



**Energy Materials Network**  
U.S. Department of Energy



**HydroGEN**  
Advanced Water Splitting Materials

# HydroGEN PEC & STCH Kickoff Meeting, HydroGEN Data Hub

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**Rachel Hurst, Christina Vader, Emily Harrell**





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# Data Hub Overview

- The HydroGEN Data Hub is a platform for consortium members and partners to share data and ideas. Researchers are encouraged to place their data within this hub, where it can be protected and distributed as needed.
- Providing data to the hub can increase communication efficiency between all parties and create a seamless environment for eventual releasing of data from DOE-funded research.
- Data can be compartmentalized and secured by project or scope and is able to store a wide variety of data types and files. The hub allows for searching the metadata and data of all resources stored within, providing a method to support discovery.



# Data Hub Overview

## Objectives:

### Data Repository

- Storage and sharing of research data/Public vs. Private data

### DOI/Publication of Data

- Internal vs. external data

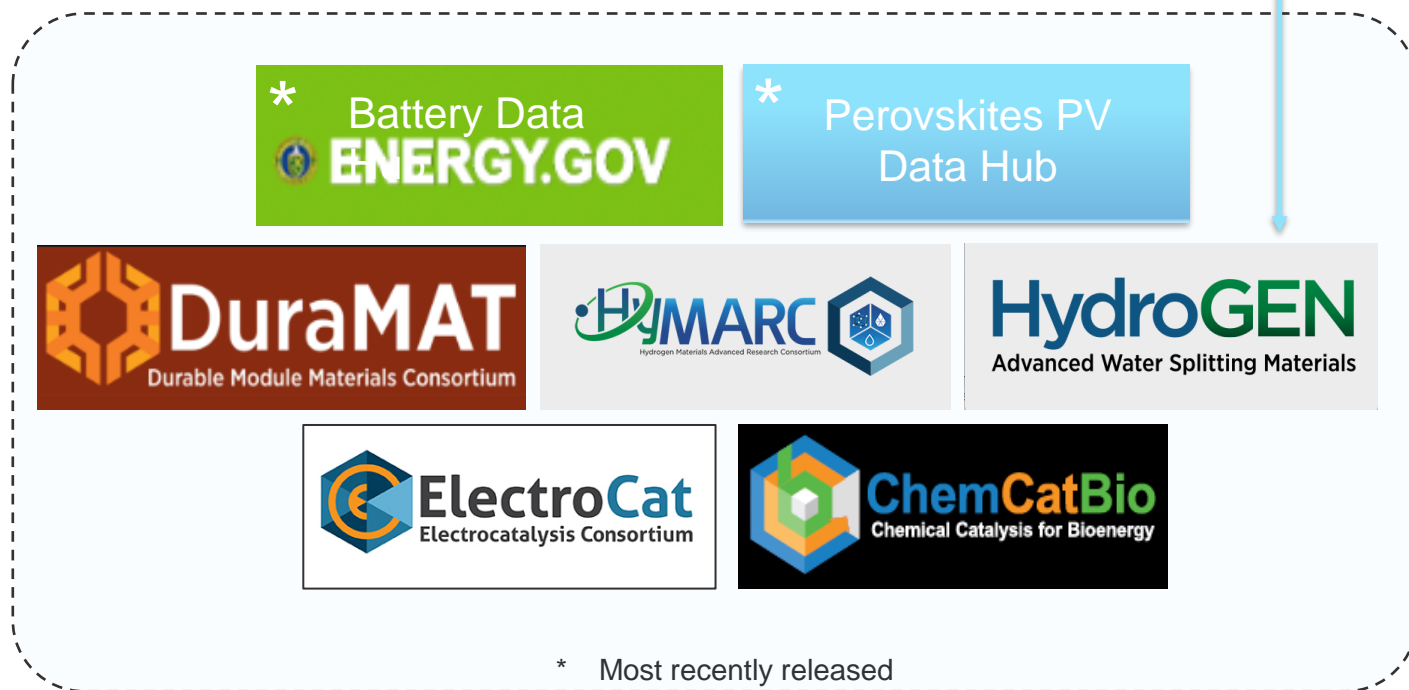
### Provide Security Mechanisms

- User login/Authentication
- Project access management

### Visualization and Analysis Capabilities

## Live Data Hubs

Collaborative data hub that also houses H2NEW Data





# NREL Data Hub Collaborators





# Coming Soon, H2NEW Release

[Log In](#) [Register](#)



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## HydroGEN & H2NEW Data Hub

The submission point for data collected from research conducted by the Advanced Water Splitting Materials National Laboratory and Next Generation Electrolyzer National Laboratory Consortia.



**Register**

Request a HydroGEN & H2NEW account.



**Discover**

Search the repository.



**Submit Data**

Upload and archive your data. Share data with others.

**HydroGEN**  
Advanced Water Splitting Materials



**H2NEW**  
U.S. DEPARTMENT OF ENERGY



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Contact the data team with questions and feedback about the data hub.

[About HydroGEN Data Hub](#)

[HydroGEN Data Hub / CKAN API](#)

[v2.9.6](#)

Powered by



Language:

English



# Best Practices: HydroGEN Data Hub

## Project Start

- Project team members register for datahub accounts; PI requests **project creation**.

## Project Duration

- Project team utilizes the datahub's extensive data platform and research-focused capabilities **to share data for private collaboration within the team**.
- Work with the HydroGEN datahub administrator to manage your project, your team's private data, and to **facilitate the release of public data for the project prior to project closeout**.

## Project Closeout

- For project closeout, work with the datahub administrator to **ensure project results are publicly available** for the next generation of research.

*An **example** of a public data release deliverable tied to a project publication can be seen here: [Photoelectrochemically Self-Improving Si/GaN Photocathode](#).*

*This example is **the standard** for public data release on the HydroGEN datahub.*






# Making Data Public

- Data can be released to the public/made publicly available when necessary.
- The Data Hub PI or project owner is responsible for determining when data is ready for public release.
- At this point, **a Dataset can be set to public.** All resources in a public dataset will be visible to the public and will not require a user to login or have project level permissions.






## Private Datasets

Private datasets display a closed red lock

 <b>2019-0207-ANLHaoWang-CoO3_TiO2 Particles</b>
<b>2 Resources</b> <i>This dataset has no description</i>
 <b>2019-0118-LinaChong_ANL-CoOxLaMnon1824</b>
<b>2 Resources</b> Gatan Data only
 <b>Structural models for cobalt oxide defects</b>
<b>1 Resource</b> Structural models for carbon impurities and oxygen vacancies in spinel cobalt oxide (Co3O4).

## Public Datasets

- Public datasets have gone through an approval process.
- Once approval is complete public datasets display an open blue lock

 <b>Photoelectrochemically Self-Improving Si/GaN Photocathode</b>
<b>12 Resources</b> The resources are raw data for plotting the figures presented in the paper. These excel files includes the data of: photocurrent density vs voltage (J-V curves), photocurrent vs...
 
 <b>2022 Water Splitting Technologies Benchmarking and Protocols Workshop</b>
<b>8 Resources</b> The fourth annual workshop for the Advanced Water-Splitting Technology Pathways Benchmarking & Protocols project was held May 3-4, 2022 in a hybrid in-person and virtual...






# Viewing Projects

## [Data Hub Home](#)

## [FOA3 Projects](#)

- [FOA3 PEC Caltech - Haber](#)
- [FOA3 PEC Rice - Mohite](#)
- [FOA3 PEC UH - Gaillard](#)
- [FOA3 PEC UM - Mi](#)
- [FOA3 PEC UT - Yan](#)
- [FOA3 PEC Yale - Hu](#)
- [FOA3 STCH ASU - Muhich](#)
- [FOA3 STCH CUB - Musgrave](#)
- [FOA3 STCH CUB - Weimer](#)
- [FOA3 STCH SG - Qian](#)
- [FOA3 STCH WU - Wexler](#)