Symposium Agenda

May 29th, 2017 (Monday)

14:30 - 18:30	**Registration** (Nan Yang Hotel)

May 30th, 2017 (Tuesday)

9:00 - 20:00	**Registration** (Nan Yang Hotel)
14:30 - 18:00	**Laboratory Tour** (MSE Building by the Wu Tong West Road)

Tutorial

Time: 8:30-17:30, May 30th, 2017 (Tuesday)

Location: MSE New Building

Chair: Zhiwei Shan		
8:30 - 11:30	**Xiaofeng Zhang**	电子显微学漫谈
14:30 -17:30	**Xiuliang Ma**	电子衍射与物相分析实验案例
8:30 – 11:30	**Xingzhong Li**	Landyne software suite for electron diffraction simulation and crystallographic analysis
14:30 -17:30		

Plenary Session

Time: 8:10-12:00, May 31st, 2017 (Wednesday)
Location: Multi-functional Academic Conference Hall, XJTU

Session Chairs	**Evan Ma and Dapeng Yu**	
8:10-8:30	**Opening Remarks**	
8:30-9:00	**Hengqiang Ye**	学习先师，专注科学
9:00-9:30	**Dapeng Yu**	Ultrafast growth of graphene single crystal
9:30-10:00	**Xiaodong Zou**	Automated electron diffraction techniques for phase analysis and structure determination
10:00-10:30	**Coffee Break and Group Photo**	
10:30-11:00	**Min Zhu**	Nanophase and interface tuning of H/Li storage materials
11:00-11:30	**Jianyu Huang**	In-Situ transmission electron microscopy studies of the electrochemical processes of lithium ion battery materials
11:30-12:00	**Chongmin Wang**	In-situ TEM imaging and spectroscopy of energy materials
12:00	**Lunch** (Nan Yang Hotel)	

Plenary Session

Time: 14:00-21:00, May 31st, 2017 (Wednesday)

Location: Multi-functional Academic Conference Hall, XJTU

Session Chairs	**Haimei Zheng and Xiaodong Zou**	
14:00-14:30	**Knut Urban**	Chromatic and spherical aberration corrected transmission electron microscopy
14:30-15:00	**Xiaoxu Huang**	3D TEM characterization of metals and alloys
15:00-15:30	**Rong Yu**	Surfaces and dislocations of metal oxides
15:30-16:00	**Litao Sun**	Surface effects from sub-10nm materials
16:00-16:30	**Coffee Break**	
16:30-17:00	**Manling Sui**	Nanoscale engineering in VO_2 nanowires via direct electron writing process
17:00-17:30	**Haimei Zheng**	Materials transformations and dynamic phenomena at solid-liquid interfaces
17:30-18:00	**Jianbo Wang**	Fabrication and real-time structural characterization of nanomaterials
18:00-18:30	**Xiaofeng Zhang**	Hitachi in situ environmental TEM technologies and applications
18:30	**Banquet** (Nan Yang Hotel)	
20:00-21:00	**K. H. kuo Committee Meeting** (Nan Yang Hotel)	

Plenary Session

Time: 8:00-12:00, June 1st, 2017 (Thursday)

Location: Multi-functional Academic Conference Hall, XJTU

Session Chairs	**Yimei Zhu and Jianfeng Nie**	
8:00 - 8:30	**John William Morris, Jr.**	The grain refinement of martensitic steel by tailored thermal cycling -an exercise in microstructural nano-engineering
8:30 - 9:00	**Evan Ma**	ETEM at CAMP-Nano to unravel mechanisms underlying hydrogen induced blistering of protective aluminum oxide
9:00 - 9:30	**Jianfeng Nie**	Revealing the role of micro-alloying elements in precipitation in aluminium alloys by electron microscopy
9:30 - 10:00	**Jianghua Chen**	Electron microscopy for aluminum alloys as light-weight industry materials
10:00 - 10:30	**Coffee Break**	
10:30 - 11:00	**Yimei Zhu**	Phase retrieval electron microscopy of nanoobjects
11:00 -11:30	**Judith C. Yang**	Computationally assisted STEM and EXAFS characterization of tunable Rh/Au and Rh/Ag bimetallic nanoparticle catalysts
11:30 - 12:00	**Ming Pan**	Pushing the limit in high resolution TEM imaging of porous materials
12:00	**Lunch** (Nan Yang Hotel)	

Plenary Session

Time: 14:00-21:30, June 1st, 2017 (Thursday)

Location: Multi-functional Academic Conference Hall, XJTU

Session Chairs	**Scott X. Mao and Oden Warren**	
14:00-14:30	**Scott X. Mao**	Atomic scaled shear-driven amorphization in silicon lattice pillar under transmission electron microscope
14:30-15:00	**Xiaodong Han**	Precise Atomic Resolution in situ Mechanical & Environmental Microscopy
15:00-15:30	**Jin Zou**	Understanding the growth of metal chalcogenides
15:30-16:00	**Xiaozhou Liao**	Exploring ferroelectric domain switching induced by external stimulation
16:00-16:30	 **Coffee Break**	
16:30-17:00	**Oden Warren**	In-operando nanomechanical testing
17:00-17:30	**Jianzhong Yuan**	Latest application at atomic level by using aberration corrected electron microscopes
17:30-18:00	**David Nackashi**	Seeing is believing-new horizons for in situ microscopy
18:00-18:30	**Ming Ye**	Quantitative measurement of nanomaterial physical properties at nanometer spatial resolution
18:30	 **Dinner** (Nan Yang Hotel)	
19:30 - 21:30	**Poster Session (**MSE New Building**)** *Note: awards announcement will be held at 16:00 during the coffee break on June 2nd, MSE new building*	

Parallel session I: Advanced Structural Materials

Time: 8:00-12:00, June 2nd, 2017 (Friday)

Location: MSE New Building

Session Chairs	**Yu-Chieh Lo and Yang Lu**	
8:00 – 8:25	**Matteo Seita**	Assessing crystallographic information in polycrystalline metals by means of optical microscopy
8:25 - 8:50	**Tongmin Wang**	In situ study on interface evolution of Al/Cu bimetal by synchrotron X-ray radiography
8:50 - 9:15	**Lin Geng**	Strengthening and toughening metal matrix composites by configuration design
9:15 - 9:40	**Guohua Fan**	Strengthening and toughening mechanisms of laminated metal matrix composites based on the local strain analysis
9:40 - 10:30	**Coffee Break**	
10:30 - 10:55	**E-Wen Huang**	A study of lattice elasticity of high entropy alloys
10:55 - 11:20	**Zuankai Wang**	Nature-inspired materials
11:20 -11:45	**Yu-Chieh Lo**	Heterogeneous nucleation of copper on carbon surface
12:00	**Lunch** (Nan Yang Hotel)	

Parallel session I: Advanced Structural Materials

Time: 14:00-18:00, June 2nd, 2017 (Friday)

Location: MSE New Building

Session Chairs	**Kai Chen and Xiaosong Liu**	
14:00 - 14:25	**Weifeng He**	Surface nanocrystaliization of metallic alloys with different stacking fault energy induced by laser shock peening and the strengthening mechanism
14:25 - 14:50	**Qimin Wang**	Developing nano-layered and nanocomposite hard coatings by PVD techniques for structural applications
14:50 - 15:15	**Xiaosong Liu**	Applications of synchrotron-based X-ray spectroscopy in the energy storage research
15:15 - 15:40	**Zheng Jiang**	SSRF XAFS beamline and its application in materials science
15:40 - 16:30	**Coffee Break**	
16:30 - 16:55	**Zhijun Li**	Compatibility research of fission product tellurium and alloy N in molten salt reactor
16:55 - 17:20	**Yunchang Xin**	The high orientation dependence of hall-petch relationship in Mg alloy
17:20 - 17:45	**Kai Chen**	Microstructure and mechanical property inhomogeneity in 3D printed Ni-based superalloy

Parallel session II: Advanced Analytical Electron Microscopy

Time: 8:00-12:00, June 2nd, 2017 (Friday)

Location: MSE New Building

Session Chairs	**Renchao Che and Huolin Xin**	
8:00 – 8:25	**Huolin Xin**	5D imaging of multi-element and multi-valence material evolution in in-situ environmental TEM by on-the-fly and analytical electron tomography
8:25 - 8:50	**Miaofang Chi**	Integrating novel microscopy into battery research: from atomic resolution to in situ and functional imaging
8:50 - 9:15	**Xiaoyan Zhong**	High spatial resolution electron magnetic circular dichorism
9:15 - 9:40	**Guang Yang**	High resolution STEM and EELS studies of functional oxides
9:40 - 10:30	**Coffee Break**	
10:30 - 10:55	**Renchao Che**	属磁性材料磁畴相变的原位洛伦兹透射电镜研究
10:55 - 11:20	**Peng Wang**	Electron ptychographic diffractive imaging
11:20 -11:45	**Xiaoxiao Cao**	Latest advances of Instrumentation and application of Gatan analytical TEM solutions
12:00	**Lunch (Nan Yang Hotel)**	

Parallel session II: Advanced Analytical Electron Microscopy

Time: 14:00-18:00, June 2nd, 2017 (Friday)
Location: MSE New Building

Session Chairs	**Yang Lu and Jinping Zhang**	
14:00 - 14:25	**Jinping Zhang**	Σ-rotation domains in AlN films on sapphire by HVPE
14:25 - 14:50	**Xingzhong Li**	TEM study of phase segregation in Mn_2CrGa-based alloys
14:50 - 15:15	**Shaobo Mi**	Atomic-scale structure of epitaxial $Pb(Zr,Ti)O_3/SrRuO_3$ heterointerfaces
15:15 - 15:40	**Bin Huang**	In-situ TEM investigation of new structural metallic materials
15:40 - 16:30	**Coffee Break**	
16:30 - 16:55	**Yang Lu**	Ultrahigh strength and fracture of metallic and semiconductor nanowires
16:55 - 17:20	**Jeffrey M. Wheeler**	Plasticity and fracture of silicon at high and low temperatures
17:20 - 17:45	**Shihao Li**	Small-volume aluminum alloys with native oxide shell deliver unprecedented strength and toughness

Parallel Session III: In Situ TEM Symposium

Time: 8:00-12:00, June 2nd, 2017 (Friday)
Location: MSE New Building

Session Chairs	**Honggang Liao & Shijian Zheng**	
8:00 – 8:25	**Honggang Liao**	2D materials formation dynamics revealed by in situ liquid cell TEM
8:25 - 8:50	**Akihiro Kushima**	In situ liquid-cell transmission electron microscopy for energy storage materials
8:50 - 9:15	**Jianbo Wu**	In situ investigation of nucleation, growth, corrosion behavior in atomic layered core-shell electocatalysts
9:15 - 9:40	**Qiang Xu**	Real time atomic scale imaging of catalysts during catalytic reaction
9:40 - 10:30	**Coffee Break**	
10:30 - 10:55	**Qian Yu**	Mechanical properties characterization of materials at multiple scale
10:55 - 11:20	**Shijian Zheng**	Interface effects of nanolayered metallic composites
11:20 -11:45	**Chuanhong Jin**	Direct imaging the kinetic pathways of atomic diffusion in monolayer molybdenum disulfide
12:00	**Lunch** (Nan Yang Hotel)	

Parallel Session III: In Situ TEM Symposium

Time: 14:00-18:00, June 2nd, 2017 (Friday)
Location: MSE New Building

Session Chairs	**He Zheng & Lin Gu**	
14:00 - 14:25	**Lin Gu**	Atomic-scale investigation of electrically induced ion migration and structural evolution of functional oxides
14:25 - 14:50	**Yuan Yao**	In situ electron holography for microelectronic device
14:50 - 15:15	**Fangfang Xu**	In-situ TEM investigation of advanced inorganic materials
15:15 - 15:40	**Meng Li**	Effect of hydrogen on the integrity of aluminum-oxide interface at elevated temperatures
15:40 - 16:30	 **Coffee Break**	
16:30 - 16:55	**He Zheng**	Microstructures and growth dynamics in low-dimensional materials
16:55 - 17:20	**Erwan Sourty**	State of the art TEM by FEI/Thermo Fisher scientific as part of dedicated workflow solution
17:20 - 17:45	**Qin Luo**	日立高端场发射电镜和联用解决方案介绍

Parallel session IV: Energy and Electronic Materials

Time: 8:00-12:00, June 2nd, 2017 (Friday)
Location: MSE New Building

Session Chairs	**Hui Xia and Shuqiang Jiao**	
8:00 – 8:25	**Shuqiang Jiao**	The rechargeable aluminium-ion batteries
8:25 - 8:50	**Weifeng Wei**	Tuning the surface structure and chemistry of layered oxide cathodes for high-voltage rechargeable batteries
8:50 - 9:15	**Tao Zhang**	Gel-derived cation-π stacking film and self-defense redox mediator for lithium-O_2 batteries
9:15 - 9:40	**Jinsong Wu**	Atomic-resolution in-situ TEM studies of lithium/sodium electrochemistry in nanostructured electrodes
9:40 - 10:30	**Coffee Break**	
10:30 - 10:55	**Hui Xia**	Nanostructured electrode designs for high performance supercapacitors
10:55 - 11:20	**Xiaogang Han**	Improved solid-state lithium batteries with surface/interface treatment
11:20 -11:45	**Wei Xiao**	Molten salt electrochemistry towards electrometallurgy and CO_2 reduction
12:00	**Lunch** ((Nan Yang Hotel))	

Parallel session IV: Energy and Electronic Materials

Time: 14:00-18:00, June 2nd, 2017 (Friday)

Location: MSE New Building

Session Chairs	**Ming Xu and Huigao Duan**	
14:00 - 14:25	**Huigao Duan**	High-resolution nanofabrication for studying materials behavior at the sub-10-nm scale
14:25 - 14:50	**Lan Yin**	Biodegradable materials for dissolvable electronics
14:50 - 15:15	**Chaopeng Fu**	Low-cost electrochemical energy storage electrodes based on industrial waste mill scale
15:15 - 15:40	**Jiangwei Wang**	Tuning the outward to inward swelling in lithiated silicon nanotubes via surface oxide coating
15:40 - 16:30	**Coffee Break**	
16:30 - 16:55	**Ming Xu**	Pressure effect on resonant bonding
16:55 - 17:20	**Volker Deringer**	Exploring chemical bonding in phase-change materials with new theoretical tools
17:20 - 17:45	**Shuai Wei**	The role of glass transition, semiconductor-metal transition, and liquid fragility in phase-change behavior