

Monitoring Gasoline Particulate Filters with Microwaves Stefanie Walter defended her doctoral thesis

Congratulations!

Stefanie Walter defended her doctoral thesis about “Radio frequency-based state diagnosis of gasoline particulate filters” (German original title “*Hochfrequenzgestützte Zustandsdiagnose für die Überwachung von Benzinpartikelfiltern*”) on Wednesday, October 4th, 2023.

The research work for her dissertation was conducted at the Department of Functional Materials in a joint collaboration with the automotive industry. The project was funded by the Bavarian Research Foundation (Bayerische Forschungsstiftung, BFS).

Special thanks to Prof. John Jelonnek for his support as the second examiner!

Dr. Walter already published parts of her thesis in peer-reviewed journals. Examples are:

S. Walter, P. Schwanzer, G. Hagen, H.-P. Rabl, M. Dietrich, R. Moos:
Soot Monitoring of Gasoline Particulate Filters Using a Radio-Frequency-Based Sensor
Sensors, **23**, 7861 (2023), doi: 10.3390/s23187861

S. Walter, P. Schwanzer, C. Steiner, G. Hagen, H.-P. Rabl, M. Dietrich, R. Moos:
Mixing Rules for an Exact Determination of the Dielectric Properties of Engine Soot Using the Microwave Cavity Perturbation Method and Its Application in Gasoline Particulate Filters
Sensors, **22**, 3311 (2022), doi: 10.3390/s22093311

S. Walter, P. Schwanzer, G. Hagen, G. Haft, H.-P. Rabl, M. Dietrich, R. Moos:
Modelling the Influence of Different Soot Types on the Radio-Frequency-Based Load Detection of Gasoline Particulate Filters
Sensors, **20**, 2659 (2020), doi: 10.3390/s20092659



The evaluation board and the candidate.

From left to right: Prof. Andreas Jess, Prof. Moos, Dr. Walter, Prof. Jelonnek, and Prof. Ruckdäschel

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