

Powder Aerosol Deposition – how to make ceramic coatings at room temperature

Mario Linz defended his doctoral thesis

Congratulations!

Mario Linz defended his doctoral thesis about “The powder aerosol deposition of very small powder quantities: further developments, mechanism, and applications” (German original title: “*Die Pulveraerosol-Deposition kleinster Pulvermengen: Weiterentwicklungen, Mechanismus und Anwendungen*”) on Monday, July 28th, 2025.

Dr. Linz' work bases mainly on a close collaboration within the framework of the Cluster of Competence for Solid-State Batteries. Special thanks to Dr.-Ing. habil. Guido Falk (Universität des Saarlandes) for his support as the second examiner!

Dr. Linz already published several parts of his thesis in peer-reviewed journals:

M. Linz, F. Bühner, D. Paulus, L. Hennerici, Y. Guo, V. Mereacre, U. Mansfeld, M. Seipenbusch, J. Kita, R. Moos, Revealing the Deposition Mechanism of the Powder Aerosol Deposition Method Using Ceramic Oxide Core-Shell Particles, *Advanced Materials*, **36**, 2308294 (2024), doi: [10.1002/adma.202308294](https://doi.org/10.1002/adma.202308294)

M. Linz, J. Exner, T. Nazarens, J. Kita, R. Moos, Mobile sealing and repairing of damaged ceramic coatings by powder aerosol deposition at room temperature, *Open Ceramics*, **10**, 100253 (2022), doi: [10.1016/j.oceram.2022.100253](https://doi.org/10.1016/j.oceram.2022.100253)

M. Linz, J. Exner, J. Kita, F. Bühner, M. Seipenbusch, R. Moos, Discontinuous Powder Aerosol Deposition: An Approach to Prepare Films Using Smallest Powder Quantities, *Coatings*, **11**, 844 (2021), doi: [10.3390/coatings11070844](https://doi.org/10.3390/coatings11070844)



The evaluation board and the candidate.

From left to right: Prof. Brüggemann, Dr. habil. Falk, Dr. Linz, Prof. Moos, and Prof. Freitag

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