



## Diversified Consortium

### Institute of Particle Technology

Manufacturing of electrodes and manual cell assembly (full and half cells)

### Institute of Machine Tools and Production Technology

Stacking and wrapping of electrodes, cell housing

### Institute of Energy and Process Systems Engineering

Simulation, electrochemical analysis and diagnostics

### Institute of High Voltage Technology and Electric Power Systems

Formation, ageing and performance tests

### Institute of Environmental and Sustainable Chemistry

Electrochemical characterization

### Institute for Engineering Design

Design methods, production planning and development

### Institute of Joining and Welding

Confectioning, contacting and cell sealing

### Physikalisch-Technische Bundesanstalt Braunschweig

Metrology, measurement technique, standardization, traceability

## Visitor Address

Battery LabFactory Braunschweig  
Langer Kamp 19, 38106 Braunschweig

Further Information:

[www.tu-braunschweig.de/blb](http://www.tu-braunschweig.de/blb)

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**BLB** BATTERY  
LABFACTORY  
BRAUNSCHWEIG

AN INSTITUTION OF **NFF**



## Unique Characteristics

- » Representation of the entire process chain for the automatized manufacturing of large scale battery cells
- » 1,000 m<sup>2</sup> development centre with 160 m<sup>2</sup> dry room for the systemic research of electrode- and cell manufacturing processes.
- » Scientifically sound knowledge of electrode and battery cells production on industrial level since 2008
- » Freedom of design - more than 1,000 possible variations of electrode- and cell production configurations
- » Production and process associated experimental and model-based analysis
- » Incorporation of mechanical-, process-, electrical engineering and (electro)chemistry
- » Seven institutes of TU Braunschweig and PTB Braunschweig in cooperation with industrial companies
- » Cooperation with Niedersaechsisches Forschungszentrum Fahrzeugtechnik (NFF) in the subjects of automotive integration, lightweight design

## Core Competences

- » Excellence in process engineering along the entire value adding chain
- » Custom-made and reproducible production of electrodes / cell structures
- » Customizing – individual and application-specific electrodes and cells incl. manufacturing of demonstrators
- » Development of next generation battery technologies
- » Diagnostics and metrology
- » Physical / electrochemical modelling and simulation
- » Development of recycling processes for batteries and electrode production waste
- » Life-cycle-analysis – energy monitoring along the process chain and production environment

## Aims

- » Establishment of reproducible production processes und profound material- and process knowledge
- » Evaluation of impacts of production-related processes on quality, costs, energy demand and performance of the battery
- » Development of mechanical and installation engineering in cooperation with industry
- » Increase of energy density, quality and safety
- » Testing of new materials and cell designs
- » Verification of alternative manufacturing processes and of new battery technologies

