What can we do for you?

The aim of ACTNXT is to bridge the gap between materials research and PtX applications. We wish to make advanced characterization of materials more standardized and accessible to industry to better understand and optimise their technologies.

www.actnxt.eu

Make sure our efforts match the needs of your company.

– Get in touch!

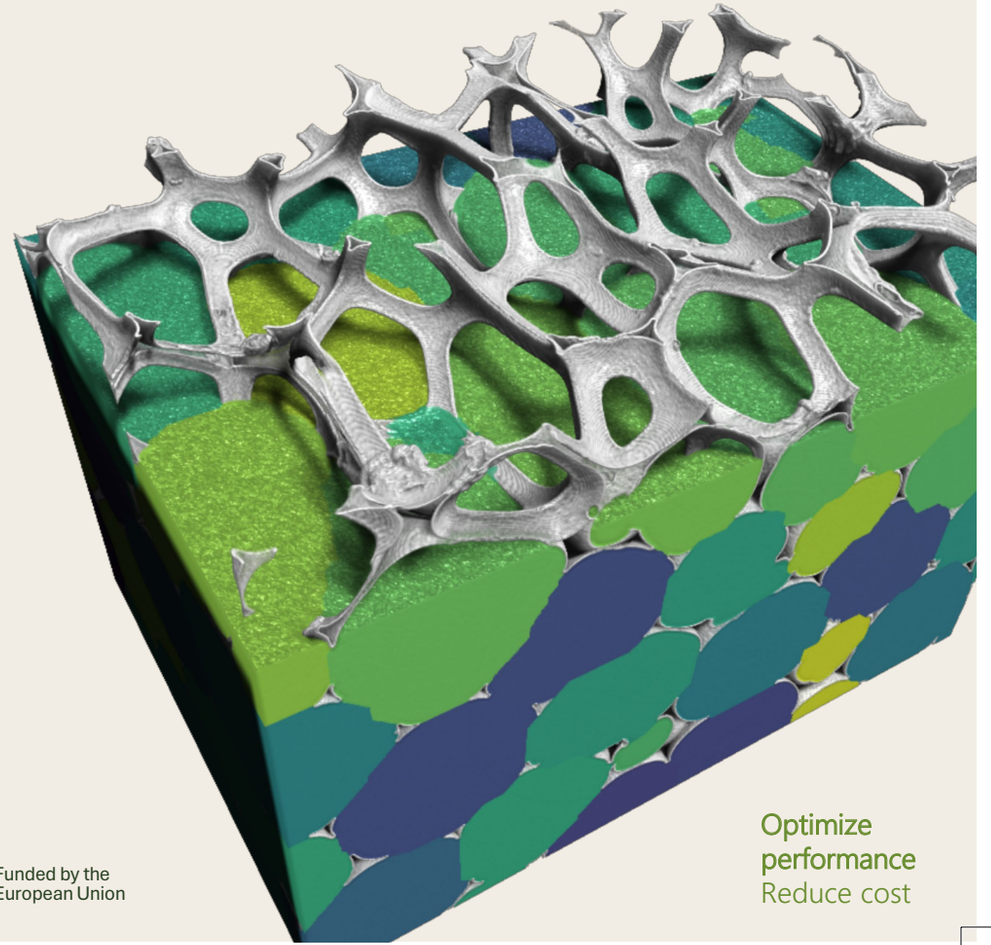
DANISH TECHNOLOGICAL INSTITUTE
CERIC
TECHNISCHE UNIVERSITÄT DARMSTADT
JM Johnson Matthey
NEUTRONS FOR SOCIETY
ESRF
cea
UNIVERSITY OF COPENHAGEN
Ranido
TNO
CHARLES UNIVERSITY
whitecell systems
PSI
Empa
TU Graz
Hydrogen pro

The fourteen partners of ACTNXT include large Research Infrastructures, RTOs, Universities and Companies from ten different countries.

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

ACTNXT

Look inside your tech while it is running



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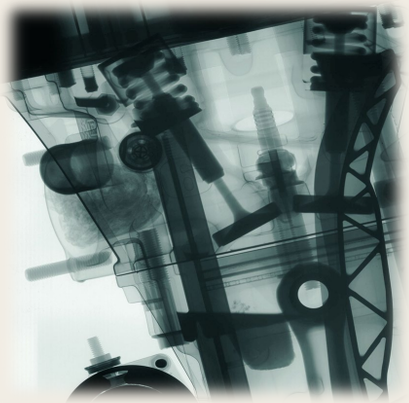
Optimize performance
Reduce cost

Study processes inside components

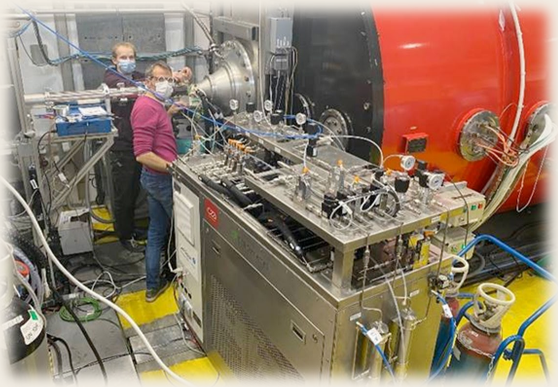


The measurements can be performed on a real device while it is running. And we can look at:

- Formation and dynamics of bubbles and droplets inside realistic metal components
- Surface chemistry of e.g. electrodes
- 3D images from micrometer to millimeter scale
- Atomic scale, molecules and crystal structures

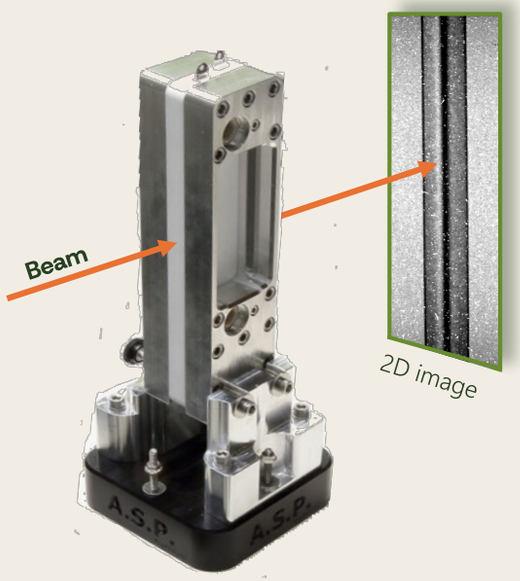
Understand the impact of external conditions e.g.

- Temperature
- Pressure
- Hydrogen exposure
- Impacts or shakes



Troubleshoot your product

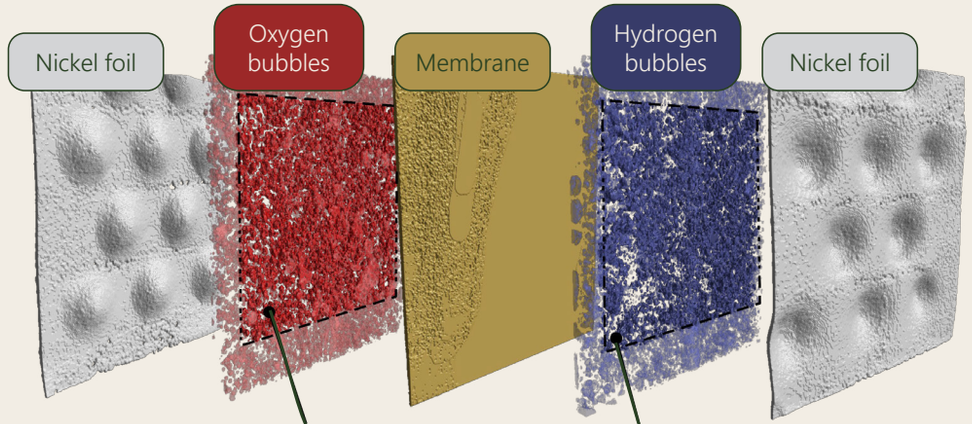
- High temperature hydrogen attack
- Clogging
- Bottlenecks
- Corrosion
- Leakage
- Diffusion



An Example of what we can do for industry

A study of an alkaline electrolysis with imaging

Per request from Hydrogen Pro we were able to study the creation and flow of hydrogen and oxygen bubbles inside the nickel foam electrodes and understand how the activity of different sections depended on the current applied.



3D analysis

From the 3D reconstruction it is possible to distinguish between different elements inside the device. In this example information about the distribution of nickel foam pore sizes is quantified, along with a map of the trapped oxygen and hydrogen bubbles, blocking the flow inside the nickel foam based anode and cathode.