

Detecting ppb-levels of NO₂ at room temperature Ricarda Wagner defended her doctoral thesis

Congratulations!

Under special restrictions due to the corona pandemic, on Thursday, March 25th, 2021, Ricarda Wagner defended her doctoral thesis about “Zinc oxide as a material to detect resistively NO₂ at room temperature” (German original title: “Zinkoxid als Material zur resistiven Detektion von NO₂ bei Raumtemperatur”).

Special thanks to Prof. Maximilian Fleischer for his support as the second examiner! Due to the corona pandemic, he could not join the defense in person, but attended online. What a successful experiment!

The research work for her dissertation was conducted at the Department of Functional Materials, partly financed by industry. Dr. Wagner presented her work on several conferences and published parts of her thesis in peer-reviewed journals. Examples are:

R. Wagner, D. Schönauer-Kamin, R. Moos:

Influence of Humidity and Different Gases on a Resistive Room Temperature NO₂ Gas Dosimeter Based on Al-Doped ZnO for ppb-Concentration Detection, *Journal of The Electrochemical Society*, **167**, 167516 (2020), doi: 10.1149/1945-7111/abcb65

R. Wagner, D. Schönauer-Kamin, R. Moos:

Novel Operation Strategy to Obtain a Fast Gas Sensor for Continuous ppb-Level NO₂ Detection at Room Temperature Using ZnO—A Concept Study with Experimental Proof, *Sensors*, **19**, 4104 (2019), doi: 10.3390/s19194104

L. Vogel, R. Wagner, R. Moos, D. Schönauer-Kamin:

Investigations on the crystal growth mechanism of one-pot-synthesized Al-doped ZnO and its UV-enhanced room temperature NO₂ gas sensing characteristics, *Functional Materials Letters*, **11**, 1850087 (2018), doi: 10.1142/S179360471850087X



The evaluation board and the candidate in corona-correct distance.
From left to right: Prof. Moos, Dr. Wagner, Prof. Krenkel, and Prof. Sesterhenn.
Prof. Fleischer (top right) attended online.