

UniSysCat - Colloquium

Dr. Christian Teutloff

Freie Universität Berlin, Department of Physics, Institute of Experimental Physics

Start Time: Thursday, June 24, 2021 05:00 pm

End Time: Thursday, June 24, 2021 06:00 pm

Online

EPR in (Bio-)Catalysis – more than a fingerprinting tool?

Dr. Christian Teutloff

Freie Universität Berlin, Institut für Experimentalphysik

Research on catalytically influenced processes has a longstanding tradition in the scientific area of Berlin as electron paramagnetic resonance has, too. Often used as a fingerprinting tool EPR was and is used for the speciation of paramagnetic states located on nonmetallic or (transition-)metal-containing cofactors.

In this talk I will give an overview of some use cases of EPR beyond fingerprinting and speciation. I want to illustrate how EPR can be utilised for answering questions about catalytic and enzymatic reactions, where paramagnetic intermediates occurred. Furthermore I want to give a taste how EPR can help in addressing scientific problems, when no native paramagnetic state is existing as a reporter, but spin probes can be introduced as spies telling stories of, e.g. conformational changes.

With these few examples I hope to give you a glimpse on what is hidden behind this door called „Advanced EPR“ and introduce you to the terms "hyperfine“ and „dipolar spectroscopy“.

Prof. Dr. Matthias Drieß

Organizer