chemosensors

MDPI

Supplementary Material

Influence of Silsesquioxane-Containing Ultra-Thin Polymer Films on Metal Oxide Gas Sensor Performance for the Tunable Detection of Biomarkers

Oleg Lupan [1,2,3,4,*], Mihai Brinza [3], Julia Piehl [1], Nicolai Ababii [3], Nicolae Magariu [3], Lukas Zimoch [2], Thomas Strunskus [1], Thierry Pauporte [4], Rainer Adelung [2], Franz Faupel [1] and Stefan Schröder [1,*]

[1] Department of Materials Science, Chair for Multicomponent Materials, Kiel University, Kaiserstraße 2, D-24143 Kiel, Germany; julp@tf.uni-kiel.de (J.P.); ts@tf.uni-kiel.de (T.S.); ff@tf.uni-kiel.de (F.F.)
[2] Functional Nanomaterials, Faculty of Engineering, Institute for Materials Science, Kiel University, Kaiserstraße 2, D-24143 Kiel, Germany; luzi@tf.uni-kiel.de (L.Z.); ra@tf.uni-kiel.de (R.A.)
[3] Center for Nanotechnology and Nanosensors, Department of Microelectronics and Biomedical Engineering, Technical University of Moldova, 168 Stefan cel Mare Av., MD-2004 Chisinau, Moldova; mihai.brinza@mib.utm.md (M.B.); nicolai.ababii@mib.utm.md (N.A.); nicolae.magariu@mib.utm.md (N.M.)
[4] Institut de Recherche de Chimie Paris-IRCP, Chimie ParisTech, PSL Université, rue Pierre et Marie Curie 11, 75231 Paris, CEDEX 05, France; thierry.pauporte@chimieparistech.psl.eu
* Correspondence: oleg.lupan@mib.utm.md (O.L.); ssch@tf.uni-kiel.de (S.S.)

Contents

Table S1. Gas response data in % for Figure 5a.

O.T.	*Hydrogen*	*2-Propanol*	*n-Butanol*	*Acetone*	*Ammonia*	*Carbon dioxide*	*Methane*
250 °C	69.04	0.1	0.1	0.1	0.1	0.1	0.1
300 °C	213.44	7.53	8.57	3.23	0.1	0.1	0.1
350 °C	256.01	99.76	63.62	32.12	0.1	15.17	0.1

Table S2. Gas response data in % for Figure 5b.

O.T.	*Hydrogen*	*2-Propanol*	*n-Butanol*	*Acetone*	*Ammonia*	*Carbon dioxide*	*Methane*
250 °C	15.14	0.1	0.1	0.1	0.1	0.1	0.1
300 °C	182.06	16.07	7.26	0.1	0.1	0.1	0.1
350 °C	709.07	141.43	144.35	45.65	2.17	13.51	0.1

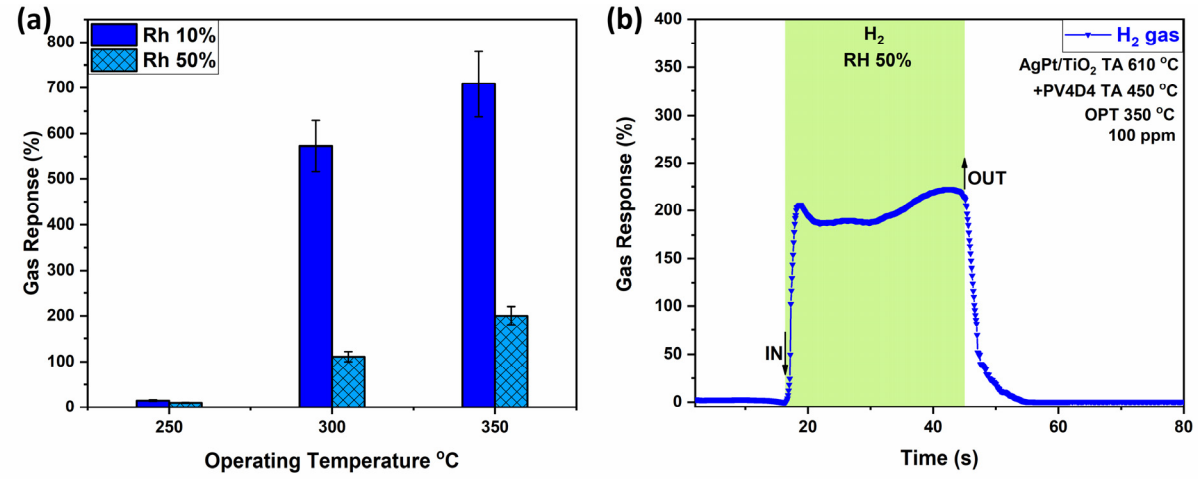

Figure S1. (a) Comparison of hybrid sensor responses at different relative humidity levels; **(b)** dynamic response of the cage layer hybrid sensor to H_2 molecules at a 350 °C operating temperature and 50% relative humidity.

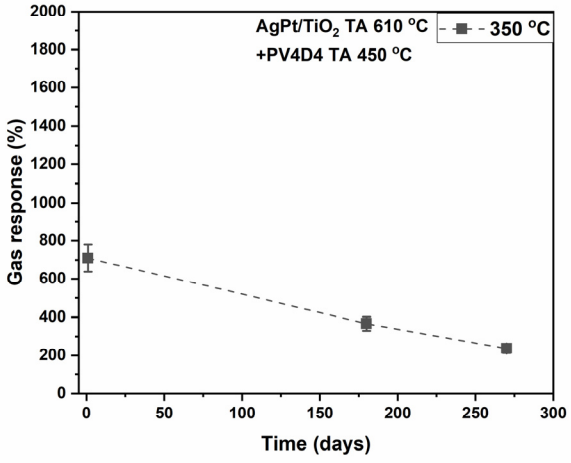

Figure S2. Long-term stability of one of the sensors applied in this study.