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Press release

Serena DeBeer becomes new Director at the Max Planck Institute for Chemical Energy Conversion

Prof. Serena DeBeer was recently appointed director of the Max Planck Institute for Chemical Energy Conversion.

Prior to her appointment, Prof. DeBeer headed the project group „X-ray Spectroscopy“ at the MPI CEC.

“I am incredibly honored to be appointed director at the MPI CEC,” says DeBeer. “I think being a MPI director would be a dream for any scientist, but it has a special meaning for me having worked here for almost six years and knowing what a truly wonderful place this is to do research. We have unsurpassed facilities for doing state-of-the-art research, but the real strength of the institute is the incredible staff. I really can’t imagine a better place to do world class science!”

Research in her group focuses on the development of new spectroscopic tools for understanding processes in biological and chemical catalysis. Both static and time-dependent probes of metal spin state and valence orbital composition are being developed, with a focus on understanding the fundamental processes of dioxygen activation and dinitrogen reduction by transition metal catalysts. Her research group’s approach utilizes X-ray core spectroscopy, closely coupled to modern computational methods, in order to obtain quantitative insights into electronic structural changes in catalytic systems.

The American-born scientist started her career at the renowned Stanford and Cornell Universities. She currently holds associate and honorary professorships at the Cornell University and the Ruhr University Bochum, respectively.

Her future research will place a strong focus on studying small molecule activation by transition metal catalysts in situ. “Our goal is to understand on an atomic level how bonds are formed and broken. While this is very fundamental research, it is also a key aspect of energy research, as it forms the foundation of rational catalyst design.”

The [MPI for Chemical Energy Conversion](http://www.cec.mpg.de) sees it as its task to investigate the fundamental chemical processes in energy transformation and thus to contribute to the

development of new and efficient catalysts. Multidisciplinarity is a pre-condition for this goal. At the MPI CEC the fields of *heterogeneous catalysis*, *homogeneous catalysis* and *biophysical chemistry* are being explored in combination using state-of-the art experimental and theoretical analysis methods.