

## Nb<sub>2</sub>O<sub>5</sub> MICROCOLUMNS FOR ETHANOL SENSING

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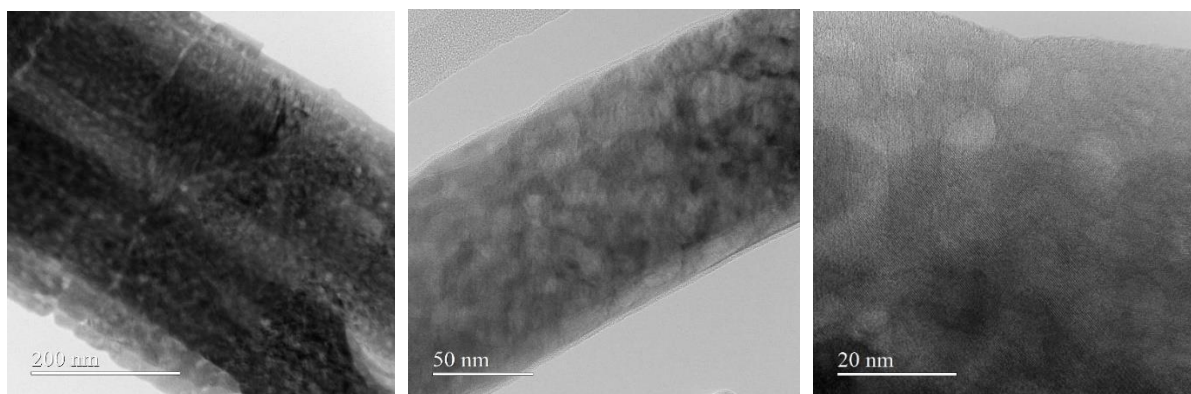
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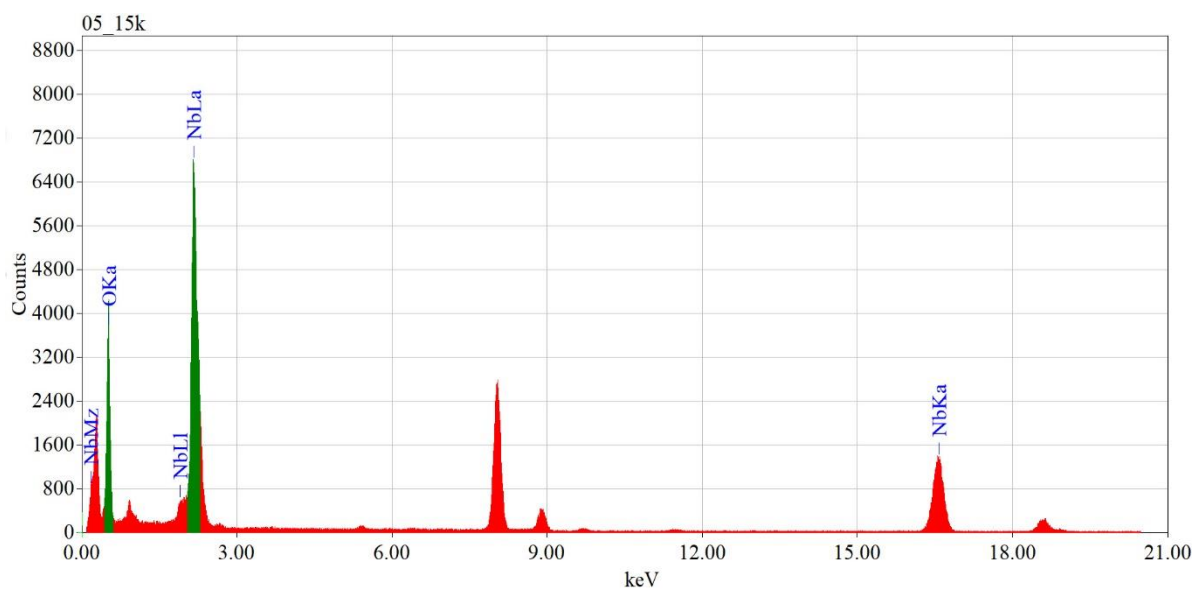
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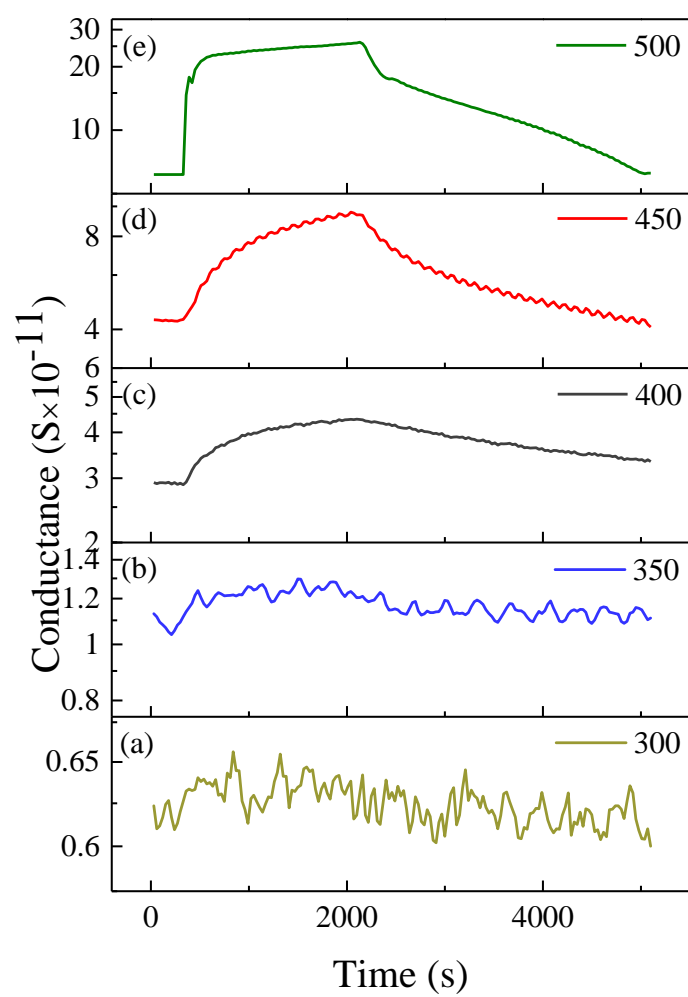
### Supplementary information



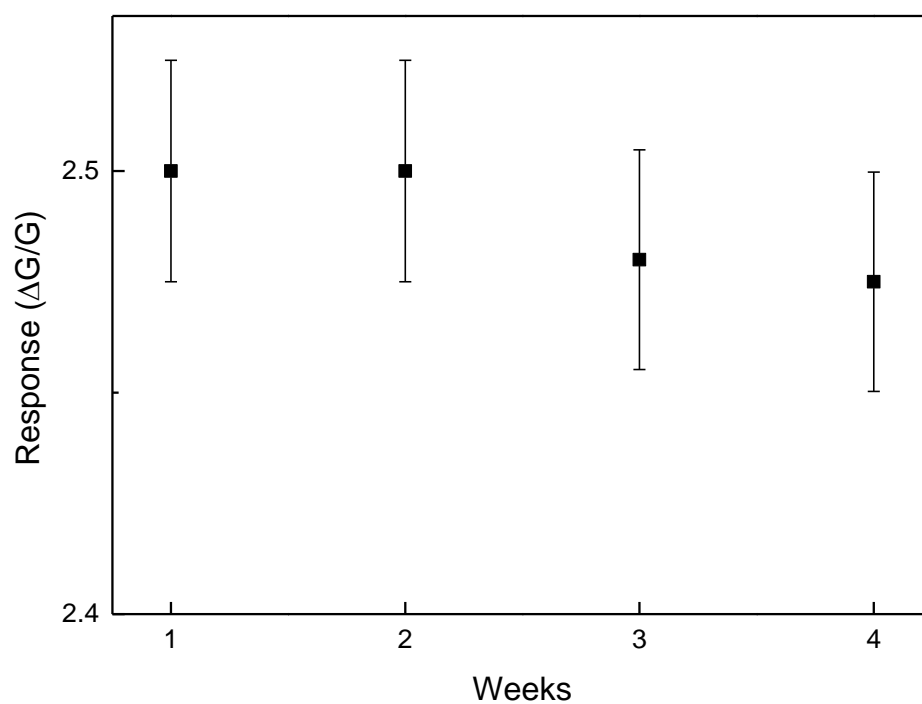
**Figure S1.** Magnified TEM images of Figure 2 (d).



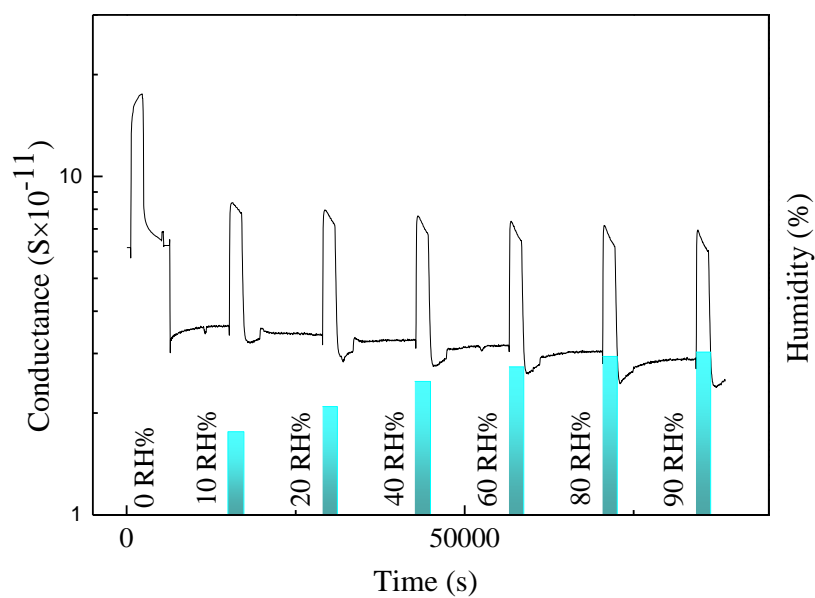
**Figure S2.** EDX spectrum of  $\text{Nb}_2\text{O}_5$  microcolumns confirming the presence of Nb and O.



**Figure S3.**  $\text{Nb}_2\text{O}_5$  microcolumns sensor response to 10 ppm ethanol at different operating temperatures (300-500 °C).



**Figure S4.** Long term stability of the Nb<sub>2</sub>O<sub>5</sub> microcolumns sensor response to 10 ppm ethanol at 500 °C.



**Figure S5.** Nb<sub>2</sub>O<sub>5</sub> microcolumns sensor dynamic response to 10 ppm ethanol at different humidity levels when operating at optimum working temperatures (500 °C).