Berliner Physikalisches Kolloquium

im Magnus-Haus, Am Kupfergraben 7, 10117 Berlin

Eine gemeinsame Veranstaltung der Physikalischen Gesellschaft zu Berlin e.V.,
der Freien Universität Berlin, der Humboldt-Universität zu Berlin,
der Technischen Universität Berlin und der Universität Potsdam
– gefördert durch die Wilhelm und Else Heraeus-Stiftung –

Am Donnerstag, dem **3. Mai 2018, um 18:30 Uhr**

spricht

Prof. Dr. Serena DeBeer

Max Planck Institute for Chemical Energy Conversion, Mülheim an der Ruhr, and Department of Chemistry and Chemical Biology, Cornell University, Ithaca, New York, USA

über das Thema

„Breaking Methane – Toward the Economic Utilization of Natural Gas“

Moderation: Birgit Kanngießer, Technische Universität Berlin

Every year, the global community flares about 140 billion m^3 of natural gas or 3.5% of the world's total supply. Abundant and inexpensive, natural gas is dominantly comprised of methane. Methane is often burned, rather than utilized as a fuel, because of the difficulties in transporting relatively small quantities from various remote natural gas sites. This has raised interest in possible gas to liquid conversion processes that would allow for an economically viable utilization of methane. Presently, the industrial processes for converting methane to methanol employ a multiple step process and large costly factories, which do not provide a realistic solution. In contrast, in nature, there are bacteria containing the enzyme methane monooxygenase, which allow for the direct conversion of methane to liquid methanol under ambient conditions. As such, there is great interest in understanding how these enzymes work on an atomic level. In our laboratories, we utilize a variety of X-ray based spectroscopic approaches, combined with theory, to understand the mechanism of these enzymes. The broader goal of our work is to translate these findings into knowledge-based catalytic design.

Auch zu lesen im Internet: http://www.pgzb.tu-berlin.de/