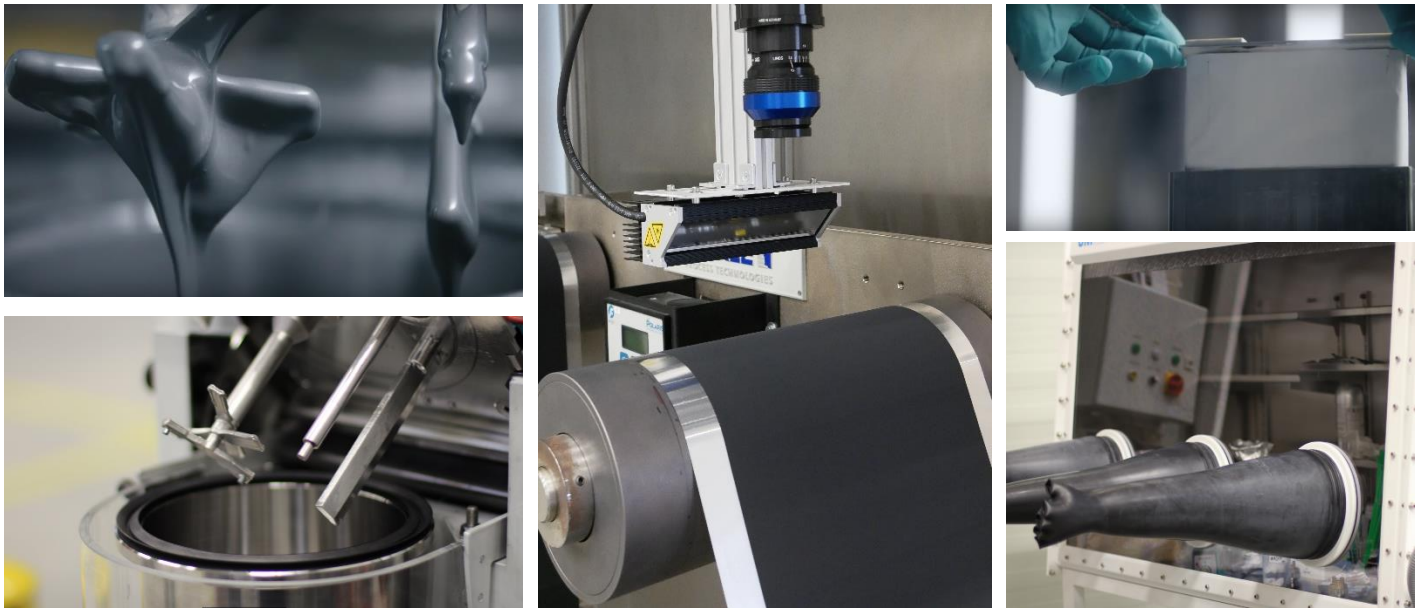


# Bachelor / Master Thesis

## *Aluminium-Ion Battery Prototype Production*



### Initial situation:

Electrification of drivetrains in the automotive industry is one of the key challenges for a sustainable future mobility. The key component for environmental and commercial success is the high voltage battery. Modern Lithium-Ion batteries are relatively safe and offer high energy densities. However, to guarantee a fully electrified future mobility, safety and range of EVs must be further improved. A promising approach in this context is the development of aluminium-ion batteries using cost-optimised aluminium as anode material. These batteries promise higher energy densities, higher safety and lower costs and therefore could be another enabler for a sustainable mobility in the future.

### Your tasks:

PEM has a pilot production line for pouch cell batteries. Your task will be to build up a first working prototype of a designated aluminium-ion battery cell. Therefore, a detailed analysis of the production processes is required. Afterwards, the prototype will be build up and performance tests will be conducted.

### Requirements:

- High motivation and commitment
- Interest in topics of e-mobility
- Ideally first experiences in the field of battery technologies
- Fluent English or German language skills
- Ideally practical production skills

### Your benefits:

- Comprehensive support
- Development of expert knowledge in the field of batteries for electric cars
- Contact to experts from research and industry
- Insights into one of the most promising research topics for future mobility
- Practical experience in prototype production

### Have we caught your attention?

Please send your current transcript of records and curriculum vitae to the email address listed below.

### Your contact at PEM:

Marc Locke, M.Sc. RWTH  
Campus-Boulevard 30  
D-52074 Aachen  
[m.locke@pem.rwth-aachen.de](mailto:m.locke@pem.rwth-aachen.de)