



Der Vorsitzende des Promotionsausschusses

EINLADUNG

Hiermit lade ich ein zum öffentlichen Promotionskolloquium von

Herr M. Sc. Amir Haghypour

Energie-Materialien

(Prof. Dr. Volker Presser)

am

Montag, 27. Januar 2025, 10:00 Uhr s.t.

per Videokonferenz; Link für MS Teams: <https://msteams.link/0ZI8>

Raum für die Prüfung: INM, Leibniz-Saal, Campus D2.5.

Thema der Dissertation:

Electrode Engineering of Metal-Oxide-Based Materials for Optimized Lithium-Ion Batteries

The dissertation with the title of "Electrode Engineering of Metal-Oxide-Based Materials for Optimized Lithium-Ion Batteries" studies methods to enhance lithium-ion battery (LIB) technology by addressing issues regarding metal-oxide-based materials for LIBs electrodes such as reduced capacity during charging/discharging at high rates and optimizing the potential range. The established manufacturing methods in the study significantly boosted the efficiency and durability of the electrodes. Additionally, the study introduces the DigiBatMat platform to digitalize the processes involved in producing electrodes for LIBs by using data analysis to optimize LIB's performance. The findings offer perspectives on enhancing energy storage technologies and support progress in electrochemical energy storage.

Saarbrücken, 13.01.2025

Prof. Dr. Uli Kazmaier