**PRESS RELEASE**

**French research group gets a second recognition at the European Inventor Award 2023 with the Popular Prize for an innovative approach to storing hydrogen**

* **The multidisciplinary research group was voted the public's favourite in an online poll after already winning in the ‘Research’ category**
* **The team developed an efficient storage solution for hydrogen, that can be a crucial factor in combatting climate change**
* **This invention makes green hydrogen accessible and safer to transport and mass store**
* **The Popular Prize winner was announced by European Patent Office at a hybrid ceremony today in Valencia, Spain**

**Munich, 4 July 2023** – A French multidisciplinary team consisting of Patricia de Rango, Daniel Fruchart, Albin Chaise, Michel Jehan and Nataliya Skryabina, today received the **Popular Prize of the European Inventor Award 2023 for finding a way to store safely hydrogen efficiently** in a solid form for easier storage and transportation. This announcement came shortly after receiving the European Inventor Award in the ‘Research’ category, chosen by an independent jury, making it their second win of the day.

Hydrogen plays a key role in the clean energy transition, being three times more energetic than fossil fuels. However, it takes up more space and requires more energy to compress and store it. This promising work to better store the element resulted in the French researchers receiving the most votes from the general public in an online poll.

“*Thanks to the juries for choosing us finalists, and to the public. Our group continues to work strongly towards the similar and better objectives. This research symbiosis has been made so fruitful largely thanks to several contractual support from DG XII. In addition to the discovery, development of original materials and smart reservoirs, our research team has benefited from the skills of 10 young PhDs trained during the patent emergence period. In our opinion, the training of young people in modern research and development is essential,*” say the winning team on receiving this second prize.

The Popular Prize was awarded by the European Patent Office at the hybrid European Inventor Award 2023 ceremony in Valencia, Spain today, which also honoured winners in five other categories, as well as young inventors.

Over the past few weeks, the public was invited to choose their favourite inventor or inventor team from the 12 finalists nominated across the categories Research, Industry, Non-EPO countries and SMEs.

**Solid hydrogen in a million-tonne market**

**Hydrogen has the potential to achieve global decarbonisation**. Demand for the element reached 94 million tonnes in 2021 and accounted for roughly 2.5% of the final global energy consumption, according to the Global Hydrogen Review 2022, published by the International Energy Agency (IEA). One of the main goals within the industry is safer and more efficient storage.

With their combined expertise in physics and engineering, the French team developed an atomic structure and process that results in the hydrogen being stored in disc, which is safer, more stable and doesn't ignite when heated. This method also requires less energy than storing hydrogen in liquid form or as very high-pressure gas and is therefore more sustainable. The disc can be stored for years without degrading. “*The system is very safe because of the low-level pressure used*,” said Daniel Fruchart, one of the team’s experts, “*I can put the disc directly on the table and there is no reaction with the air.*”

The French team uses magnesium hydride (MgH2) to store the hydrogen. Expanded graphite is added to the mixture to manage the heat when the hydrogen is released. It’s then mechanically compressed into a disc, which is easily stored and transported. Additionally, the heat of the reaction is stored reversibly, meaning the total energy efficiency improves by 80%. Their invention has already been commercialised across Europe, Australia, and Japan.

Find more information about the invention’s impact, the technology and the inventors’ stories [here](https://new.epo.org/en/news-events/european-inventor-award/meet-the-finalists/patricia-de-rango-daniel-fruchart-albin?mtm_campaign=EIA2023&mtm_keyword=EIA-pressrelease&mtm_medium=press&mtm_group=press).

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**About the European Inventor Award**

The European Inventor Award is one of Europe's most prestigious innovation prizes. Launched by the EPO in 2006, the award honours individuals and teams, who have come up with solutions to some of the biggest challenges of our time. The finalists and winners are selected by an independent jury comprising former Award finalists. Together, they examine the proposals for their contribution towards technical progress, social and sustainable development, and economic prosperity. All inventors must have been granted a European patent for their invention. Read more [here](https://new.epo.org/en/news-events/european-inventor-award?mtm_campaign=EIA2023&mtm_keyword=EIA-pressrelease&mtm_medium=press) on the various categories, prizes, selection criteria and livestream ceremony to be held on 4 July 2023.

**About the EPO**

With 6,300 staff members, the [European Patent Office (EPO)](https://www.epo.org/?mtm_campaign=EIA2023&mtm_keyword=EIA-pressrelease&mtm_medium=press&mtm_group=press) is one of the largest public service institutions in Europe. Headquartered in Munich with offices in Berlin, Brussels, The Hague and Vienna, the EPO was founded with the aim of strengthening co-operation on patents in Europe. Through the EPO's centralised patent granting procedure, inventors are able to obtain high-quality patent protection in up to 44 countries, covering a market of some 700 million people. The EPO is also the world's leading authority in patent information and patent searching.