

Electrospun ZnO/Pd Nanofibers as Extremely Sensitive Material for Hydrogen Detection in Oxygen Free Gas Phase

Vadim Platonov, Abulkosim Nasriddinov and Marina Rumyantseva *

Chemistry Department, Moscow State University, Moscow, 119991 Russia

* Correspondence: roum@inorg.chem.msu.ru; Tel.: +7-495-939-5471 (M.R.)

Supplementary Information

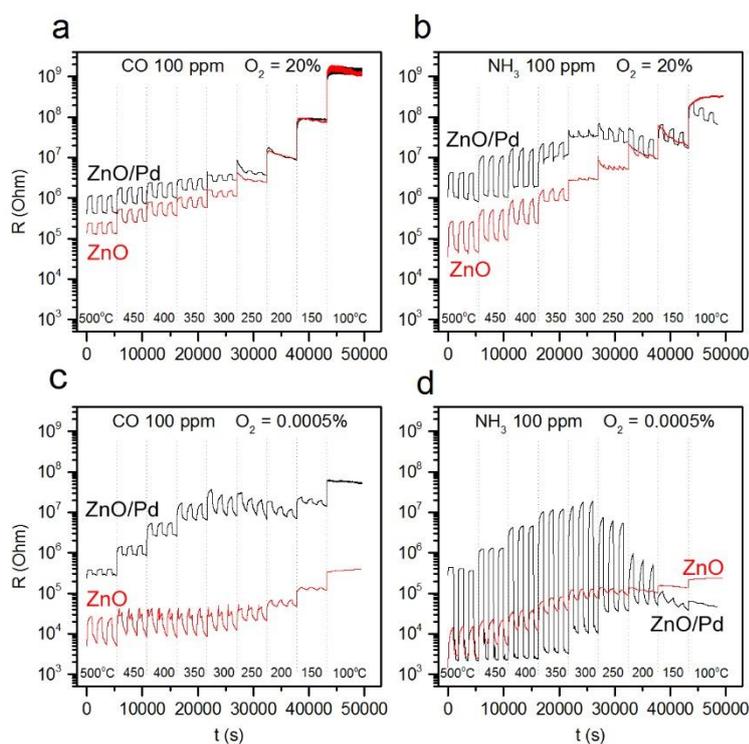
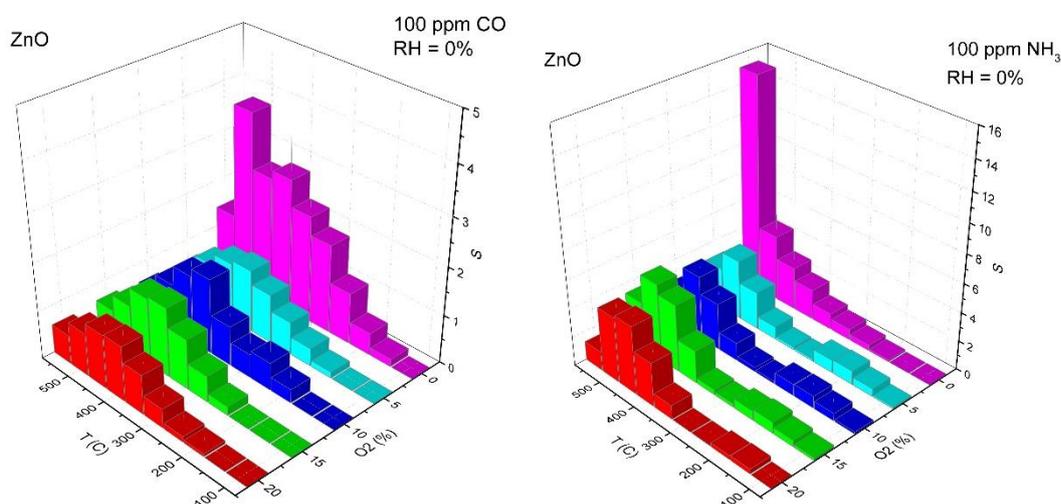


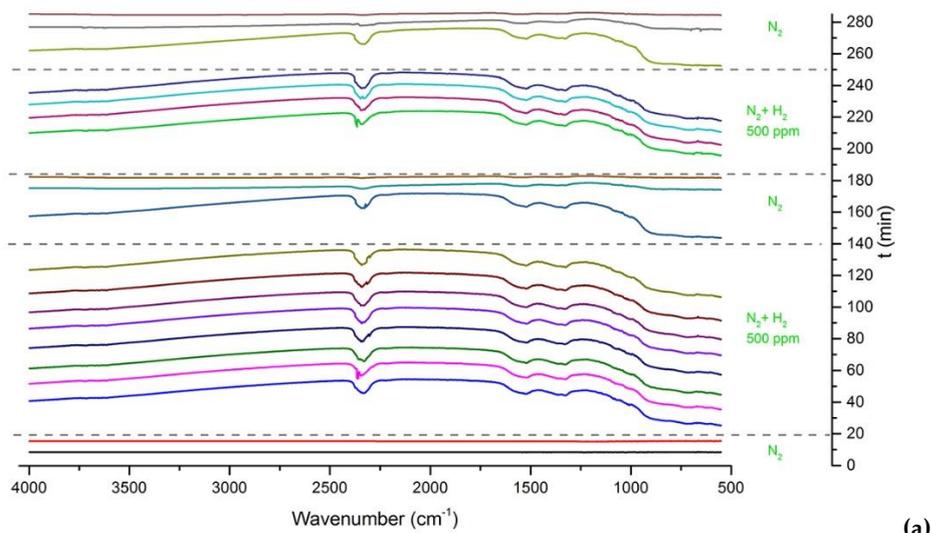
Figure S1. Transient sensor response of ZnO and ZnO/Pd nanofibers to 100 ppm of reducing gases CO (a,c), NH₃ (b,d) in atmosphere with different oxygen backgrounds of 20% (a,b) and 0.0005% (c,d) in the temperature range 100 – 500°C.



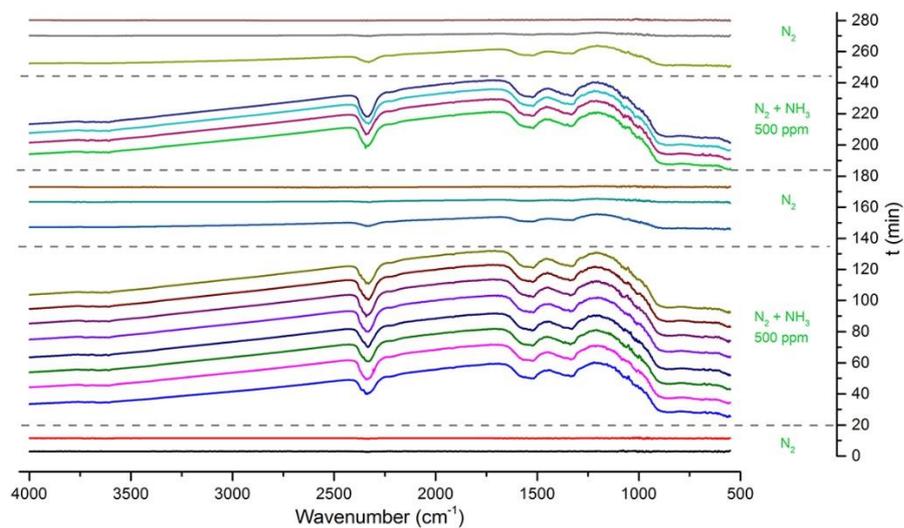
(a)

(b)

Figure S2. Temperature dependences of sensor response of ZnO nanofibers to 100 ppm of reducing gases CO (a), NH₃ (b) in atmosphere with different oxygen backgrounds C(O₂) = 20, 15, 10, 5 and 0.0005%.



(a)



(b)

Figure S3. DRIFT spectra of ZnO/Pd nanofibers recorded in the presence of 500 ppm H₂ (a) and 500 ppm NH₃ (b) in background gas with 0.0005% O₂ at 350°C.