

Press release

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Bekaert and Toshiba sign a partnership agreement on MEA technology for PEM electrolyzers to accelerate the advance towards green hydrogen production at scale

Bekaert**Toshiba Energy Systems and Solutions Corporation**

Bekaert and Toshiba Energy Systems and Solutions Corporation (“Toshiba”), have entered into a global partnership which includes a strategic cooperation agreement, and a manufacturing technology license for Membrane Electrode Assemblies (MEA), a key component for Proton Exchange Membrane (PEM) electrolyzers, that will help to accelerate the advance towards green hydrogen production. The agreement formalizes recent collaboration to leverage both companies’ technological, manufacturing and commercial strengths since signing an MoU in September 2023*.

PEM electrolyzers use electricity to split water into its component elements of oxygen and hydrogen. When the electricity is from a renewable energy source, the hydrogen is produced without any greenhouse gas emissions. The catalyst in PEM anode electrodes uses iridium, one of the scarcest traded metals. Consequently, solutions that reduce iridium content present a significant break-through towards the scale adoption of these technologies.

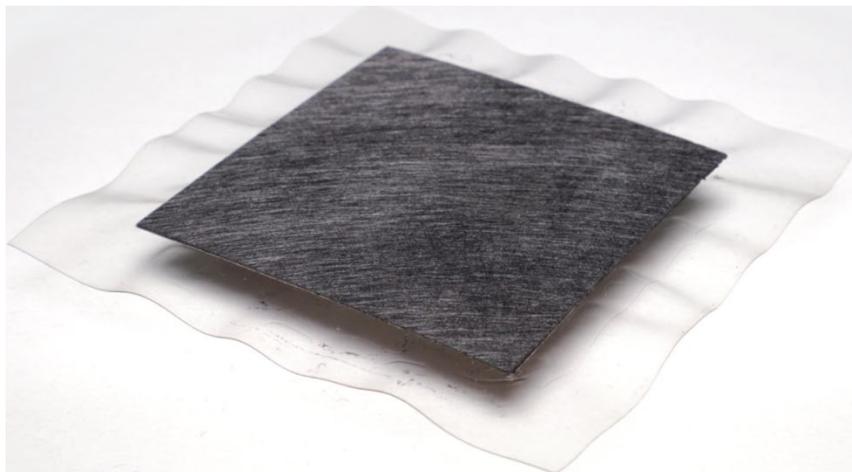
Under the agreement, Bekaert’s leading expertise in Porous Transport Layers (PTL), a key component in the MEA of water electrolyzers, will be coupled with Toshiba’s innovative iridium-saving technology for MEA, which will enable a 90% reduction in iridium usage in the production of PEM electrolyzers. This reduction in iridium will enable a more stable supply of MEA and support the scale expansion of green hydrogen production.

Bekaert will undertake commercialization of MEA production, leveraging its global network and established manufacturing base in Belgium, to serve its hydrogen customers. Toshiba will license its iridium-saving MEA technology to Bekaert, granting them the ability to manufacture and distribute MEAs. Meanwhile, Toshiba will focus on further enhancing its technical performance of the technology. The agreement is global, with the exception of Japan-related projects, which will be subject to a separate agreement.

Inge Schildermans, Senior Vice-President of Bekaert’s Energy Transition business commented: “Bekaert is a leading player in the development of green hydrogen production and is therefore delighted to partner with Toshiba on the industrialization and commercialization of this innovative new PEM MEA technology. Furthermore, we are delighted to be able to offer this to our green hydrogen customers and help them achieve their cost and sustainability challenges. Bekaert is establishing itself as a green hydrogen technology and industrialization partner, helping the electrolyzer industry to scale and deliver the energy transition.”

Shigehiro Kawahara, Vice-President of Toshiba ESS commented: "Addressing the surging demand for green hydrogen requires wider adoption of PEM electrolysis equipment. Our advanced iridium-saving MEA technology, coupled with Bekaert's longstanding expertise in PTL, forms a promising partnership. We believe this collaboration will effectively meet the rapid growth in demand and contribute significantly to the realization of a green hydrogen society."

* Press Release: [Bekaert and Toshiba sign Memorandum of Understanding to develop global partnership around MEA for PEM electrolysis - Bekaert.com](#)



About Bekaert

Bekaert's ambition is to be the leading partner for shaping the way we live and move, and to always do this in a way that is safe, smart, and sustainable. As a global market and technology leader in material science of steel wire transformation and coating technologies, Bekaert also applies its expertise beyond steel to create new solutions with innovative materials and services for markets including new mobility, low-carbon construction, and green energy.

About Bekaert Hydrogen

Bekaert's ultrathin metal fiber porous media are used as porous transport layers enhancing the durability and performance of electrochemical devices such as water electrolyzers for the production of green hydrogen. Bekaert has established a technology and market leadership position in Porous Transport Layers (PTL) for both PEM and AEM electrolyzers with the brandname [Currento®](#). The company invests in the development of next generations of innovative solutions for green hydrogen production as well as in expanding its production footprint to multiple GW capacity over the coming years.

About Toshiba Energy Systems & Solutions Corporation

Toshiba Energy Systems & Solutions Corporation, a wholly owned subsidiary of Toshiba Corporation, handles Toshiba Group's energy businesses. With its long experience and expertise in a wide range of power generation and transmission systems, and in energy management technologies, the company delivers innovative, reliable, and efficient energy solutions across the globe.

Find out more about Toshiba ESS at <https://www.global.toshiba/ww/company/energy.html>

More information on Bekaert's technology leadership in solutions for green hydrogen production

- [7 December 2023](#): Bekaert invests in Ionorm Innovations
- [10 October 2023](#): Bekaert and Toshiba sign MOU to develop global partnership
- [17 April 2023](#): Bekaert expands manufacturing and research capacity in electrolysis technologies for green hydrogen production
- [17-21 April 2023](#): Bekaert exhibits at Hannover Messe in Hall 13: [Hydrogen and Fuel Cells](#)
- [22 March 2023](#): Bekaert joins Solar Impulse Foundation as a partner to advance sustainability efforts
- January 2023: Bekaert became a member of Hydrogen Europe
- [Bekaert Website](#): [Currento® PTL](#) for hydrogen production
- Bekaert is a partner of ECO2Fuel
- [22 September 2022](#): Bekaert concludes partnership with Pajarito Powder, Albuquerque, US, to accelerate the development of spearheading innovations in the market of green hydrogen production
- [26 April 2022](#): JM, Bekaert, TNO and Schaeffler partner to boost the efficiency of renewable hydrogen production
- [31 May 2021](#): Flemish expertise centers join forces with industry to push green hydrogen production forward

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