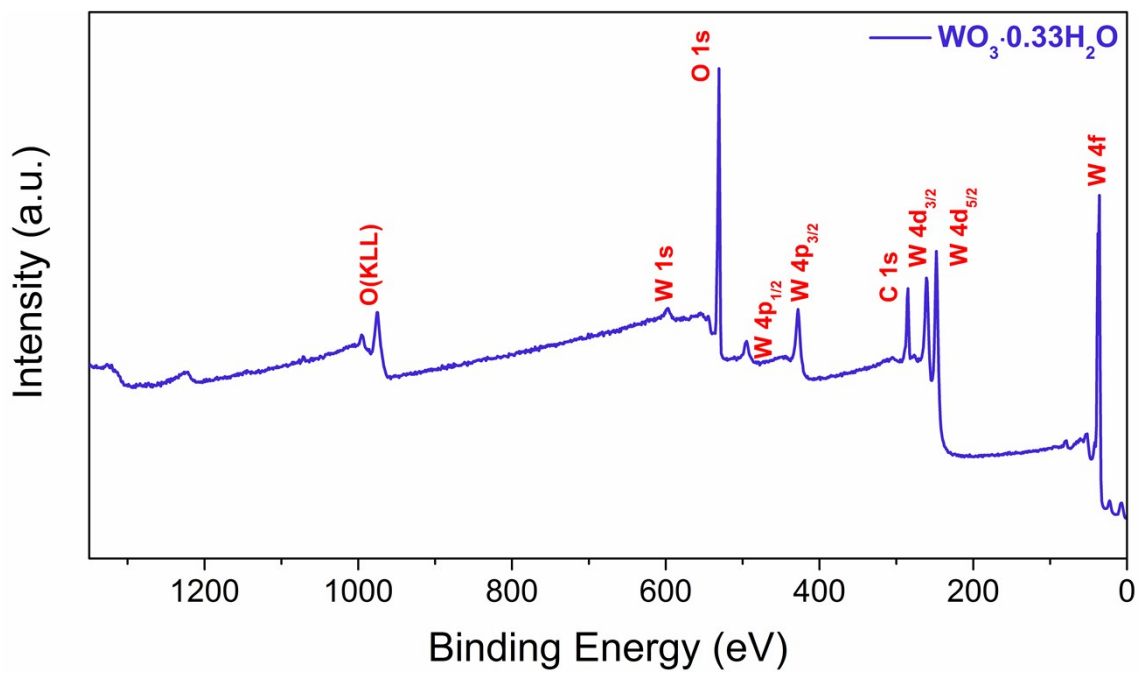
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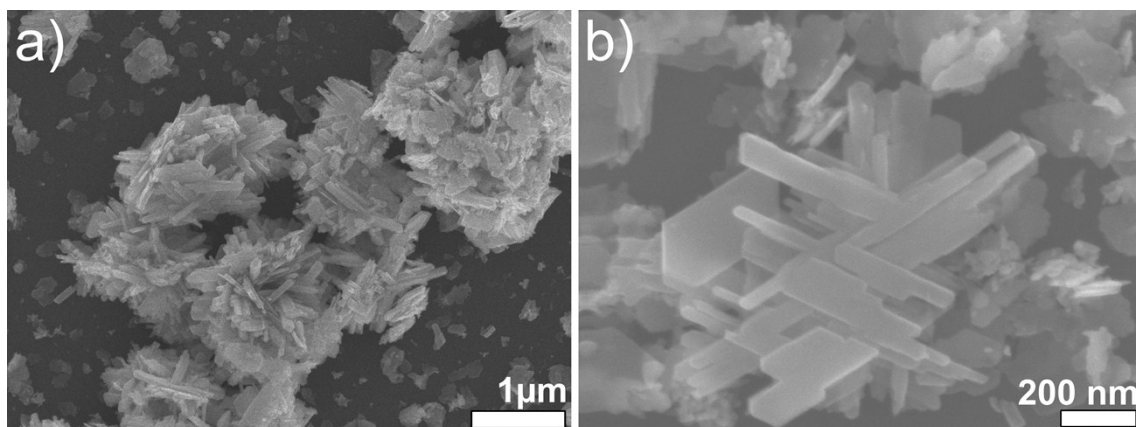
\*E-mail: volanti@ibilce.unesp.br



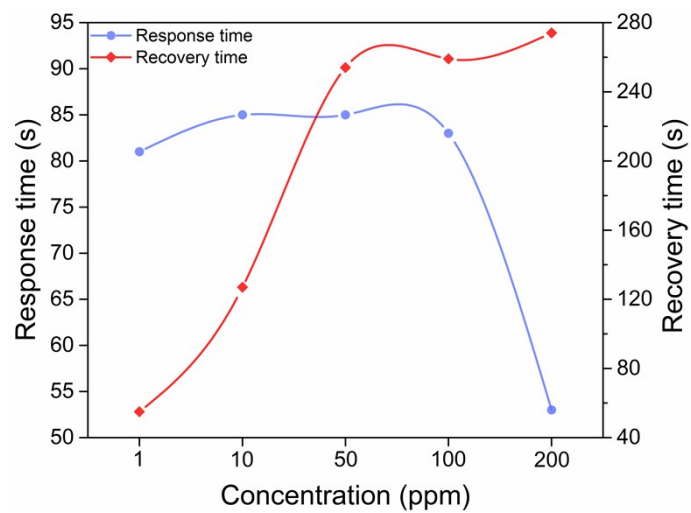
**Fig. S1** XRD pattern of  $\text{WO}_3 \cdot 0.33\text{H}_2\text{O}$ -MAH.



**Fig. S2** Survey-scan XPS spectrum of  $\text{WO}_3 \cdot 0.33\text{H}_2\text{O}$ -USN-MAH.



**Fig. S3** FESEM images of  $\text{WO}_3 \cdot 0.33\text{H}_2\text{O}$ -USN-MAH sample. (a) Low magnification image, and (b) 2D branches plates structures.



**Fig. S4** Response and recovery time of  $\text{WO}_3 \cdot 0.33\text{H}_2\text{O}$ -USN-MAH sample in the range of isopropanol concentration of 1–200 ppm.