



Emobility

ZBT GmbH



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Fuel Cell Stack and System Development

ZBT is one of the leading German research centers for fuel cell technology. With more than 100 highly skilled technical experts, ZBT offers independent engineering support for the industry, focusing on the topics

- Fuel cells for mobile applications
- Fuel cells for stationary applications
- Hydrogen production
- Hydrogen infrastructure
- Li-Ion battery development

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Dieses Projekt wird unterstützt durch den europäischen Fond für Regionale Entwicklung und das Land Nordrhein-Westfalen



ZBT GmbH The Fuel Cell Research Center

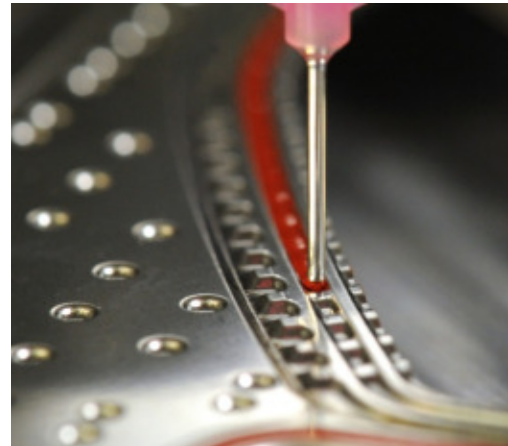


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Stack Development

- Benchmarking of MEA, BPP, gasket materials
- Bipolar plate design
 - CAD flowfield design
 - CFD simulations
 - μ PIV measurements
 - Rapid prototyping design validation
- Sealing solutions
- Testing and qualification
 - Performance and durability testing of single cells, shortstacks and fullstacks
 - Operating strategies
 - Contaminant investigations



System development

- System simulation
- Component development
- Control strategies
- Component & system testing
 - HiL-tests w/ shortstacks and fullstacks
 - Temperature/Humidity
 - Shock/Shaker

Reference Project: Fuel Cell Range Extender



System

- 30 kW automotive stack
- Metallic BPP > 300 cm² active area
- Dry cathode, liquid cooling
- Integrated BoP

Partners

- FEV GmbH
- Gräbener Maschinentechnik GmbH
- VKA RWTH Aachen University
- ZBT GmbH

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Regionale Wettbewerbsfähigkeit und Beschäftigung



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