



INTERNATIONAL INSTITUTE FOR CARBON-NEUTRAL ENERGY RESEARCH

I²CNER THRUST WORKSHOP: SCIENCE AND TECHNOLOGY FOR CARBON-NEUTRALITY

ADVANCED ENERGY MATERIALS THRUST (AEM),
ADVANCED ENERGY CONVERSION SYSTEMS THRUST (AEC),
AND MULTISCALE SCIENCE AND ENGINEERING FOR ENERGY AND THE ENVIRONMENT THRUST (MS3E)

DATE: JANUARY 22ND, 2021, FRIDAY

TIME: 11:00 PM – 02:00 AM (JST)

VENUE: VIRTUAL WORKSHOP VIA ZOOM

Time	Speaker	Affiliation	Title
11:00-11:05	Hiroshige Matsumoto	AEC, I ² CNER	Opening Introduction
Session 1: Advanced Energy Materials Thrust (AEM)			
11:05-11:35	Masanobu Kubota	AEM, I ² CNER	Collaborative research between University of Göttingen and I ² CNER for mitigation of hydrogen embrittlement by impurities
	Lin Tian	Institute of Material Physics, University of Göttingen	
11:35-11:45	Takashi Fukushima	AEM, I ² CNER	Electrosynthesis of amino acids from sustainable feedstocks
11:45-12:00 (00:00 AM)	Ki-Seok Yoon	AEM, I ² CNER	Biocatalytic H ₂ and CO ₂ activation
Session 2: Advanced Energy Conversion Systems Thrust (AEC)			
00:00-00:20	Hong Yang	AECS, I ² CNER/UIUC	Low- and Non-Platinum Group Metal Electrocatalysts for the Reduction of Oxygen
00:20-00:40	Stephen Skinner	AECS, I ² CNER/ICL	Investigating the effects of humidity on ion transport in mixed conducting oxides
00:40-01:00	Koji Takahashi	AECS, I ² CNER/Department of Aeronautics and Astronautics, Kyushu University	Towards reliable cooling technology from nanoscale transport phenomena
Session 3: Multiscale Science and Engineering for Energy and the Environment Thrust (MS3E)			

01:00-01:20	Roman Selyanchyn	MS3E, I ² CNER	Membrane-based Direct Air Capture for Fuel Production and Negative Emissions
01:20-1:40	Takeshi Tsuji	MS3E, I ² CNER	Use Earth Toward Negative Emissions
01:40-2:00	Andrew Chapman	MS3E, I ² CNER	Systematic Considerations for a Sustainable, Carbon Neutral Energy System