

GESELLSCHAFT DEUTSCHER CHEMIKER

Ortsverband Frankfurt

Elektrolyte für Elektrochemische Energiespeicher Chemische Konzepte, wirtschaftliche Bedeutung

"Customers don't buy products, they buy what the product can do for them" (Peter F. Drucker)

Is a key statement for the development and transformation of chemical concepts into successful innovations, as well. Hence, functional materials with highest value are based on analyzing performance needs for value in use and require translating specified physical parameters into chemical substances. This is especially important in the case of materials for energy storage technologies and for organic semiconductors for molecular electronics.

The presentation will focus on examples for designing and syntheses of molecular concepts for these applications by molecular engineering in view of their properties in the liquid and solid form for battery and supercapacitor electrolytes. Chemical approaches presented are based on concepts for weakly coordinating anions forming ionic liquid systems by combination of steric effects in Boron-, Fluorine-, and Phosphorous- compounds and with multiple redox active polycyclic hydrocarbons.





Dr. Klaus-Dieter Franz TU Darmstadt GU Frankfurt







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