

Bachelor's- / Master's Thesis: Thermophysical Simulation of Laser-Based Ablation Methods for Lithium-Ion Batteries

Your Mission:

Many different technologies are being researched worldwide for the recycling of the valuable materials in lithium-ion batteries. This includes, among other things, laser-based removal of the materials. In this thesis, you aim to simulate the thermal effects of the ablation process. The simulation helps to avoid excessive temperatures in the process, which damage the heat-sensitive materials and prevent further use. In this way, you will make an important contribution to the understanding and development of laser-based ablation. Become part of our team and actively advance sustainable technology!

Your tasks:

- Literature research on the state of research and technology
- Modelling of the system
- Software-side implementation of the model
- Implementation of simulation studies
- Validation of simulation data

Qualifications:

- First experience in programming and in the field of thermodynamics/heat transfer
- Enrolled student (m/f/d) at Aalen University in mechanical engineering, photonics or a comparable field
- Commitment and creativity, independence and ability to work in a team

Supervisors and contacts:

Prof. Dr. Thomas Schwarzbäck:

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Further Information:

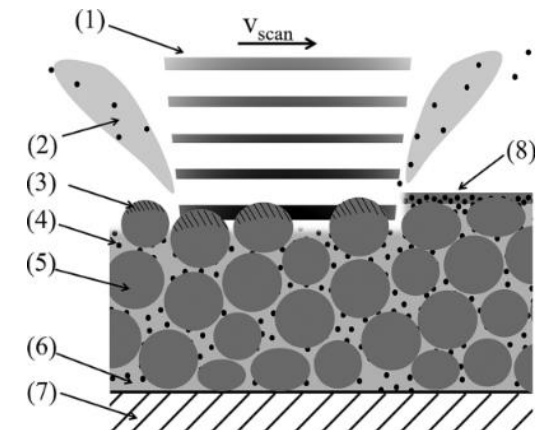
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