

Enabling a Sustainable Future Through Advanced Carbon Materials and Hydrogen

Welcome.

Dear Colleagues, the past few months have seen an unprecedented global pandemic unfold and trigger a global economic recession. This crisis highlighted the importance of working together with urgency on our long-term future.

The energy transition is already underway, and a number of technologies are being deployed to reduce our $\rm CO_2$ footprint. However, new pathways must be developed to go beyond technologies that are ready or near-ready for large-scale use.

This is particularly important in the case of hydrogen: the currently available routes alone cannot provide enough CO₂-free energy in the long term. Water splitting increases pressure on renewable sources of electricity, and the other routes (such as SMR with CO₂ capture and methane splitting with low-value carbon by-products) rely on waste management (CO₂ or low-value solid carbon) which must be avoided to attain a circular economy in the long term. If we want to solve the hydrogen issue, we must solve the solid carbon issue satisfactorily.

In the past few months, we have been working together with our Corporate Partners to setup the foundations of the Carbon Hub. And we are pleased to announce our first Call for Proposals to start providing solutions for a low-carbon sustainable future where the splitting of hydrocarbons provides carbon-based materials that displace CO₂ and energy intensive materials in addition to concurrent production of hydrogen.



Professor Matteo Pasquali Director, Carbon Hub



Dr. Marie Contou Carrere Interim Executive Director, Carbon Hub

Call for Proposals.



Dr. Glen C. Irvin, Jr. Chair, Carbon Technical Council Carbon Hub

Since the vibrant and successful Technical Workshop at the Kick Off Meeting in February, the Carbon Technical Council team has been busy organizing and consolidating the 400+ideas, questions, and comments generated by the participants and focused them into 5 topical areas.

We are announcing that our inaugural Call for Proposals will be released on September 14, 2020, with submissions due by October 31, 2020. Awardees will be notified on or about November 10, 2020.

Open to Carbon Hub Academic Collaborators, we hope that you and your colleagues will be a part of the first group submitting proposals, bringing forward the best and boldest technical ideas.

Stay tuned to future newsletters and the Call for Proposals <u>website</u> for more details on the 5 topical areas and other submission guidelines and details.

Carbon Hub Members.

The Carbon Hub will advance existing technology to slash carbon dioxide emissions by fundamentally changing the way the world uses hydrocarbons. This major research initiative, led by Rice University, brings industry, academia and non-profit organizations together to work in unison as non-competitive partners.

We are proud to count more than $\underline{70\ collaborators}$ across 20 universities, federal labs and research institutes.

As a founding member, Shell inaugurated the Carbon Hub with a commitment of up to \$10 million.



We are pleased to welcome two additional Corporate Partners:





Is your organization interested in becoming a member? <u>Contact us</u> to discuss our different membership levels and associated benefits.

A Successful Kick Off Meeting.

On February 13, 2020, industry experts and leaders joined us to officially launch the Carbon Hub. The panel discussions addressed the challenges and opportunities to enable a low-carbon sustainable future.

Click the link below to watch the videos on our website.



Videos Link

