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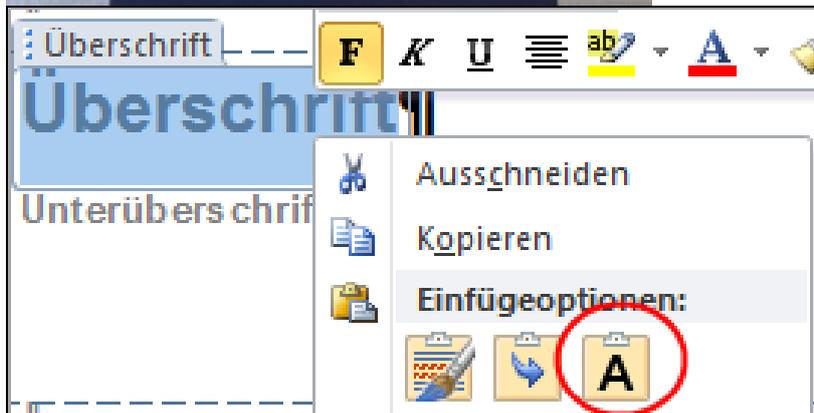
aufgrund eines Beschlusses
des Deutschen Bundestages

New Production Methods for Better Batteries

BMW Grant for Setting up a Novel Lithium-ion Cell Factory with Cheaper Process Technologies at KIT



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optimized production methods,” explains Dr. Andreas Gutsch, coordinator of the Competence E project at Karlsruhe Institute of Technology (KIT). Low-cost, high-performance lithium-ion cells are required for both stationary storage systems and quickly chargeable vehicle batteries. At the research factory, fabrication steps for battery manufacture will be newly developed. “We want to leave the path of fabrication technologies known so far and develop entirely new production and integration methods for lithium-ion cells,”

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Gutsch says. This will include new drying, coating, and calendaring techniques for electrode materials as well as new assembly methods for cells.

The fabrication lines with new machines and plant technologies for the validation of various concept studies will be developed and established in cooperation with German supply companies. "With our research factory, we want to strengthen German suppliers of machines and facilities for lithium-ion cell manufacture," explains Gutsch. The technologies developed at KIT will be tested in test runs and campaigns with larger series until production maturity. In this way, economically promising production methods will be identified. The technical breakthroughs expected in the manufacture of lithium-ion cells will reduce costs considerably.

The production hall covering an area of nearly 1500 m² is being established on Campus North of KIT. In November 2012, the Federal Ministry of Economics (BMWi) granted funding for the purchase of the first installation. First machines for the production of lithium-ion batteries will be commissioned in late February 2013 already. Applications of these batteries focus on electric commercial vehicles and stationary storage systems for private households and industry. Parallel to the construction of the research factory, first demonstrators will be set up. They will be taken into operation in spring 2013.

All infrastructure facilities will be accessible to all interested companies in Germany according to a utilization plan. In addition, KIT offers cooperation models, such as licensing or contract research projects. In this way, results and new technologies are to be transferred as rapidly as possible to German industry and innovations are to be commercialized quickly.

The Competence E project covers all research aspects from the battery material to the electric drive in a way that is unique in Germany. With an open technology platform for battery-electric vehicle drives and stationary energy storage systems, the systemic approach is aimed at developing industrially applicable solutions and their production methods. Thanks to integration along the chain of values added, battery systems with an energy density of 250 watt-hours per kilogram are to be manufactured at costs of EUR 250 per kilowatt-hour. This will be an important step towards the energy turnaround and reaching climate protection objectives: Increased

storage capacity of stationary storage systems to compensate the fluctuation of renewable energies and to enhance the range of electric vehicles for increased acceptance.

Find more on the Competence E project at:

<http://www.competence-e.kit.edu/>

Karlsruhe Institute of Technology (KIT) is a public corporation according to the legislation of the state of Baden-Württemberg. It fulfills the mission of a university and the mission of a national research center of the Helmholtz Association. KIT focuses on a knowledge triangle that links the tasks of research, teaching, and innovation.

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