Ljubljana Lithium Battery Laboratory Construction Project

The EU-funded PULSELiON project aims to develop the manufacturing technology for Generation 4b solid-state batteries. These batteries will comprise a lithium-metal anode, sulfide solid electrolytes and a nickel-rich nickel-manganese-cobalt cathode. A novel pulsed laser deposition technique will be adapted and modified into a single-step ...

The European project NAIMA ("Na Ion materials as essential components to manufacture robust battery cells for non-automotive applications") aims to develop a new generation of high-competitive and safe Na-ion cells for the ...

The team of researchers from University of Ljubljana, Laboratory for Internal Combustion Engines and Electromobility (LICeM), led by prof. dr. Tomaz Katrasnik, will in this 4 year project lead ...

The European project NAIMA ("Na Ion materials as essential components to manufacture robust battery cells for non-automotive applications") aims to develop a new generation of high-competitive and safe Na-ion cells for the current and future energy storage technologies, supported by the key actors of the European Battery value chain. NAIMA ...

Effectively extracting a lithium-ion battery"s impedance is of great importance for various onboard applications, which requires consideration of both the time consumption and accuracy of the measurement process. Although the pseudorandom binary sequence (PRBS) excitation signal can inject the superposition frequencies with high time efficiency and an ...

2020-2022: CELSA - Joint bilateral projects between KU Leuven and University of Ljubljana: Towards continuous combustion of gasified municipal solid waste.

Laboratory: Laboratory for Internal Combustion Engines and Electromobility LICeM. Project description: The lithium-ion battery (LIB) market is a rapidly growing industry that supplies ...

As a worldwide leader in the supply of lithium brine treatment technologies and chemical processing systems, Veolia Water Technologies helps lithium producers and recyclers meet the technical challenges associated with the rising demand for efficient production or recycling of high-purity lithium and battery material salts for advanced electric battery manufacturing.

Recent landmark projects such as the Zavod 21 Batteries Plant in Maribor and the Elektro Batteries Facility in Ljubljana highlight Slovenia"s commitment to becoming a regional hub for ...

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The new laboratory will be a one-stop shop for education, knowledge transfer, testing and pilot production of lithium and post-lithium battery cells for the purpose of developing technologies or validating solutions to be used by stakeholders in the private sector, public sector or ...

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We are working on designing batteries with improved functioning and longer lifetime. Our strategies to enhance the battery performance include developing self-healing batteries as well ...

Lithium-ion batteries, known for their superior performance attributes such as fast charging rates and long operational lifespans, are widely utilized in the fields of new energy vehicles ...

Leading role in multiscale modelling confirms high modelling competences of the LICeM, while ADVAGEN project synergistically complements development of advanced modelling tools that LICeM is developing also in other Horizon Europe projects: PULSELiON (PUlsed Laser depoSition tEchnology for soLid State battery manufacturIng supported by digitalization) and ...

The previously unresolved obstacles for using silicon in lithium-ion battery anodes, which were: silicon particle swelling; prohibitive first-cycle-capacity-loss of up to 50%; and rapid battery degradation, appeared to be improved significantly during the laboratory testing of Altech"s composite graphite/silicon batteries. The lithium-ion ...

The construction of lithium batteries involves meticulous coordination of materials and processes to ensure both efficiency and safety. It begins with the preparation of the electrodes, which involves coating metal foils, usually aluminum for the cathode and copper for the anode, with active materials that facilitate the movement of lithium ions. These coatings ...

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