Sustainable technologies for the avoidance and utilization of carbon dioxide-

Starting signal for new research training group at the University of Rostock

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Global warming is one of the greatest challenges facing mankind. Sustainable technologies are therefore needed to avoid and utilize the greenhouse gas carbon dioxide (CO_2). The new Research Training Group "Spectroscopic Methods for Challenging Reduction Reactions- Catalytic Coupling of CO_2" (SPECTRE) is dedicated to these tasks. The German Research Foundation (DFG) is funding the joint project at the University of Rostock with around six million euros.

The spokesperson for the twelve-strong team of scientists from the University of Rostock and the Leibniz Institute for Catalysis (LIKAT) is Professor Ralf Ludwig from the Institute of Chemistry. The funding will start in April 2024 for an initial period of five years.

"The transformation of CO_2 into value-adding carbon compounds offers the opportunity to convert renewable energy into chemical energy sources and carbon-neutral products," says Ludwig, explaining the topic of the joint project.

The RTG's team of spokespersons includes Dr. Jola Pospech and Professor Torsten Beweries from the Leibniz Institute for Catalysis (LIKAT) and Professor Stefan Lochbrunner from the Department of Physics.

Starting signal for the Research Training Group 2943 SPECTRE: (f. l.) Dr. Jola Pospech, Prof. Dr. Stefan Lochbrunner, Prof. Dr. Torsten Beweries und Prof. Dr. Ralf Ludwig

"Research Training Groups offer doctoral students the opportunity to complete a doctorate in a structured research and qualification program at a high professional level," explains Torsten Beweries. The Rostock training program includes excellent interdisciplinary teaching and training, which is to be further developed through joint supervision by the university and LIKAT. At the heart of the training is the individual qualification of the students, a structured further education and support program as well as a diverse learning and scientific environment.

"We are particularly keen to support young academics and improve the compatibility of research and family life. Supported by well thought-out equal opportunities measures, many female doctoral students will be able to start a scientific career with us," notes Jola Pospech. The chemist is enthusiastic about the training opportunities offered by a Research Training Group.

The Rostock fellows will benefit from an interdisciplinary spectrum of experimental and theoretical expertise in order to develop original chemical approaches and carry out spectroscopic and mechanistic investigations at the interface between catalysis, molecular chemistry, physical and theoretical chemistry, physics and mathematics, even in a challenging scientific context. "As part of the Research Training Group, we will continue to expand our range, particularly in the field of spectroscopic methods," explains Stefan Lochbrunner. One aim is to observe intermediates on the nanosecond time scale.

"We are currently recruiting female doctoral students for the first 10 of a total of 25 doctoral positions," says the GRK team happily. A total of 63 applications underline the great interest in this Research Training Group with a topic on sustainable chemistry.

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Logo des GRK 2943 SPECTRE:

The new research training group SPECTRE is developing spectroscopic, chemometric and quantum chemical tools to optimize the conversion of CO_2 into value-adding carbon compounds. (Image source: SPECTRE).