

# USTB-Tohoku U Joint Research Laboratory

## Inauguration Ceremony & Workshop

November 16-18, 2016 Beijing, China

<b>November 16, 2016 (Wednesday)</b>		
Pick up the delegates from Tohoku U		
<b>November 17, 2016 (Thursday)</b>		
<b>Part 1 Inauguration and Unveiling</b>		
<i>Time: 09:00-11:00</i>		
<i>Location: USTB , Admin Building, Meeting Room 306</i>		
Time	Activities	
09:00-09:05	Opening speech	
09:05-09:10	Short speech from MOST officer	
09:10-09:15	Short speech from MOE officer	
09:15-09:30	Global vision of Tohoku U by EVP T. UEKI	
09:30-09:45	Research vision of Tohoku U by EVP S. ITO	
09:45-10:00	USTB global vision by VP G. WANG	
10:00-10:15	Research of USTB by VP D.B. SUN	
10:15-10:30	Unveiling ceremony of the Plate & group photo	
10:30-10:45	Short introduction of the research of OAS (by Prof. T. SHOJI)	
10:45-11:00	Short introduction of the research of NCMS (by Prof. Y. JIN)	
<b>LUNCH</b>		
<i>Time:11:15-12:50</i>		
<i>Location: Be There Coffee</i>		
<b>Part 2 Workshop (Parallel sessions)</b>		
<i>Time:13:00-17:10 (30min/Talk including Q&amp;A)</i>		
<i>Location: Techart Plaza, Meeting Room 1,2,3,4</i>		
<b>Session I Materials performance evaluation in energy conversion system</b>		
<i>(Chairs: Prof. Y. H. Lu, Associate Prof. Y. Takeda)</i>		
<i>Location: Meeting Room 1</i>		
13:00-13:30	Experimental study on degradation mechanisms of Ni-based superalloys in steam environment beyond 700°C	Associate Prof. Y. Takeda (Tohoku U)
13:30-14:00	Fretting wear behavior and mechanism of nuclear materials	Prof. Y. H. Lu (USTB)
14:00-14:30	Effects of dissolved hydrogen and surface conditions on the IGSCC initiation and short crack growth behavior of non-sensitized 316 stainless steel in simulated PWR primary water	Dr. X. Y. Zhong (Tohoku U)

14:30-15:00	The topology of three-dimensional grain boundary network and its influence on stress corrosion crack propagation	Dr. T. G. Liu (USTB)
15:00-15:10	<b>Coffee Break</b>	
15:10-15:40	The effects of hydrogen on the oxidation and SCC initiation of Ni based alloys	Assistant Prof. J. Xu (Tohoku U)
15:40-16:10	Creep research on remaining life evaluation and prediction for USC boiler materials	Dr. K. Yagi (USTB)
16:10-16:40	Effect of Cr content on the oxidation behavior of Ni-Cr model alloys in superheated steam at 700°C	Dr. F. Hamdani (Tohoku U)
16:40-17:10	Effect of oxygen content of steam on the steam oxidation behavior of boiler tube materials	Dr. K. Nakagawa (USTB)
17:10-18:00	<b>Poster session</b>	
<b>Session II Surface science and corrosion</b> <i>(Chairs: Prof. Y. Jin, Assistant Prof. H. Abe)</i> <b>Location: Meeting Room 2</b>		
13:00-13:30	Locality and causality in corrosion	Prof. T. Shoji (Tohoku U)
13:30-14:00	FEM modeling of micro-galvanic corrosion induced by intermetallic particle in Al alloys	Prof. Y. Jin (USTB)
14:00-14:30	Research activities in degradation science and plant Life management laboratory	Assistant Prof. H. Abe (Tohoku U)
14:30-15:00	Structure of passive films on titanium studied with synchrotron radiation	Prof. D. B. Sun (USTB)
15:00-15:10	<b>Coffee Break</b>	
15:10-15:40	The development of a Large-Scale Multiphase Flow Loop for Corrosion Research in Oil & Gas Field	Dr. Y. F. Chen (USTB)
15:40-16:10	Surface analytical facilities in new industry creation hatchery center (NICHe), Tohoku University	Mr. M. Tanno (Tohoku U)
16:10-16:40	A study on high-throughput materials corrosion experiment platform	Associate Prof. P. Shi (USTB)
16:40-17:10	Surface modification of Ti6Al4V alloy by SMAT and MAO treatment	Associate Prof. L. Wen (USTB)
17:10-18:00	<b>Poster session</b>	
<b>Session III Material-performance modeling, simulation and experiments</b> <i>(Chairs: Prof. L. B. Wang, Prof. Y. Chen)</i> <b>Location: Meeting Room 3</b>		
13:00-13:30	First-principles modeling of defects behavior in nuclear fuels	Prof. Y. Chen (Tohoku U)

13:30-14:00	Perspectives and status for design of stone-based civil infrastructure materials	Prof. L. B. Wang (USTB)
14:00-14:30	A computational study on early stage oxidation initiation mechanism of Ni-Cr (111), (110) and (100) surfaces	Associate Prof. N. K. Das (Tohoku U)
14:30-15:00	First-principles modeling of layer-defect of Al <sub>2</sub> O <sub>3</sub> surface eroded by H <sub>2</sub> O and Cl <sup>-</sup>	Dr. C. H. Zhang (USTB)
15:00-15:10	<b>Coffee Break</b>	
15:10-15:40	Recent studies of nondestructive testing and evaluation in the Graduate School of Engineering, Tohoku University	Associate Prof. N. Yusa (Tohoku U)
15:40-16:10	Effects of length on strength and fatigue of longitudinal elements	Associate Prof. C.M. Lan (USTB)
16:10-16:40	A coupled PFM-DEM approach to investigate tire-pavement friction	Associate Prof. Y. Hou (USTB)
16:40-17:10	Performance degradation and remaining useful life prediction method based on functional principal component analysis	Associate Prof. L. J. Zhang (USTB)
17:10-17:40	Interfacial behavior between asphalt binder and mineral aggregate	Dr. M. Guo (USTB)
17:40-18:00	<b>Poster session</b>	
<b>Session IV Hydrogen induced degradation &amp; Fatigue</b> <i>(Chairs: Associate Prof. X. C. Ren, Prof. E. Akiyama)</i> <b>Location: Meeting Room 4</b>		
13:00-13:30	Damage evaluation of structural materials by hydrogen thermal desorption analysis	Prof. S. Komazaki (Kagoshima U, invited by Tohoku U)
13:30-14:00	Corrosion induced fatigue failure of railway wheels and safety evaluation of wheels with corrosion pitting	Associate Prof. X. C. REN (USTB)
14:00-14:30	Evaluation of hydrogen embrittlement property of high strength steels	Prof. E. Akiyama (Tohoku U)
14:30-15:00	Characterization of microstructures of dissimilar weld joint and its corrosion properties in high temperature water	Dr. X. F. Ding (USTB)
15:00-15:30	Preparation of high purity transition metals	Assistant Prof. M.

		Uchikoshi (Tohoku U)
15:30-15:40	<b>Coffee Break</b>	
<b>After the coffee break, attendees of Session IV can join the other 3 sessions</b>		
<b>BANQUET (Buffet)</b> <i>Time: 18:30-20:00</i> <i>Location: Vision Hotel</i>		
<b>November 18, 2016 (Friday)</b>		
<b>Part 1 Close meeting</b> <i>Time: 9:00-11:30</i> <i>Location: Techart Plaza, Meeting Room 5</i> <i>(Summer Palace visiting for people who will not join the close meeting*)</i>		
9:00-10:00	General session & Summary of each session (Session chairs are invited to summarize each session, and propose the future plan of each group.)	
10:00-11:30	★ Future direction and road map ★ Proposal of road map and discussion	
<b>LUNCH</b> <i>Time: 11:30-13:00</i> <i>Location: Be There Coffee</i>		
<b>Part 2 New campus visit</b> <i>Location: Meet at South Gate of USTB</i>		
13:00-17:30	Changping new campus visit	
<b>DINNER</b> <i>Time: 18:00-20:00</i> <i>Location: USTB Conference Centre</i>		

\* Everyone is welcome to join the close meeting, depending on your choice. If you do not attend the meeting, USTB will arrange an interesting tour to the Summer Palace.

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