

## CELEST Member Short Profile



**Werner Bauer**

Werner Bauer is the leader of an interdisciplinary group at the Institute for Applied Materials - Energy Storage Systems (IAM-ESS) at the Karlsruhe Institute of Technology (KIT). He studied Materials Science at the Institute of Glass and Ceramics at the University of Erlangen-Nuremberg, where he also made his PhD. Since 1994, he is employed at KIT and its predecessors. Werner Bauer began his work in Karlsruhe with the investigation of shaping processes for ceramic micro components. More than 15 years ago, these activities were replaced by the research on energy storage systems, with a focus on electrodes for lithium-ion batteries and post-lithium systems. He is also responsible for setting up and operating the electrode manufacturing area at the Battery Technology Center of the KIT.



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### Research areas

His main research activities are focusing on the investigation of electrode properties and electrode fabrication processes for lithium-ion batteries and post-lithium systems. Special emphasis is given to the inactive electrode components and their influence on electrode manufacturing and cell performance.

### Lab equipment (at campus north of KIT)

Roll-to-roll laboratory coating machine with corona treatment and two drying zones; 2 calender for electrode compaction and dry processing (max. roll temperature > 150°C); dissolver and planetary mixers; dry powder mixer; drying ovens; glove box; rheometers; instruments for the measurement of electrode thickness, homogeneity, resistivity, and adhesion strength; SEM with EDS and EBSD; sample preparation by ion beam milling; air conditioned potentiostats with more than 100 channels for laboratory pouch cells, temperature-controlled channels for 3-electrode cells and EIS measurement,

Werner Bauer @ IAM-ESS	Link IAM-ESS	Link lab equipment
<a href="https://www.iam.kit.edu/ess/21_1234.php">https://www.iam.kit.edu/ess/21_1234.php</a>	<a href="https://www.iam.kit.edu/ess/index.php">https://www.iam.kit.edu/ess/index.php</a>	<a href="https://www.iam.kit.edu/ess/254.php">https://www.iam.kit.edu/ess/254.php</a>