



## International Start-ups Unveil Sustainable Chemistry Innovations at the Impact Festival in Frankfurt a.M., Germany

Ten groundbreaking start-ups are set to showcase their innovative ideas at the ISC3 Investor Forum, culminating in the Award Ceremony for the Innovation Challenge 2024, with a prize of €25,000.

What can attendees expect from this year's Investor Forum of the International Sustainable Chemistry Collaborative Centre (ISC3)? Innovations range from leather alternative made from fruit waste in Mexico, to advanced textile recycling processes from Sweden, to PFAS-free textile membrane from Switzerland, to bio-based and biodegradable textile and leather chemicals developed in India, and to unique genetic identifiers for products developed in Türkiye. These outstanding ideas will be presented by the finalists of the ISC3 Innovation Challenge who are all focused on driving solutions in Sustainable Chemistry and Textiles.

Taking place as part of the Impact Festival on October 30th and 31st at Forum Messe Frankfurt, the event will feature five finalists competing for the Innovation Challenge Award, alongside another five exceptional start-ups which are supported by the [ISC3 Global Start-up Service](#).

### Harnessing Impact Investment for Sustainable Chemistry Innovations

The annual ISC3 Investor Forum aims to foster connections among start-ups, scientists, investors, and decision-makers, promoting collaboration to advance Sustainable Chemistry solutions. "This year, we are excited to partner with the Impact Festival to showcase the transformative potential of Sustainable Chemistry. Our goal is to engage Impact Investors by highlighting the significant contributions of our selected start-ups to society and the environment, along with their promising economic potential," states Dr. Thomas Wanner, Managing Director of the ISC3.

There is a lot to experience: 10 start-ups on 2 days on 2 stages and 1 winner of the ISC3 Innovation Challenge

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## Programme

### October 30th – Solution Stage, 10:30 – 11:30 CET

- Pitches from ten start-ups, including the five finalists of the Innovation Challenge.
- Meet all ten pitching start-ups at the ISC3 stand (Forum Messe Frankfurt, level 0, stand C1) on both days after the programme on the stage.

### October 31st

#### Transformation Stage, 13:30 – 14:30 CET

- ISC3 Investor Panel on the topic “Financing Innovation in Sustainable Chemistry and Textiles”.
- Award ceremony of the ISC3 Innovation Challenge 2024 and announcement of the Audience Award Winner.
- Meet all ten start-ups at the ISC3 stand (Forum Messe Frankfurt, level 0, stand C1) on both days after the programme on the stage.

#### Innovation Hub, 16:00 – 16:45 CET

- ISC3 Masterclass entitled ‘Which Dimensions of Sustainability Does Your Start-up Impact?’, designed to provide valuable insights into the ‘Practice of Sustainable Chemistry’, with case studies and interactive exercises - all interested parties are invited to attend.

For more information, please visit [ISC3 Investor Forum](#) and get [your Impact Festival ticket here](#).

**Don’t miss out our programme: 2 days including ISC3 booth, pitches, a masterclass and award ceremony. 10 start-ups from 9 countries on 2 stages. One common goal: Sustainable Chemistry for a sustainable world.**

### **Innovations in Sustainable Chemistry: Paving the Way for a Better Future in Agriculture, Building Industry, and Waste Management**

AR-ENA from Jordan, Nina Energy from Ecuador, Egrobots from Egypt, Theseus Development and AppCyclers from Ghana are among the innovative ISC3 start-ups presenting their innovations at the Solution Stage on October 30th, 2024. They are committed to challenging the status quo in their respective fields, driving advancements toward a more sustainable future. United by their vision of fostering a stable economic, social, and environmental foundation for generations to come, these founders are making impactful strides in agriculture, the building industry, and waste management.

[AR-ENA \(Jordan\)](#) produces a new type of hydrogel – polymers which absorb air humidity and capture liquids and can be used as a replacement for soil in hydroponics and as a replacement or assistant for the irrigation process and systems. AR-ENA’s innovation aims to revolutionize agriculture by reducing water usage by up to 65% while significantly boosting crop yields.

[Nina Energy \(Ecuador\)](#) is a science-based start-up that develops high-tech pyrolysis equipment on-site with locally sourced materials and workforce, reducing CAPEX and lead times while creating economic

opportunities. Their tech adaptability ensures efficient resource utilization and the generation of carbon credits that are traded in the voluntary market.

**Egrobots (Egypt)** revolutionizes agriculture with AI-powered robots and data analytics. The start-up provides farmers precision solutions for crop health, optimizing yields and promoting sustainable farming practices.

**Theseus Development (Ghana)** uses an abundant, natural material to produce an alternative to cement-based concrete called "geopolymers", which can be used as thermo- and cost-efficient building blocks for the building industry. The start-up aims to accelerate the transition to a green built environment by empowering builders to create sustainable communities with geopolymer concrete.

**AppCyclers (Ghana)** operates a web-based marketplace platform that digitizes the collection, sourcing, and purchasing of e-waste by connecting generators, recyclers, and off-takers, streamlining the entire lifecycle.

#### **Vote for Your Winner of the Audience Award**

Should you be around the Solution Stage at approximately 10:30 on October 30th, please vote for your favourite start-up pitch among the ten by opening the subsequent ISC3 audience award poll link:

<https://easy-feedback.com/survey/1866351/wu2Nou>

We are looking forward to receiving your vote! The Audience Award Winner will be celebrated by the crowd live on Transformation Stage on October 31st, 2024!

#### **ISC3 Innovation Challenge 2024 Award on the topic "Innovations in Sustainable Chemistry for Textiles"**

A key highlight of the ISC3 Investor Forum 2024 will be the award ceremony and presentations from the finalists of the fifth ISC3 Innovation Challenge on October 31st, 2024 at approximately 14:00 CET on Transformation Stage. This year, the international €25,000 ISC3 competition will recognize outstanding ideas in Sustainable Chemistry that have the potential to transform the textile sector. "Through our Innovation Challenge in Sustainable Chemistry and Textiles, we aim to reward and empower visionary thinkers developing innovative solutions for a more sustainable future in the textile industry," says Dr. Alexis Bazzanella, Director of the ISC3 Innovation Hub.

An international jury of 23 experts selected the five finalists (in alphabetical order) from a total of around 50 high-ranking applications from start-ups on five continents:

**Dimpora AG (Switzerland):** Dimpora® is a revolutionary PFAS-free textile membrane that makes fabrics completely waterproof and breathable without harming the environment, thanks to a scientifically based and patented CoreLayer technology.

**DNACotton (Türkiye)** has developed a block-chain based traceability system in the textile sector by engaging DNABarkod® technology. This technology involves the genetic tagging of products at various stages of the production cycle, providing each product with a unique genetic identifier.

**POLYBION (Mexico)** uses locally produced agro-industrial fruit waste as raw material to craft forward-thinking biomaterials such as Celium™- Premium Cultivated Cellulose. Celium™ can be dyed, embossed



and tanned using existing infrastructure, resulting in a lower negative environmental impact than traditional fabrics.

**[Renasens AB \(Sweden\)](#)** contributes to accelerating the transition to a circular economy by developing a waterless & clean technology to recycle agricultural and blended textile wastes to new resources without fibres' depolymerisation or degradation.

**[SCHUTZEN CARE PRIVATE LIMITED \(India\)](#)** develops bio-based and biodegradable textile and leather chemicals that support biodiversity. These chemicals are based on the valorisation of bio-waste from the seeds of a local tree fruit and are produced using SCHUTZEN's patented reaction technology. SCHUTZEN's innovation reduces carbon emissions, provides an alternative to hazardous substances, thereby reducing risks to human health, reducing water pollution and promoting biodiversity.

We are proud to promote solutions in the field of Sustainable Chemistry!

Do not miss any update and visit [ISC3 Investor Forum](#). Get [your Impact Festival ticket here](#).

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#### **About ISC3**

The **International Sustainable Chemistry Collaborative Centre** promotes Sustainable Chemistry for a sustainable world. ISC3 supports the chemical industry and chemical-related sectors in their transformation process through sustainable, innovative approaches from Sustainable Chemistry. The goal is a circular economy that implements the multiple aspects of sustainability over the entire life cycle of products and a rethinking of the behaviour of all stakeholders. To advance the dialogue between different sectors and actors worldwide, including Europe and other regions as well as emerging and developing countries, ISC3 follows a multi-stakeholder approach with the networking of policymakers, public and private sectors, education, science and society. It contributes to international chemicals policy, develops professional and academic training programs, advises companies, and promotes start-ups and research. Founded in 2017 by the Federal Environment Agency and the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection, the centre is supported by the German Society for International Cooperation (GIZ) and by the Society for Chemical Engineering and Biotechnology (DECHEMA e.V.) as ISC3 Innovation Hub and Leuphana University Lüneburg as ISC3 Research & Education Hub. [www.isc3.org](http://www.isc3.org)