

## LIST OF PROFESSORS OF ELECTROCHEMICAL ENERGY STORAGE

#### TEAM



What is electrochemical energy storage materials? Prof. Dr. Dominic Bresser Electrochemical Energy Storage Materials The group "Electrochemical Energy Storage Materials" researches a variety of materials and technologies for electrochemical energy storages. The group tries to create a fundamental understanding of the electrochemical reactions and mechanisms. View research group



Why is electrochemical energy storage important? Electrochemical energy storage becomes more and more important in the context of next generation power grid, home storage, electric transportation and well-established applications such as power tools and portable devices. Our research is focused on developing materials and technologies for energy storage in batteries and related devices.



Who are the research groups at Helmholtz Institute Ulm? Overview of 16 research groups at the Helmholtz Institute Ulm (HIU) Prof. Dr. Maximilian Fichtner Solid-State Chemistry The research group Solid State Chemistry is concerned with the newest battery systems to follow today's lithium-ion battery.



What is a battery research group? Prof. Dr. Birger Horstmann Theory of Electrochemical Materials The research group models batteries as part of Prof. Latz's department at DLR. Various methods such as quantum simulation, machine learning and theoretical thermodynamics enable a deeper understanding of everything from individual atoms to the entire battery cell.



Which battery chemistries are being researched? The different demands on these batteries in terms of performance, costs and safety motivates the research of different battery chemistries. In this context a diversity of battery chemistries is being researched in the battery group, including next generation Li-ion, solid state, Li-air, Mg and Na and Zn aqueous batteries.



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What techniques do we use to study electrolytes and solid-electrolyte interfaces? Our group puts a significant emphasis on mechanistic studies and the utilization of advanced characterization techniques. We use in situ X-ray scattering and spectroscopy, FTIR and Raman spectroscopy, and electrochemical quartz crystal microbalance techniques to probe electrolytes and solid-electrolyte interfaces.



Kuldeep Kumar. Assistant Professor +91-361-2583696 kuldeepk@iitg.ac . Research Interest(s): Electrical Energy and Power Engineering, Microgrids" Operation and Control, Model Predictive Control, Modeling and Control of ???



Our research relies on molecular engineering of the electrolytes and interfaces, aiming to achieve fast and stable electrochemical energy storage and conversion. Our group puts a significant emphasis on mechanistic studies and the ???



The electrical Energy Storage laboratory seeks to develop new technologies that can move beyond lithium-ion batteries, along with basic material research for improved energy storage and low cost. The lab is designed for synthesis ???



CEEC joins together faculty and researchers from across the School of Engineering and Applied Sciences who study electrochemical energy with interests ranging from electrons to devices to systems. Our industry ???



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Our research includes Li-ion batteries with improved performances, solid state batteries providing intrinsic safety, sulfur, and Li-air batteries with higher energy densities (required for future ???





We design electrochemical processes by tuning local chemical environments at the solid-electrolyte interface. Our research relies on molecular engineering of the electrolytes and interfaces, aiming to achieve fast and stable electrochemical ???



Advanced materials for next generation portable energy storage devices. This research encompasses the fields of materials science, electrochemistry, chemical and electrical engineering, and process optimisation to develop planar ???



By the integration of a series of state-of-the-art characterisation equipment at ATI and with the collaboration with the National Physical Laboratory (Electrochemistry Group and Electronic and Magnetic Materials Group), we ???



""???""???""",??? ???



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Four energy storage experts from the Pacific Northwest National Laboratory were among 3,300 national and international scientists named to Clarivate Analytics annual Highly Cited Researchers list. The list???released ???



Energy storage in batteries is relevant for mobile electronic equipment (energy scale Wh), electrical vehicles (kWh) and daily storage of renewables and grid stability (MWh). The different demands on these batteries in terms of ???



ECHEMES Team. 06.12.24: Our 3rd Dr.! Big congratulations to Dario on his successful PhD defense! She will be handling manuscripts in the area of electrochemical energy storage. Matthias Fernandez joins the group as PhD ???



The Chimie du Solide et Energie (CSE, solid-state chemistry and energy) lab is part of the Coll?ge de France, the most prestigious research establishment in France, led by Prof Jean-Marie Tarascon and active in the ???



Current research in our group is motivated by two main, interrelated technologies: electrochemical energy storage (flow batteries) and carbon dioxide capture. In many cases, there are themes common to both research areas, ???



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Since 2009, PNNL researchers have issued 390 energy storage-related peer-reviewed publications and have been awarded 45 U.S. patents, with commercial licensing to more than 20 companies. The list applauds ???





Welcome to the Electrochemical Energy Storage and Conversion Laboratory (EESC). Since its inception, the EESC lab has grown considerably in size, personnel, and research mission. Reuters studied research and releases ???