



Press Release Finalists ISC₃ Innovation Challenge

Finalists of the first ISC₃ Innovation Challenge selected

Frankfurt am Main/Germany, July 15th, 2021 – The voting period of the **second ISC₃ Innovation Challenge** that called for innovations in the field of **Renewable Energy and Sustainable Chemistry Solutions** just ended. It received a large number of top-notch applications from six continents and 28 countries.

Renewable Energy and Sustainable Chemistry Solutions

The Challenge is organized annually with a changing thematic focus, and the final applications selected span a broad range of renewable energy and sustainable chemistry solutions. This year, the ISC₃ was specifically looking for sustainable chemistry solutions from fields such as renewable energy supply and greenhouse gas reduction, performance of materials and technologies, chemical production technologies based on carbon neutral energy and CO₂ feedstock supply, durability and resilience, renewable energy sources as feedstock supply in chemical transformations, and storage capacity building.

After a long and careful preparation and selection process that already started out in March 2021, the following start-ups made it through to the ISC₃ Innovation Challenge 2021 finals competing with 62 further start-up solutions (alphabetic order):

- **BioCORE; Stephan Herrmann, Germany:**
BioCORE's new system design is intended to significantly increase the efficiency of the fuel cell system compared to the state of the art and to enable reversible operation. In this process, excess generation from wind turbines and photovoltaics is converted into synthetic methane by electrolysis and fed into the natural gas grid.
- **Geyser Batteries Oy; Daria Hedberg and Anu Rousku, Finland:**
Geyser Batteries Oy develops and manufactures a new class of high-power, water-based, non-lithium batteries, which are capable of over one million fast charging cycles even at ultra-low ambient temperatures. The batteries have the lowest carbon footprint across the industry and are competitively priced.
- **IC2R Innovative; Michele Aresta, Italy:**
IC2R developed an effective photochemical CO₂-recycling process enabling conversion of alcohols into linear carbonates, using CO₂ in solventless conditions or in water. The abundant metals (non-precious) which are used as catalyst are recoverable and reusable in an innovative process that minimizes waste production.
- **LeafyLife; Peter Gachanja, Kenya:**
LeafyLife is improving lives of families, women, and youth in Sub-Saharan Africa by converting waste diapers and sanitary pads into clean and affordable cooking fuel. Thereby contributing to better air quality and less respiratory diseases in rurally situated African homes and saving the environment by considerably reducing the output of critical greenhouse gas.

- **Shobab Energy; Oluwatosin George, Nigeria:**
Shobab Energy is using waste from oil palm-productions as biomass resource in combination with solar photovoltaics to provide universal access to modern energy services. These decentralized systems allow 85 million Nigerians to gain access to more sustainable electricity and prevent smoke pollution.
- **ESy-Labs GmbH; Tobias Gärtner, Germany:**
ESy-Labs produces specialty chemicals as well as pharmaceutical compounds through electrosynthesis instead of the use of unsustainable, expensive, toxic and stoichiometric reagents. In addition, high-throughput screening and AI will support scale up from existing lab to technical scale.
- **UP Catalyst; Gary Urb, Estonia:**
UP Catalyst uses molten salt carbon capture and electrochemical transformation to reprocess CO₂ and produce valuable carbonaceous nanomaterials that can be used in top quality materials which have a vast range of applications, e.g. in battery and supercapacitor technologies.

We would like to extend our heartfelt thanks to our **international judging panel of 30 independent reviewers**, amongst which ISC₃ partner organization representatives, ISC₃ Advisory Board members, and individually assigned external experts, who made it possible to professionally assess all applications on a very high level.

All finalists will get access to the customized support of the ISC₃ Global Startup Service (ISC₃ GSS) Programme in the form of an online start-up training. They will be featured via the ISC₃ communication channels as a “lighthouse case study for sustainable chemistry innovation”.

On the basis of their presentation in the end of the training, five finalists will be shortlisted and given the chance to compete to win EUR 15.000 and pitch on November 11th, 2021 late afternoon CET during the upcoming all virtual third **ISC₃ Investor Forum 2021** that will be held in the frame of the first online **ISC₃ Sustainable Chemistry Week 2021**.

To learn more about our **ISC₃ Innovation Challenge Award nominee's**, and to [register for the ISC₃ Investor Forum 2021](#), please visit www.isc3.org.

The ISC₃ Investor Forum 2021 is a must attend event for international VCs and angel investors that are looking to invest in innovative sustainable chemistry technologies.

About the ISC₃

The ISC₃ is an international centre promoting and developing sustainable chemistry solutions worldwide. It is a globally acting centre, a multi-stakeholder platform that engages with civil society, politics, and the private sector to contribute to international chemicals policies and the formation of a global network for collaboration, innovation, research, and education on Sustainable Chemistry. The centre was founded in 2017 on the initiative of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and the German Environment Agency (UBA). The ISC₃ is anchored in the German GIZ



(Gesellschaft für Internationale Zusammenarbeit) and has established a Research & Education Hub at Leuphana University, Lüneburg, and an Innovation Hub at DECHEMA e.V., Frankfurt.

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