University Alliance for Sustainability

Freie Universität Berlin

Workshop IV: "Carbon Dioxide: Challenges and Opportunities for Chemistry and Society"

April 10-11, 2018

Organized by Prof. Dr. Biprajit Sarkar

Abtract

All life on earth is dependent on climate. Greenhouse gas emissions from human activities – among others, carbon dioxide (CO2) – are drivers of climate change. Therefore, climate change presents a major global challenge. The discussion on future impacts of climate change should direct political and economic strategies and decision-making processes on the local, national and global level.

Within the workshop "Carbon Dioxide: Challenges and Opportunities for Chemistry and Society" we will discuss the origins of the large amount of carbon dioxide currently present in the atmosphere. This part will be followed by the explanation of reasons that make CO2 a harmful greenhouse gas. Afterwards, novel and innovative ways for carbon dioxide capture and its conversion to value-added products will be discussed. In the final part of this contribution, we also would like to visit the "CarboTIP project" of the Department of Earth Sciences in the Botanical Garden of the Freie Universität Berlin. The regional utilization of biomass through the production of biochar and plant carbon substrates has two main effects: it saves disposal and energy costs and reduces greenhouse gas emissions.

The aim of this workshop is to explain the contribution of chemistry (among other things) in making our world more sustainable.

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Tuesday 10 April 2018 ● Fabeckstraße 23-25, Freie Universität Berlin

Chair: Prof. Dr. Biprajit Sarkar, Freie Universität Berlin

Time	*Topic*	
9:00 am	**Plenary Session, open for all participants**	
	Evolutionary Management of Drug Resistance	Prof. Jens Rolff, Freie Universität Berlin
	Carbon Dioxide: Challenges and Opportunities for Chemistry and Society	Prof. Biprajit Sakar, Freie Universität Berlin
10:30 am	Coffee Break	
	Workshop IV: "Carbon Dioxide: Challenges and Opportunities for Chemistry and Society"	
11:00 am	**Key note and discussions**	
	Origin of the large amount of carbon dioxide in the atmosphere	Prof. Dr. Biprajit Sarkar, Freie Universität Berlin
	Explanation of reasons that make CO2 a harmful greenhouse gas	
12:30 pm	Lunch	
02:00 pm	**Presentation and Discussions**	
	Novel and innovative ways for carbon dioxide capture and its conversion to value-added products	Prof. Dr. Biprajit Sarkar, Freie Universität Berlin
04:00 pm	Coffee Break	
04:30 pm – 6:30 pm	Visit of the "CarboTIP project" (Department of Earth Sciences) in the Botanical Garden of the Freie Universität Berlin	
6:30 – open end	We have pre-booked tables in the restaurant "Luise" near U-Bahn station Dahlem Dorf for a self-organized dinner.	

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Wednesday, 11 April 2018 ● Fabeckstraße 23-25, Freie Universität Berlin

Chair: Prof. Dr. Biprajit Sarkar, Freie Universität Berlin

Time	***Topic***	
9:00 am	**Plenary Session, open for all participants**	
	Solar Fuels Replacing Fossil Fuels - an Alternative "Energiewende" (Energy Transition) Route?	Prof. Holger Dau, Freie Universität Berlin
	Competing Technological Innovation Systems as a Challenge for Mission-oriented Innovation Policy - Insights from the German "Energiewende"	Prof. Carsten Dreher, Freie Universität Berlin
10:30 am	Coffee Break	
	Workshop IV: "Carbon Dioxide: Challenges and Opportunities for Chemistry and Society"	
11:00 am	Discussion of possible research cooperation and active participation (World Café)	Prof. Dr. Biprajit Sarkar, Freie Universität Berlin
12:30 pm	Lunch	
02:00 pm	Excursion: After a sightseeing tour of Berlin's city center participants can choose between two tour offers (please indicate your choice in the registration form): • EUREF Campus: An urban model for a modern city - a campus consisting of companies and research organizations, that coexist in a sustainable environment. • ECF Farm: An urban farm where fish farming and the cultivation of vegetables are combined to form an economic cycle of growth and sustainability while conserving resources.	
06:00 pm	Farewell Dinner, Restaurant ‚Umspannwerk Ost', Palisadenstr. 48, 10243 Berlin	