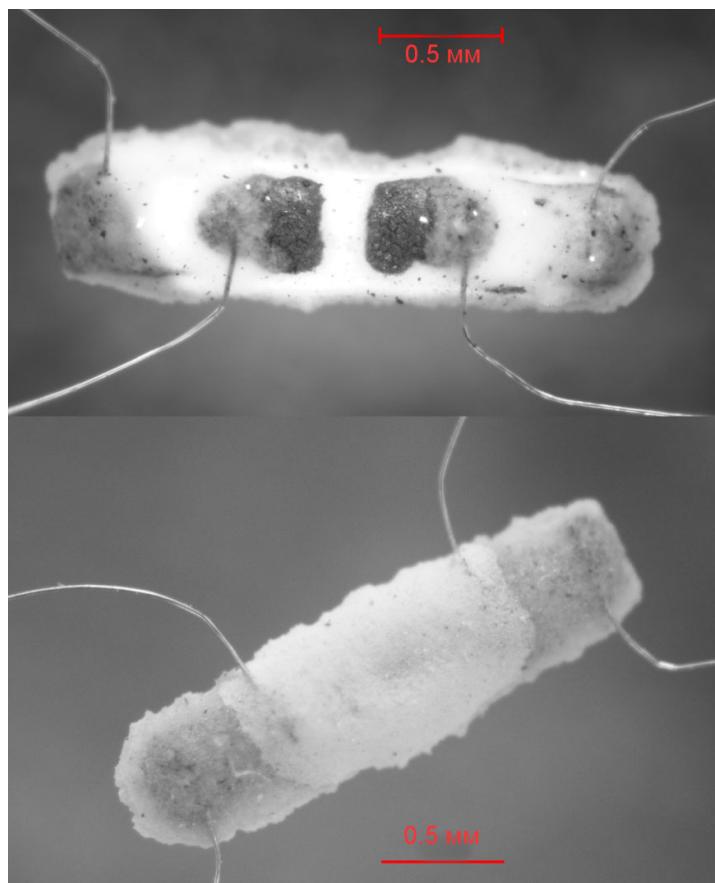
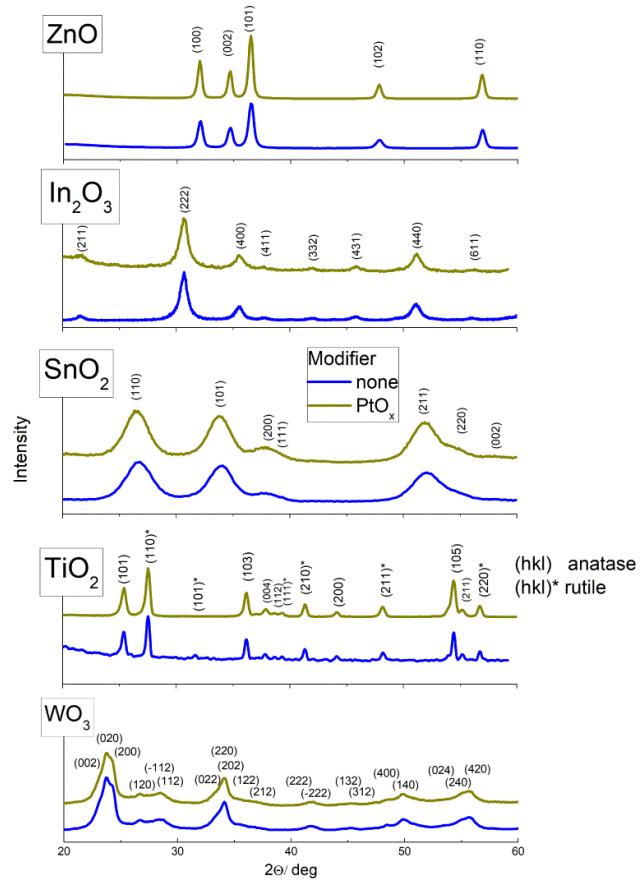


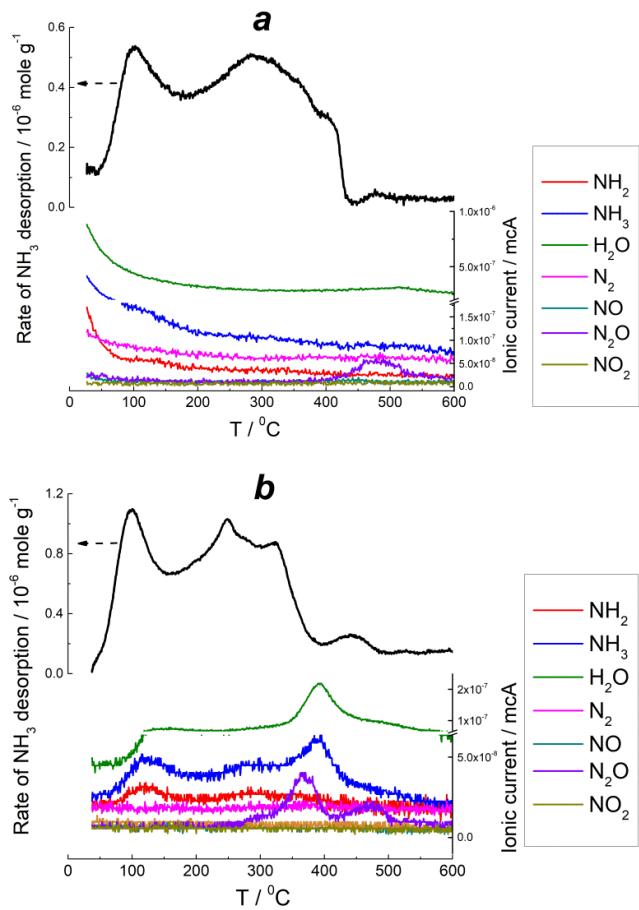
## Supplementary data



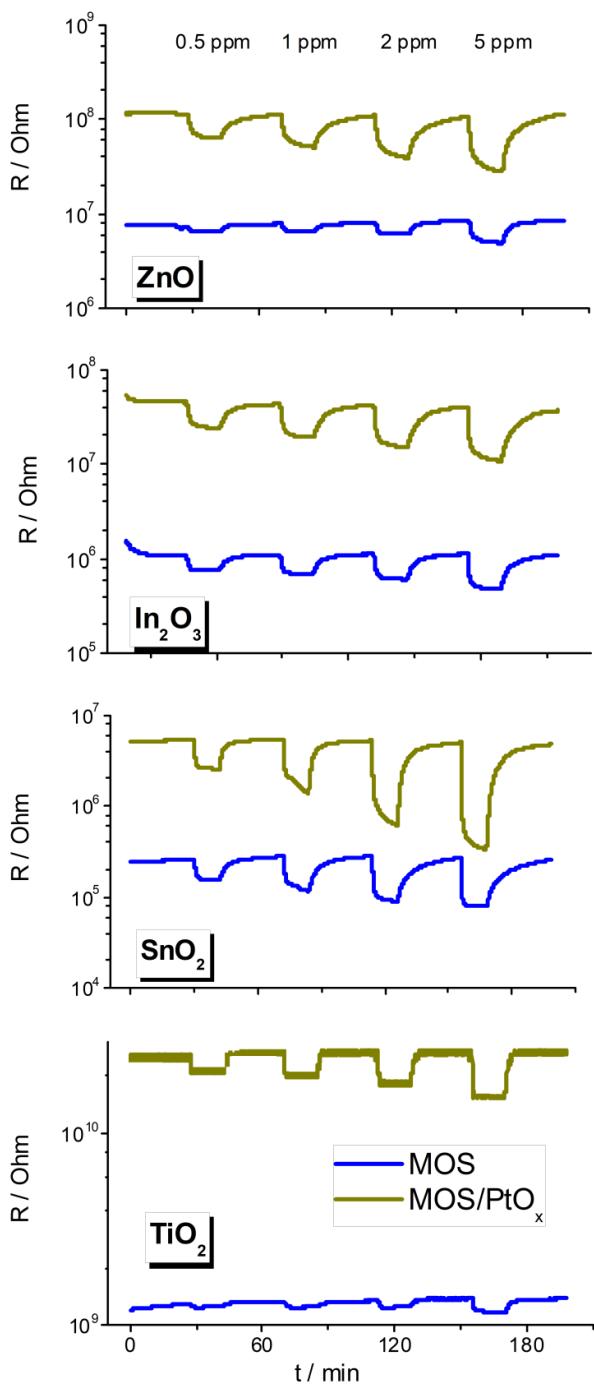
**Figure S1.** Microscope images of sensor substrate before (top) and after (bottom) thick film deposition.



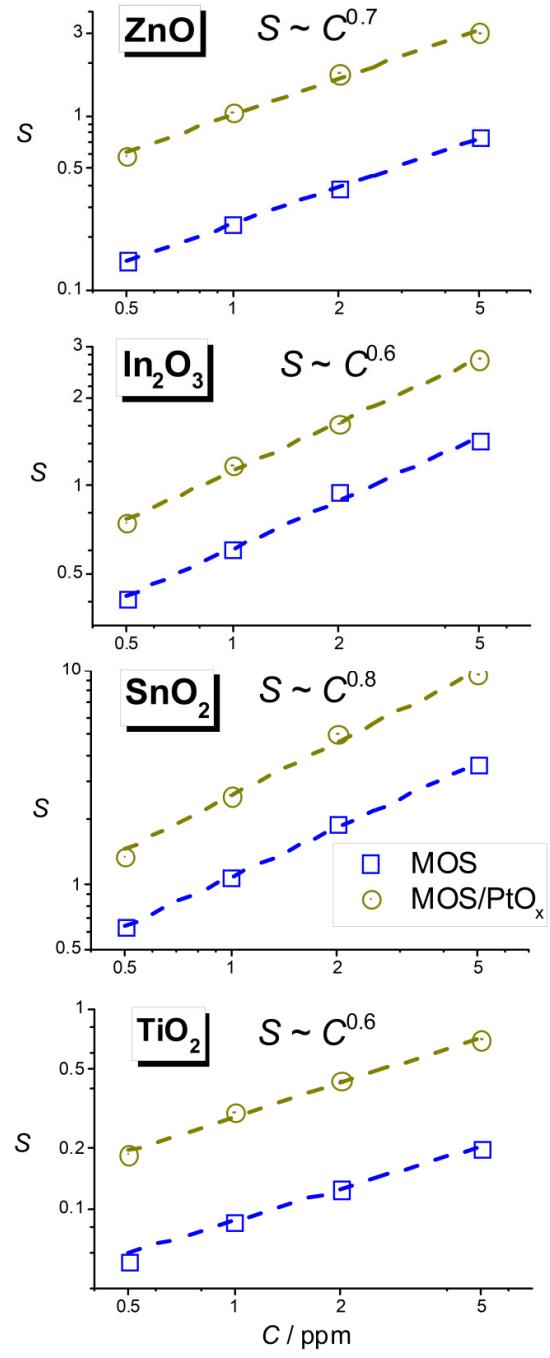
**Figure S2.** XRD patterns of MOS and MOS/PtO<sub>x</sub> samples.



**Figure S3.** Patterns of ammonia TPD from the surface of MOS (thermal conductivity detector, TCD) and mass-spectrometric analysis (MS) of desorbed gas.



(a)



(b)

**Figure S4.** Dynamic response of pristine and  $\text{PtO}_x$ -modified  $\text{ZnO}$ ,  $\text{In}_2\text{O}_3$ ,  $\text{SnO}_2$ , and  $\text{TiO}_2$  to 0.5–5 ppm benzene at  $220^\circ\text{C}$  (a), sensor signals in relation to benzene concentration at  $220^\circ\text{C}$  (b).