

## Fifth doctoral thesis in 2015 — Andrea Groß concludes the series

Congratulations!

Andrea Groß defended her doctoral thesis about the effect of NO<sub>x</sub> on the electrical conductivity of NO<sub>x</sub> storage materials and the application of these materials for novel NO<sub>x</sub> dosimeters (German original title "Einfluss von NO<sub>x</sub> auf die elektrische Leitfähigkeit von NO<sub>x</sub>-Speichermaterialien und die Anwendung dieser Materialien für neuartige NO<sub>x</sub>-Dosimeter") on December 10<sup>th</sup>, 2015.

The research work for her dissertation was conducted in collaborative international projects between the Ford Motor Company and the chair of Prof. Moos and between the chairs of Prof. Tuller (MIT) and Prof. Moos.

Dr. Groß already published parts of her thesis in peer-reviewed journals. Some are listed here:

- A. Groß, M. Kremling, I. Marr, D.J. Kubinski, J.H. Visser, H.L. Tuller, R. Moos: Dosimeter-type NO<sub>x</sub> sensing properties of KMnO<sub>4</sub> and its electrical conductivity during temperature programmed desorption, *Sensors*, **13**, 4428-4449 (2013)
- A. Groß, T. Weller, H.L. Tuller, R. Moos: Electrical Conductivity Study of NO<sub>x</sub> Trap Materials BaCO<sub>3</sub> and K<sub>2</sub>CO<sub>3</sub>/La-Al<sub>2</sub>O<sub>3</sub> during NO<sub>x</sub> Exposure, *Sensors and Actuators B: Chemical*, **187**, 461-470 (2013)
- A. Geupel, D. Schönauer, U. Röder-Roith, D.J. Kubinski, S. Mulla, T.H. Ballinger, H.-Y. Chen, J.H. Visser, R. Moos: Integrating nitrogen oxide sensor: a novel concept for measuring low concentrations in the exhaust gas, *Sensors and Actuators B: Chemical*, **145**, 756-761 (2010)



Picture from left to right: Prof. Altstädt, Prof. Moos, Dr. Groß, Prof. Fischerauer, Prof. Krenkel.

This defense concludes a series of five doctoral theses in 2015 at the department of Functional Materials, showing FM's broad research spectrum. It started in January 2015 with Dr. Fremerey's work on sensors to determine the soot and sulfur loading of fixed bed catalyst. In summer 2015, Dr. Ortolino reported on electrical high load vias in hybrid thick-film technology, and in October 2015, Dr. Fischer defended her thesis on the pulsed polarization method to detect nitrogen oxides in exhausts. Later this year, Dr. Missal presented his work on a miniaturized LTCC-based dynamic differential scanning calorimeter.