

## MOST-H2 project Kick-Off : a solution for efficient storage of hydrogen

*Widespread use of hydrogen as an energy carrier is a key priority for the EU in order to achieve its climate and energy transition targets. The EU funded project MOST-H2: “Novel metal-organic framework adsorbents for efficient storage of hydrogen” is therefore developing an innovative concept for hydrogen storage, from the laboratory to the tank. With a budget of appr. 6 million euros over 48 months, the project focuses on research and innovation to find the best storage solutions. On July 4<sup>th</sup>, 2022, the project had its official Kick-Off meeting.*

### MOST-H2 in a nutshell

MOST-H2 consists of a laboratory-to-tank approach to develop, validate and demonstrate innovative low-cost hydrogen storage technologies using cost-efficient monolithic Metal-Organic Framework (MOF) adsorbents, with an optimal combination of volumetric and gravimetric capacity, but also a low environmental footprint. New, sustainable high-performance MOFs are produced through the combination of advanced synthesis strategies and sophisticated computational techniques.

The main objective is to computationally design, synthesise and experimentally validate new ultra-porous MOF based hydrogen adsorbents. This represents an essential step towards more efficient, inherently safer and cost-effective hydrogen storage solutions compared to conventional technologies. An important part of the project is devoted to developing and upscaling monolithic forms of optimal MOF materials to allow easy integration into a cryo-adsorption storage tank, specifically designed for this purpose.

With the MOST-H2 technology forming the basis for elaborating future market penetration plans, the project will contribute considerably to a green, sustainable and circular hydrogen economy.

### Project Kick-Off Meeting

Organized by the project coordinator, National Centre for Scientific Research « Demokritos », the



MOST-H2 Kick-Off Meeting was held online, allowing a cheerful first reunion with all participants on July 4<sup>th</sup>, 2022. Joining forces, the highly motivated, multinational and multidisciplinary MOST-H2 team is looking forward to the upcoming months of collaboration!

## MOST-H2 consortium

MOST-H2 gathers 16 partners from Greece, the UK, France, Germany, Spain, Austria, Italy and Morocco working together since 1<sup>st</sup> June 2022 until 31<sup>st</sup> May 2026: [National Centre for Scientific research “Demokritos”](#) (coordinator), [University of Cambridge](#), [University of Crete](#), [Université du Mans](#), [Friedrich-Alexander Universität Erlangen-Nuernberg](#), [Universidad de Alicante](#), [Max-Planck-Gesellschaft](#), [Immaterial LTD](#), [Mohammed VI Polytechnic University](#), [Lapesa Grupo Empresarial SL/Laguens y Perez SL](#), [FEN Research GmbH](#), [Italferr SPA](#), [Greendelta GmbH](#), [Steinbeis 2I GmbH](#), [Hiden Isochema Ltd.](#)



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