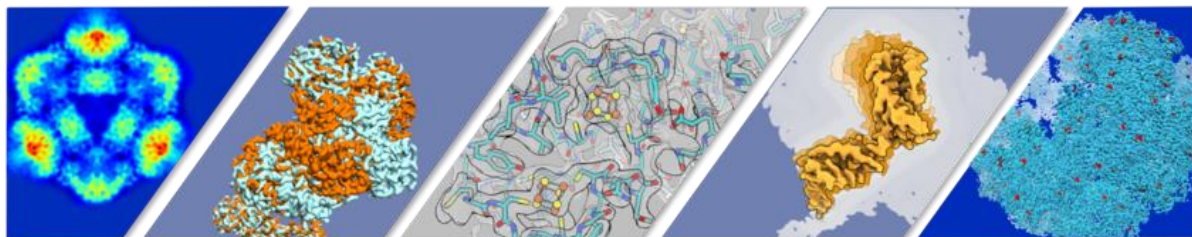


Max-Planck Research Group – 7100 Case Study



The Max Planck Society for the Advancement of Science based in Frankfurt, Germany is a formally independent non-governmental and non-profit association of research institutes founded in 1911. Formally known as the Kaiser Wilhelm Society, the establishment was later renamed in 1948 to the Max Planck Society in honour of its former president, theoretical physicist Max Planck.

The goal at Max Planck Institute of Biophysics is to understand, at an atomic level, the function of sophisticated proteins that mediate the chemistry of life. Focus is given on metalloproteins, especially redox proteins, and the bioenergetic and regulatory processes that they mediate.

Cambridge Sensotec caught up with [Dr. Bonnie Murphy](#), the Group Leader at Max Planck Institute of Biophysics to find out more about how the [Rapidox 7100 multigas analyser](#) has helped them during their research.

“Our work is built upon a foundation of biochemical and molecular biology techniques. We have recently set up a plunge-freezing device in an anaerobic tent, which allows control of the gas atmosphere under which cryo-EM sample grids are prepared and frozen. This has allowed us to obtain high-resolution structures of oxygen-sensitive proteins, and to use the gas composition to control redox potential for some proteins. We are actively building on this to fully control the redox potential of cryo-EM samples up to the point of freezing.”



“I have been really impressed with the customer service from Cambridge Sensotec. I believe their analyser is better than what is currently offered in this field within anaerobic proteins and organisms.

A key feature is that we can use the analyser outside of the tent, without having to introduce too much air. Also, the fact we can measure the gases independently is very important to us. We came to Cambridge Sensotec because the other products at this price point could only measure oxygen in the presence of hydrogen. We wanted to measure the two gases independent

from one another”.

The Rapidox 7100 multigas analyser was largely used to test the oxygen levels in the house nitrogen to ensure it was oxygen free. Being a modular gas analyser provides the user to add additional sensors if required.

To learn more about the Max Planck Institutes and facilities for the international flagship for German science, please click [here](#).