

CELEST Member Short Profile



Anna Smith

Dr. Anna Smith, Ph.D. (born Jozwiuk) is currently team leader of the research group "Cell Development and Testing" at Battery Technology Center (BATEC), Karlsruhe Institute of Technology (KIT). She studied chemistry at TU Berlin (Diplom with special honors) and continued with her doctoral research at the University of Oklahoma, USA, with main focus on the electrochemical behavior of inorganic mixed-valence multinuclear metal complexes. Her battery experience started during a postdoc position at BELLA (laboratory of BASF SE and KIT), where she investigated additives for Lithium-Sulfur batteries and majorly contributed developing a DEMS (differential electrochemical mass spectrometry) setup coupled with IR-spectroscopy. She was then scientific assistant at Competence E (now Battery Technology Center) at KIT. During that time, she performed cell testing of NiMH Powercaps for the development of the battery management system control in prototype storages. Currently she is spokesperson for Research Unit D in POLiS and contributes to post-Li research on cell level.



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Research areas

Main emphases are the development of (LIB, SIB) battery cell components, evaluation of cell materials, upscaling and electrochemical testing thereof. Also, she is working on analysis methods for liquid and gaseous components from batteries using GC and HPLC to investigate degradation mechanisms.

Lab equipment (at campus north of KIT)

Semi-automated manufacturing line for pouch cell assembly from lab to industrial scale (30 mAh to 30 Ah) within a dry room, Basytec potentiostats (3-300 A), Biologic potentiostats with impedance, glovebox, Karl-Fischer, speed-mixer, laboratory doctor blade coater, HPLC-MS/ UV-vis, GC-MS/FID, optical microscope, table top SEM

Anna Smith @ IAM-ESS	Link institute IAM-ESS	Link lab equipment
https://www.iam.kit.edu/ess/english/1192.	<u>https://www.iam.kit.edu/ess/english/index.</u>	https://www.batterietechnikum.kit.edu/english/351.
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