HYPER
ELECTRIFIED CHEMISTRY

Newsletter

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An electrochemically produced oxidiser for modular, onsite generation of HYdrogen PERoxide

HYPER's world class consortium aims to transform hydrogen peroxide (H_2O_2) production from a large-scale, energy intensive chemical process to a small-scale on-site production, through electrifying the chemical production of H_2O_2.

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1. Coordinator's Update

The HYPER project will soon reach its halfway point. Our 18-month review meeting with the Commission was successfully completed a few months ago with a positive review, and the project taking the next steps in its progression toward the TRL 6 pilot plant that will be demonstrated at the end of the project.

Work on the construction of the TRL 4 mini-plant that will be eventually deployed at our textile partner inoTEX in the Czech Republic has started. Completion and shakedown of the mini-plant will take place next spring, completely consistent with the project timeline. Simultaneously, work on the TRL 6 pilot plant has started, and the lessons learned from the construction and testing of the mini-plant will be important for the successful completion of the upscaled technology.

Initial textile bleaching results performed at inoTEX with laboratory produced e-H2O2 satisfyingly showed essentially no difference

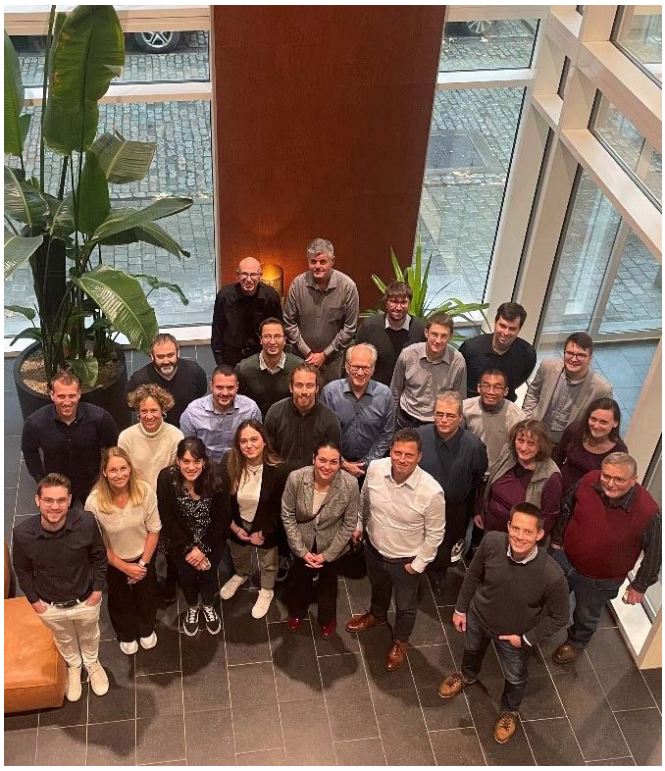

Figure 1. Consortium members meeting in Brussels

between our e-H2O2 and commercial H2O2. The initial techno-economic and life cycle assessments of the process both indicated the same technological improvements that are needed to meet the project's competitiveness and sustainability goals. These improvements are the focus of the continued process optimisation currently taking place in the project.

Another outcome of the initial techno-economic and life cycle analyses will be a review paper on alternative H2O2 production process currently under development. Keep an eye open early next year for more news on the publication of this review paper. I would like again to give a shoutout to all the consortium partners for their continued engagement and dedication for a successful project.

2. Discover The Future Of Hydrogen Peroxide Through A Creative Video

An animated video was created to explain how HYPER addresses the challenge of hydrogen peroxide production by developing a novel electrosynthesis method.
This technology allows an on-demand, on-site production of hydrogen peroxide in precise concentrations, eliminating the need for long-distance transportation and reducing the environmental footprint.
Click to watch video here.

3. Andritz Advances Hyper Technology Integration In Pulp And Paper Industry

ANDRITZ, a Finland-based leading global supplier of systems, equipment, and services for the pulp and paper industry, is making progresses in integrating the HYPER innovations into the industry.
Thanks to on-site manufacturing of hydrogen peroxide, pulp mills can increase environmental efficiency and utilize renewable excess energy. The company has achieved several key milestones in the integration process including a modern state-of-the-art pulp mill concept with a comprehensive process design and balance.

4. A Rich Roundup Of Events

The HYPER project has recently featured several events regarding textile industry and much more. A summary is provided herein:
TECHTEXTIL 2024, 23-26th April -This year, project partner Inotex presented project HYPER at Techtextil 2024, the leading international trade fair for technical textiles and nonwovens, held in Frankfurt, Germany, where 1600 exhibitors from 53 countries presented the entire spectrum of technical textiles, nonwovens, functional apparel textiles and textile technologies.
TEXWASTE 2024, 22nd May -INOTEX contributed to HYPER project promotion by bringing the project's roll-up and leaflets at TEXWASTE's 3rd national conference organized on 22nd May in Hradec Králové, Czech Republic.
TEXTILE ETP ANNUAL CONFERENCE, 14-15th May - Jan Marek, member of the management board of The European Technology Platform for the Future of Textiles and Clothing (ETP),

presented project HYPER at the 18th Textile ETP Annual Conference 2024 which took place in Mechelen (Belgium). This conference brought together industry leaders, experts, and innovators focusing on sustainability, innovation, fundings, and the future of the textile sector.

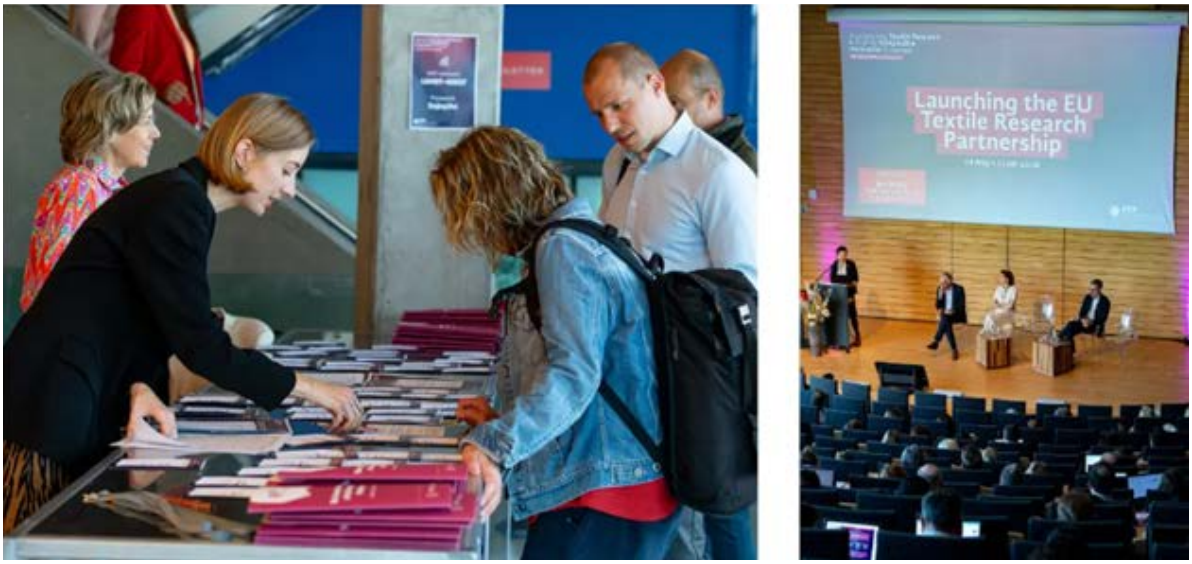

Figure 2 Textile ETP Annual Conference 2024

ČTPT and CLUTEX TEXTILE INDUSTRY WORKSHOPS, 10-11th July -HYPER project was presented at two recent workshops held during general meetings of two prominent organizations in the Czech textile industry: ČTPT (The Czech Technology Platform for Textile) and CLUTEX (Cluster Technical Textiles)
Both workshops, taking place in Broumov, Czech Republic, provided an excellent platform to present HYPER to potential stakeholders in the textile industry.

HYPER at P4P Workshop on Process Industries Electrification, 24th October - The workshop, titled “Opportunities and Challenges within Electrification of the Process Industries” and organised by HYPER, was part of the Second European Process Industry Conference organized by the European Public-Private Partnership A.SPIRE. HYPER presentation addressed benefits and challenges of electrification in process industries, with a spotlight on textiles, pulp and paper, and coatings.

Figure 3 HYPER presentation at Process4Planet thematic workshop

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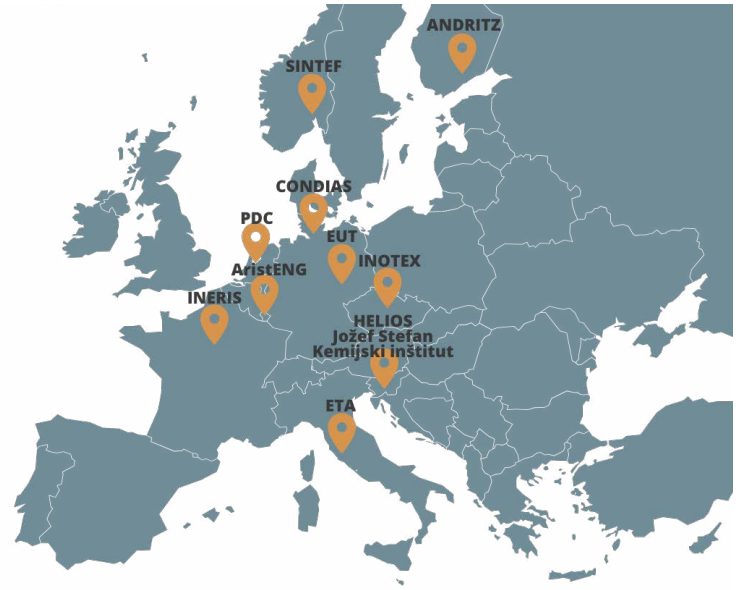

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