



## HOW WE MADE MOFS A COMMERCIAL REALITY

*At MOF Technologies we were the first company that broke through the wall between MOF science and commercial application. We co-developed a MOF based product with high efficacy for storing and releasing a highly unstable gas in the post-harvest freshness management industry.*

Hungry for more success, our diverse team of experts continue to innovate and pioneer the MOF field, securing additional IP and new strategic partnerships. Our partners choose us for our proven track record on MOF product development and through collaborations, we help design and manage their path from problem to high-performing MOF product in a timely, low cost, and low-risk manner.



### PROBLEM

Under normal environmental conditions, the target gas for this application is chemically unstable and posed explosive hazards when stored via compression. The key to unlocking the controlled delivery of this gas was the development of a suitable high capacity adsorbent that could safely capture and store it.



### THE PATH

We leveraged our years of MOF knowledge and expertise to shortlist the most promising candidates for the storage and delivery of the target gas. Using our custom-built adsorption suite, the sorptive properties of the selected MOFs were evaluated under actual conditions to determine how they would perform in reality. Upon selecting the leading MOF for the application, we tailored properties, such as shape factor and particle size to further enhance performance and facilitate prototype development. The final step was providing multi-kg quantities of the optimised and shaped MOF material to validate the technology.



### PRODUCT

We enabled the development of a safe storage and delivery package for an unstable gas by developing an innovative MOF with unrivalled volumetric working delivery. We further supported this project by supplying commercial volumes of consistent, high-quality MOF using our award-winning patented protected manufacturing process.

*So lean on our proven product development pedigree and partner with the MOF pioneers to help design and manage your path from problem to high performing MOF product in a timely, low cost, and low-risk manner.*

## OUR PATH TO PRODUCT



### PROBLEM

How to store and deliver an unstable gas not suitable for compression.



### PATHFINDING

Application of our MOF knowledge to identify candidates for the storage & release of the target gas.



### CONCEPT AND FEASIBILITY

Selection of principle MOF through performance evaluation under realistic test conditions.



### DEVELOPMENT

Optimisation of leading MOF's physical properties to enable prototype development.



### DEMONSTRATION

Provision of multi-kg quantities shaped MOF for technology validation



### PRODUCT

Commercial supply of an innovative MOF with suitable storage & delivery properties for the unstable gas.

## THE PACE FROM PROBLEM TO PRODUCT

