Conference Agenda

Friday December 14th	12:00 – 22:30	会议注册 Registration 御苑宾馆 Lobby of Yuyuan Hotel
	13:30 – 18:10	讲　　习 Tutorial 航空宇航学院（A18 号楼）529 报告厅
	18:30 – 20:00	晚　　餐 Dinner 御苑宾馆一楼　Dining Room of Yuyuan Hotel
	20:00 – 22:00	分会理事会 Committee Meeting 御苑宾馆四楼会议室

Conference Agenda: Tutorial

December 14th (13:30 -18:00)

	Tutorial 1
13:30 -14:40	**Scanning Probe Methods for Photovoltaics** **David Ginger**
14:40 -15:00	**Discussion and Break**
	Tutorial 2
15:00 -16:10	**Introduction to Nanomechanical Measurements with Atomic Force Microscopy** **Roger Proksch**
16:10 -16:30	**Discussion and Break**
	Tutorial 3
16:30 -18:00	**Ferroelectric or Electrochemical? Artifacts in Piezoresponse Force Microscopy** **Jiangyu Li**

Conference Agenda

Saturday December 15th	07:30 – 18:30	会议注册 Registration 逸夫科学馆大厅 Lobby of Yifu Hall	
	08:30 – 09:00	开 幕 式 Opening Ceremony 逸夫科学馆报告厅 Main Classroom of Yifu Hall	
	09:00 – 10:30	大会报告 Plenary Session I 逸夫科学馆报告厅 Main Classroom of Yifu Hall	
	10:30 – 11:00	墙报/茶歇 Poster/Coffee Break 逸夫科学馆大厅 First Floor of Yifu Hall	
	11:00 – 12:20	主题报告 Keynote Session I	Piezoelectric Materials I.A 主报告厅 Main Classroom of Yifu Hall Electromechanical Probes I.B 长空厅 Changkong Classroom
	12:20 – 13:40	午餐 Lunch Break 一食堂三楼桃李苑 Third Floor of First Canteen	
	13:40 – 15:10	大会报告 Plenary Session II 逸夫科学馆报告厅 Main Classroom of Yifu Hall	
	15:10 – 15:40	墙报/茶歇 Poster/Coffee Break 逸夫科学馆大厅 First Floor of Yifu Hall	
	15:40 – 18:26	主题报告 Keynote Session II	Transport Behaviors II.A 主报告厅 Main Classroom of Yifu Hall Functional Devices II.B 长空厅 Changkong Classroom
	18:45 – 20:30	晚宴 Banquet 御苑宾馆一楼 Dining Room of Yuyuan Hotel	

Conference Agenda

Sunday December 16th	08:30 – 10:10	大会报告及墙报颁奖 Plenary Session III and Poster Award 逸夫科学馆报告厅 Main Classroom of Yifu Hall	
	10:10 – 10:20	茶歇 Coffee Break 逸夫科学馆大厅 First Floor of Yifu Hall	
	10:20 – 12:13	主题报告 Keynote Session III	Atomic Imaging III.A 主报告厅 Main Classroom of Yifu Hall 2D Systems III.B 长空厅 Changkong Classroom
	12:13 – 13:30	午餐 Lunch Break 一食堂三楼桃李苑 Third Floor of First Canteen	
	13:30 – 15:50	主题报告 Keynote Session IV	Multiferroics and Magnetism IV.A 主报告厅 Main Classroom of Yifu Hall Theory and Computation IV.B 长空厅 Changkong Classroom
	15:50 – 16:10	茶歇 Coffee Break 逸夫科学馆大厅 First Floor of Yifu Hall	
	16:10 – 18:16	主题报告 Keynote Session V	Electrochemical Couplings V.A 主报告厅 Main Classroom of Yifu Hall Functional Probes V.B 长空厅 Changkong Classroom
	18:30 – 19:30	晚餐 Dinner 御苑宾馆一楼 Dining Room of Yuyuan Hotel	

Plenary Session

Plenary Session I December 15th (09:00-10:30)
Main Classroom of Yifu Hall | Chair: Jing-Feng Li

09:00-09:30 Observation of Room Temperature Polar Skyrmions
Ramamoorthy Ramesh

09:30-10:00 Probing van der Waals Interactions Using Atomic Force Microscopy
郭万林 Wanlin Guo

10:00-10:30 Merging Chemical and Functional Imaging at the Nanoscale
David Ginger

Plenary Session II December 15th (13:40-15:10)
Main Classroom of Yifu Hall | Chair: Jiangyu Li

13:40-14:10 Polarization-Induced Conductance and Ferromagnetism at Ferroelectric/Insulator Interfaces
潘晓晴 Xiaoqing Pan

14:10-14:40 Atomic Mapping of Domains and Interfacial Structures in Ferroelectric Films
马秀良 Xiuliang Ma

14:40-15:10 Understanding Mechanically Induced Domain Switching in Ferroelectric Thin Films Guided by Phase-Field Modeling
陈龙庆 Long-Qing Chen

Plenary Session III December 16th (08:30 -10:00)
Main Classroom of Yifu Hall | Chair: Weiqiu Chen

08:30-09:00 On Electron Transfer Mechanism in Contact-Electrification Effect
王中林 Zhong-Lin Wang

09:00-09:30 Electromechanical Behavior of Ionic Polymer Metal Composite Modified by $BaTiO_3$
熊克 Ke Xiong

09:30-10:00 Ferroelectric Domain Structure in Bulk $BiFeO_3$ Crystals
Sang-Wook Cheong

Scientific Program

December 15th

08:30 -09:00 **Opening Ceremony**
Main Classroom of Yifu Hall | Chair: Cunfa Gao

Plenary Session I (09:00 -10:30)
Main Classroom of Yifu Hall | Chair: Jing-Feng Li

Lecture 1
09:00 -09:30 Observation of Room Temperature Polar Skyrmions
Ramamoorthy Ramesh

Lecture 2
09:30 -10:00 Probing van der Waals Interactions Using Atomic Force Microscopy
郭万林 Wanlin Guo

Lecture 3
10:00 -10:30 Merging Chemical and Functional Imaging at the Nanoscale
David Ginger

10:30 -11:00 **Poster Session and Coffee Break**
First Floor of Yifu Hall

Keynote session I.A (11:00 -12:20)
Piezoelectric Materials
Main Classroom of Yifu Hall | Chair: Ke Wang, Yumeng You

11:00 -11:20 Molecular Piezoelectrics
Yumeng You

11:20 -11:40 Giant Polarization in Super-Tetragonal Ferroelectric Thin Films Through a New Concept of Interphase Strain
Linxing Zhang

11:40 -12:00 Phase Structures and Piezoelectric Response of Sol-Gel Processed (001)-Oriented KNN-Based Thin Films
Jin Luo, Jing-Feng Li

12:00 -12:20 Rotating a Phase Boundary: Potassium-Sodium-Niobate Derivates
Ke Wang

Keynote session I.B (11:00 -12:20)

Electromechanical Probes

Changkong Classroom | Chair: Cai Shen, Deyang Chen

11:00-11:20 Visualization and Imaging of Electrochemical and Mechanical Properties of Materials for Batteries and Fuel Cells
S. Hong

11:20-11:40 Transplantable and Tunable Strain Engineering in Complex Oxide Thin Films
Deyang Chen

11:40-12:00 The Role of Humidity and Crosslinking on Collagen Piezoelectricity
B.J. Rodriguez

12:00-12:20 Direct Study of Electric Properties of PC 12 Cells and Hippocampal Neurons by EFM and KPFM
Cai Shen

12:20-13:40 **Lunch Break**
Third Floor of First Canteen

Plenary Session II (13:40-15:10)

Main Classroom of Yifu Hall | Chair: Jiangyu Li

Lecture 1
13:40-14:10 Polarization-Induced Conductance and Ferromagnetism at Ferroelectric/Insulator Interfaces
潘晓晴 Xiaoqing Pan

Lecture 2
14:10-14:40 Atomic Mapping of Domains and Interfacial Structures in Ferroelectric Films
马秀良 Xiuliang Ma

Lecture 3
14:40-15:10 Understanding Mechanically Induced Domain Switching in Ferroelectric Thin Films Guided by Phase-Field Modeling
陈龙庆 Long-Qing Chen

15:10-15:40 **Poster Session and Coffee Break**
First Floor of Yifu Hall

Keynote session II.A (15:40 -18:26)

Transport Behaviors

Main Classroom of Yifu Hall| Chair: Yue Zheng, Jiyan Dai

15:40-16:00 Topological Structures as Nanoscale Functional Elements
J. Seidel

16:00-16:20 Charge Compensation and Wall Current Enhancement in $BiFeO_3$ Epitaxial Thin Films
Anquan Jiang

16:20-16:40 Strain Modulation to Ferroelectric Tunnel Junction
Jiyan Dai

16:40-17:00 Ferroelectric Synapse for Neuromorphic Computing
Chungang Duan

17:00-17:20 Conductive Behavior of Ferroelectric Domain Walls
Xiaomei Lu

17:20-17:40 Novel Conductive Properties in Ferroelectric Topological Domains
Xingsen Gao

17:40-18:00 Measuring and Modulating the Electron Transport in Single Molecular Junction
Yue Zheng

18:00-18:13 Nanoscale Investigation on Domain Evolution Behavior in the $Pb(Mg_{1/3}Nb_{2/3})O_3$-$0.28PbTiO_3$ Relaxor Ferroelectric Single Crystal via Piezoresponse Force Microscopy
Qingyuan Hu

18:13-18:26 Effect of the Oxygen Octahedral Structure on the Performance and Temperature Stability of Ferroelectric Morphotropic Phase Boundary
Kang Yan

Keynote session II.B (15:40 -18:26)

Functional Devices

Changkong Classroom | Chair: Liangliang Li, Yaojin Wang

15:40-16:00 Self Powered Smart Sensing System
Haixia Zhang

16:00-16:20 The Self-Powered Nanosystem Based on Dielectric Elastomer and Triboelectric nanogenerator
Xiangyu Chen

16:20-16:40 Transparent and Flexible All-Inorganic Ferroelectric Nonvolatile Memories
Guoliang Yuan

16:40 Non-Volatile Memory Based on Ferroelectric-Gating Few-Layer Photoelectric Black

-17:00 Phosphorus Semiconductor
Yaojin Wang

17:00 cAFM Device Concepts in $SrTiO_3$ Based Electron Systems
-17:20 Guanglei Cheng

17:20 Understand the Energy Band Alignment in Thin-Film Solar Cells
-17:40 Qi Chen

17:40 Micro-Thermoelectric Power Generators with Cross-Plane and In-Plane
-18:00 Configurations
Liangliang Li

18:00 Smart Versus Big Data Analysis in AFM: Why Chose Relaxor
-18:13 R. Stomp

18:13 Domain Dynamics in Organic Ferroelectric Polymers
-18:26 Bobo Tian

18:45 **Banquet**
-20:30 Dining Room of Yuyuan Hotel

December 16th

Plenary Session III and Poster Award (08:30 -10:10)

Main Classroom of Yifu Hall | Chair: Weiqiu Chen

Lecture 1

08:30 -09:00 On Electron Transfer Mechanism in Contact-Electrification Effect
王中林 Zhong-Lin Wang

Lecture 2

09:00 -09:30 Electromechanical Behavior of Ionic Polymer Metal Composite Modified by $BaTiO_3$
熊克 Ke Xiong

Lecture 3

09:30 -10:00 Ferroelectric Domain Structure in Bulk $BiFeO_3$ Crystals
Sang-Wook Cheong

10:00 -10:10 **Poster Award Ceremony**

10:10 -10:20 **Coffee Break**
First Floor of Yifu Hall

Keynote session III.A (10:20 – 12:13)

Atomic Imaging

Main Classroom of Yifu Hall | Chair: Yuefei Zhang, Peng Gao

10:20 -10:40 Flexoelectricity of $SrTiO_3$ Dislocations
Peng Gao

10:40 -11:00 Structure and Electronic Structure of Functional Materials under Symmetric Breaking
Lin Gu

11:00 -11:20 A Protonated Brownmillerite Electrolyte for Superior Low-Temperature Proton Conductivity
Pu Yu

11:20 -11:40 Advanced Electron Microscopy for Thermoelectric Materials
Lin Xie, Jiaqing He

11:40 -12:00 Characterization of Elastic Modulus of ALD Thin Films by In-Situ SEM-SPM
Yuefei Zhang

12:00 -12:13 Photo Induce Ferroic Domain Alteration and Ionic Migration in Organometal Perovskite
Jinjin Zhao

Keynote session III.B (10:20 – 12:13)

2D Systems

Changkong Classroom | Chair: Ming Ma, Xueyun Wang

10:20-10:40 Freestanding Crystalline Monolayers of Oxide Perovskites
Yuefeng Nie

10:40-11:00 Ferroelectric Domain in $CuInP_2S_6$
Xueyun Wang

11:00-11:20 Interfacial Strain Engineering of WS_2 and MoS_2 Films Investigated by Advanced Atomic Force Microscopy
Zhihai Cheng

11:20-11:40 Structural Superlubricity: Challenges in Crossing Atomic to Macroscopic Scale
Ming Ma, Quanshui Zheng

11:40-12:00 Measuring the Local Mobility of Graphene on Semiconductors
Haijian Zhong

12:00-12:13 Adhesions of Liquids on Graphite
Cangyu Qu

12:13-13:30 **Lunch Break**
Third Floor of First Canteen

Keynote session IV.A (13:30 – 15:50)

Multiferroics and Magnetism

Main Classroom of Yifu Hall | Chair: Zuhuang Chen, Ming Liu

13:30-13:50 DFT Prediction of Low Dimensional Ferroelectrics
Shuai Dong

13:50-14:10 Low Voltage of Interfacial Magnetism in Magnetic Multilayers
Ming Liu

14:10-14:30 Ferroelectrically Tunable Magnetic Skyrmions in Ultrathin Oxide Heterostructures
Lingfei Wang

14:30-14:50 Scanning Nitrogen-Vacancy Center Microscopy for Nanoscale Magnetic Imaging
Pengfei Wang

14:50-15:10 Electric Field Controlled Spintronics in Multiferroic Heterostructures
Yuewei Yin

15:10-15:30 The Emerging Magnetism in Low Dimensional Transition Metal Oxides
Xiaofang Zhai

15:30 -15:50 Domain Structure and Magnetism in Multiferroic $BiFeO_3$ Thin Films–Redux
Zuhuang Chen

Keynote session IV.B (13:30 – 15:49)
Theory and Computation
Changkong Classroom | Chair: Houbing Huang, Jiawang Hong

13:30 -13:50 Three-Dimensional Contact Analyses with Multi-Field Couplings
Weiqiu Chen

13:50 -14:10 Mechanical Control of Magnetic Order: From Phase Transition to Skyrmions
Jie Wang

14:10 -14:30 Beyond Piezoelectricity: Flexoelectricity and Its Effect on the Nanostructures
Jiawang Hong

14:30 -14:50 Phase-Field Modeling of Electric-Field-Control Multicaloric Effects
Houbing Huang

14:50 -15:10 Isolated Design of Three-Dimensional Origami Structures Induced by Buckling
Yan Shi

15:10 -15:23 Piezotronic Effect in a Composite Fiber of Piezoelectric Dielectrics and Nonpiezoelectric Semiconductors
Chunli Zhang

15:23 -15:36 Atomic Scale Study of the Anti-Vortex Domain Structure in Polycrystalline Ferroelectric
Xiaobao Tian

15:36 -15:49 Quantitatively Analyzing the Nanoscale Electromechanical Responses in Piezoelectric Medium via Pieoresponse Force Microscopy
Kai Pan

15:49 -16:10 **Coffee Break**
First Floor of Yifu Hall

Keynote Session V.A (16:10 – 18:16)
Electrochemical Couplings

Main Classroom of Yifu Hall | Chair: Kaiyang Zeng, Jinxing Zhang

16:10-16:30 Nanoscale Susceptibilities in Ferroelectric Thin Films: Insights from Multidimensional Spectroscopy and Machine Learning
Josh Agar

16:30-16:50 Physics and Chemistry on the Polar Surface of Ferroelectrics
Jinxing Zhang

16:50-17:10 Electromechanical Response and Hysteresis in Piezoresponse Force and Electrochemical Strain Microscopy – Quantitative Interferometric Measurements and Long-range, Non-localized Hysteretic Forces
Roger Proksch

17:10-17:30 Electrode/Ionic Liquid Interfaces: A Combined Study Using AFM Force Curve and Electrochemistry
Jiawei Yan

17:30-17:50 Applying of SPM-Based Techniques to Characterize Functional Properties of Oxide Materials
Kaiyang Zeng

17:50-18:03 Investigation on Surface Charge on Ferroelectric Films by Scanning Probe Microscopy
Ni Zhong

18:03-18:16 Room-Temperature Multiferroic New System of Hexagonal $Lu_{1-x}In_xFeO_3$
Juan Liu

Keynote session V.B (16:10 – 18:16)
Functional Probes
Changkong Classroom | Chair: Min Zeng, Xiaoyan Liu

16:10-16:30 Photoinduced Charge Separation at Plasmonic Au Nanoplate/Ferroelectric Interface
Xiaoyan Liu

16:30-16:50 Confinement and Filler Induced Microstructure and Phase Change in PVDF Based Thin Films for Dielectric and Piezoelectric Applications
Dong Guo

16:50-17:10 Ferroelectric Domains of Epitaxial Hexagonal Manganite Films
Min Zeng

17:10-17:30 SPM-Based Studies of Optical Illumination Induced Effects in Perovskites
Tao Li

17:30 -17:50 Excitations in Symmetry-Broken Phases
Zongquan Gu, Jonathan Spanier

17:50 -18:03 Deterministic, Reversible and Nonvolatile Low Voltage Writing of Magnetic Domains in Epitaxial $BaTiO_3/Fe_3O_4$ Heterostructure
Gaokuo Zhong, Jiangyu Li

18:03 -18:16 Nonvolatile Modulation of Electronic Properties of Oxide and Non-Oxide Semiconductor Thin Films Grown on Ferroelectric Single Crystals
Renkui Zheng

18:30 -19:30 **Dinner**
Dining Room of Yuyuan Hotel

POSTER PRESENTATION

P 1:	Environmental and Biological Impact of Room Temperature Ionic Liquids Interacting with Model Cell Membranes M. Galluzzi
P 2:	Extensive AFM Study on Organo-Metal Halide Perovskite Thin-Films in Solar Cell T. Leonhard
P 3:	Room Temperature Multiferroic Properties of Electrospun Gallium Ferrite Nanofibers Feng An
P 4:	Nano-Characterization of Evolutions in the Morphology and Mechanical Properties of Electrode Materials by the Inverted Atomic Force Microscopy Operating in Liquid Zhuanfang Bi
P 5:	Role of Intermediate Phase to the High Piezoelectric Properties in the [001]-Oriented $Pb(Mg_{1/3}Nb_{2/3})O_3$-x%$PbTiO_3$ Single Crystals: Direct Observation by Piezoresponse Force Microscopy Jihong Bian
P 6:	A New Approach to Get the Molecular Interaction of Protein by AFM Experiment: Quantification, Regulation and Application Yihui Dong
P 7:	Discontinuous Phase Transition for Mc-O Phase in 0.66$Pb(Mg_{1/3}Nb_{2/3})O_3$ -0.34$PbTiO_3$(PMN-34PT) Jinhui Fan
P 8:	Thickness-Dependent Evolution of Piezoresponses and Stripe 90° Domains in (101)-Oriented Ferroelectric $PbTiO_3$ Thin Films Yanpeng Feng
P 9:	Probing of Local Mechanical Electrochemistry Coupling of Na-Ion Battery by Multi-Mode Scanning Probe Microscopy Techniques Bi Fu
P 10:	Single-Crystalline Freestanding $PbTiO_3$ Thin Films by Molecular Beam Epitaxy Lu Han
P 11:	Freestanding Crystalline Monolayers of Oxide Perovskites Dianxiang Ji
P 12:	Ferroic Domains Regulate Photocurrent in Organometal Halid Perovskite Films Chunmei Jia

P 13:	Resolving Fine Electromechanical Structure of Collagen Fibrils via Sequential Excitation Piezoresponse Force Microscopy Peng Jiang
P 14:	Hydrothermal Growth and Piezoelectric Response of Li,Ta-Doped (K,Na)NbO_3 Nanorods Lei Jiang
P 15:	Non-Equilibrium Microstructure of $Li_{1.4}Al_{0.4}Ti_{1.6}(PO_4)_3$ Superionic Conductor by Spark Plasma Sintering for Enhanced Ionic Conductivity Shanshan Duan
P 16:	Quantitative Amplitude-Modulation Scanning Kelvin Probe Microscopy by Cantilever Dynamics Optimization Junqi Lai
P 17:	Resolving the Local Electrochemistry of Lithium-Ion Battery Electrode Materials at Nanoscale Aolin Li
P 18:	Influence of Structural Evolution on Electrocaloric Effect in $Bi_{0.5}Na_{0.5}TiO_3$-$SrTiO_3$ Ferroelectric Ceramics Feng Li
P 19:	Temperature Dependent Phase Transition of Sol-Gel Synthesized (1-x)$(Bi_{0.5}Na_{0.5})TiO_3$-x$SrTiO_3$ Thin Films Xianying Li
P 20:	Elastic Properties of Suspended Indium Selenide (InSe) Yuhao Li
P 21:	Detecting the Thickness-Dependent Surface Potential of 2D Layered α-In_2Se_3 by Kelvin Probe Force Microscopy Zhi Li
P 22:	Nanoscale Ring-Shaped Conduction Channels with Memristive Behavior in $BiFeO_3$ Nanodots Zhongwen Li
P 23:	Twist Angle-Dependent Conductivities Across MoS_2/Graphene Heterojunctions. Mengzhou Liao
P 24:	Direct Fabrication of Graphite-Mica Heterojunction and in Situ Control of Their Relative Orientation Bingtong Liu

P 25:	Finite Element Modeling and Quantitative Measurement Using Smim to Characterise Low K Dielectric Films Bo Liu
P 26:	Epitaxial Growth of BTFM-CTO Thin Film by Sol-Gel Method Cong Liu
P 27:	General Resolution Enhancement Method in Atomic Force Microscopy (AFM) Using Deep Learning Yue Liu
P 28:	Vertical Cavity Surface Emitting Lasers with Micro-Pattern Structure Yun Liu
P 29:	Visible Light-Induced Surface Charge on BTO-Polymer Hybrid and Its Enhancement to Triboelectricity Wangheng Lu
P 30:	Eliminating the Effects of Piezoelectricity in the Characterization of Flexoelectric Coefficient Yingzhuo Lun
P 31:	Measuring Light Induced Dynamic Surface Charge Redistribution of Pyroelectric Nano Generators Utilizing the Atomic force Microscope Xin Lv
P 32:	Controllable Conductive Readout in Self-Assembled, Topologically Confined Ferroelectric Domain Walls Ji Ma
P 33:	Nonlinear Dynamics Analysis of Piezoelectric Materials in Contact-Mode Piezoresponse Force Microscopy Experiment Wenjie Ming
P 34:	Domain Growth Dynamics in PMN-PT Ferroelectric Thin Films Jiayu Pan
P 35:	Fracture Analyses of Soft Materials with Hard Inclusion Pengyu Pei
P 36:	Eliminating Delamination of Graphite Sliding on Diamond-Like Carbon Yujie Gongyang
P 37:	Direct Measurements of Electrocaloric Effect Based on Scanning Thermal Microscopy Dongliang Shan

P 38:	Robust Microscale Superlubricity in Single Crystalline Layered Material Heterojunctions: The Case of Graphite/H-BN Interfaces Yiming Song
P 39:	Ex-situ Investigation of Solid Electrolyte Using Scanning Probe Based Techiniques Qiaomei Sun
P 40:	Probing the Nanoscale Mechanical and Functional Properties of Osteogenesis Imperfecta Mouse Models by Scanning Probe Microscopy Techniques Yao Sun
P 41:	Manipulating Conductive Domain Walls in Confined Ferroelectric Nanoislands Guo Tian
P 42:	Self-Assembled Au-Nb: $SrTiO_3$ Nanocomposite Thin Film for Photochemical Water Splitting Hongliang Wang
P 43:	Nano/Atomic Scale Control of Multiple Order Parameters in Correlated Functional Materials Jing Wang
P 44:	Comparison of Piezoelectricity of $KNLNS_{0.07}$-BZ Thin Films on Different Substrates Quantitatively at the Nanoscale via Novel PFM Enabled by Machine Learning Lei Wang
P 45:	Dielectric and Piezoelectric Properties of $BiNiO_3$ Doped $K_{0.5}Na_{0.5}NbO_3$-$Na_{0.5}Bi_{0.5}ZrO_3$ Lead-Free Ceramics Ting Wang
P 46:	Enhanced Electrocaloric Effect Near Polymorphic Phase Boundary in Lead-Free Potassium Sodium Niobate Ceramics Xiangjian Wang
P 47:	Outstanding Piezoelectric Response and Energy Harvesting Performance of Lead-Free $(K,Na)NbO_3$ Nanorod Arrays Zhao Wang
P 48:	Nanoscale Characterization of Solid Electrolyte by Scanning Probe Microscopy Techniques Zhongting Wang
P 49:	Crystallization and Electrical Properties of PVDF-Based Binary and Ternary Composites Jingshu Xu

P 50:	**Piezoelectricity and Ferroelectricity in Hexagonal Alpha-In_2Se_3 Down to the Monolayer Limit** **Fei Xue**
P 51:	**Directional Emission Micro-Cavity Structure Lasers and Their Array Device** **Changling Yan**
P 52:	**The Effects of Maxwell Stress on the Piezoelectric Materials with Two Collinear Cracks** **Guang Yang**
P 53:	**Electrically Driven Reversible Magnetic Rotation in Nanoscale Multiferroic Heterostructures** **Junxiang Yao**
P 54:	**Giant Strain in $Bi_{0.5}Na_{0.5}TiO_3$-Based Relaxor-Ferroelectrics by Sites and Composition Engineering** **Jie Yin**
P 55:	**Effects of Defects and Environments on Local Electrochemical Process of Yttria-Stabilized Zirconia (YSZ) Thin Film** **Bingxue Yu**
P 56:	**Quadratic Electromechanical Strain in Silicon Investigated by Scanning Probe Microscopy** **Junxi Yu**
P 57:	**Preparation and Structure Characterization of Freestanding $BiFeO_3$ Films** **Yipeng Zang**
P 58:	**Hierarchic Polar Topological Domain in $PbTiO_3$ Nanoislands** **Luyong Zhang**
P 59:	**Atomic Scale Insights into Structure Instability and Decomposition Pathway of Methylammonium Lead Iodide Perovskite** **Ying Zhang**
P 60:	**Practical High Strain with Superior Temperature Stability in Lead-Free Piezoceramics Through Domain Engineering** **Chunlin Zhao**
P 61:	**Nanoscale Domain Structures and Local Property Characterization of Multiferroic Materials via Scanning Probe Microscopy** **Kunyu Zhao**
P 62:	**Coherent Thermoelectric Power from Graphene Quantum Dots** **Mali Zhao**

P 63:	**Manipulation of Conductive Ferroelectric Domain Walls** **Dongfeng Zheng**
P 64:	**Phase Structural Engineering to Improve In-Situ Temperature Stability of D_{33} in Potassium Sodium Niobate Ceramics for Ultrasonic** **Ting Zhen**
P 65:	**Thickness-Dependent Phase Transition in Lead-Free $Bi_{0.5}Na_{0.5}TiO_{3-2\%}$ $BaTiO_3$ Epitaxial Film** **Zhen Zhou**
P 66:	**Measuring Elasticity of Multiferroic Composite Nanofibers with Contact Resonance AFM via Local and Global Excitation** **Qingfeng Zhu**
P 67:	**Effect of Crystal Orientation on Piezoelectric Response and Domain State Evolution of $BaTiO_3$ Thin Films** **Zhe Zhu**

Nanjing University of Aeronautics and Astronautics

Nanjing University of Aeronautics and Astronautics (NUAA) is one of China's premier learning and research institutions which now develops into a comprehensive university especially featured with Aerospace Engineering. Ever since it was established in 1952, we have strived to conduct world-level research and education system. 66 years' history witnesses its unremitting efforts and remarkable achievements.

Academia and education at NUAA represent strong capacity among all the universities in China. It has acquired national status through the quality of its excellence research work, especially in the areas of Aerospace Engineering, Mechanics, Electromechanics, Economy and Management, etc.

Our university's laboratories are a constant source of new ideas, especially in the fields of Aircraft Design, Dynamics, Mechanics, Manufacturing, Automation and Unconventional Machining, etc. Through the diverse research and teaching activities, we are striving to provide the highest quality of educational experience for students to meet the current needs of society, endowing them with a passport to the professional world and cultivating them into future pioneers in the fields of science and technology.

State Key Laboratory of Mechanics and Control of Mechanical Structures

The State Key Laboratory of Mechanics and Control of Mechanical Structures (SKLMCMS) was established in 2011. SKLMCMS is one of the most representative academic research institutions of China in the field of Aerospace Structural Mechanics and Control. The Laboratory is recognized as the leader in the fields of aircraft structural dynamics and control in China. Its smart structures and structronics research group is among the leading research groups in the world. It is also one of the pioneer institutes in the research of aircraft structural strength. SKLMCMS has initialized many new research fields in China, such as the Aviation Smart Materials and Structures, Vibration and Precision Drive Technologies, Nonlinear Dynamics and Control, and Micro-Nano Mechanics.

The research areas of SKLMCMS include structural dynamics and control, strength of mechanical structures, vibration utilization and precision drive, micro-nano mechanics as well as smart materials and structures. inspired by the severe and demanding operational environments for high performance aircraft and technical challenges in newly emerged materials, structures and processes, especially the trending of integrations among new materials, new structures and multiple functions, the Mission of SKLMCMS is devoted to develop innovative theories and break technical bottlenecks in aerospace sciences and technologies related to the fields of structural dynamics and control, strength of light structures and smart structure systems in order to support national priorities, and promote industrial progresses.

MAPS AND TRAFFIC

1. CONGRESS MAPS

■ **In AFM^2 2018, most constructions are located inside the Ming Palace Campus of Nanjing University of Aeronautics and Astronautics. (南京航空航天大学明故宫校区):**

A: Yifu Hall (逸夫科学馆, Main Venue of AFM^2 2018, including the conference lecture rooms and the registration place on December 15-16, 2018)

B: Yuyuan Hotel (御苑宾馆, the registration place on December 14, 2018)

C: Grand Metropark Hotel, Nanjing (南京维景国际大酒店)

D: Ming Palace Station (明故宫地铁站)

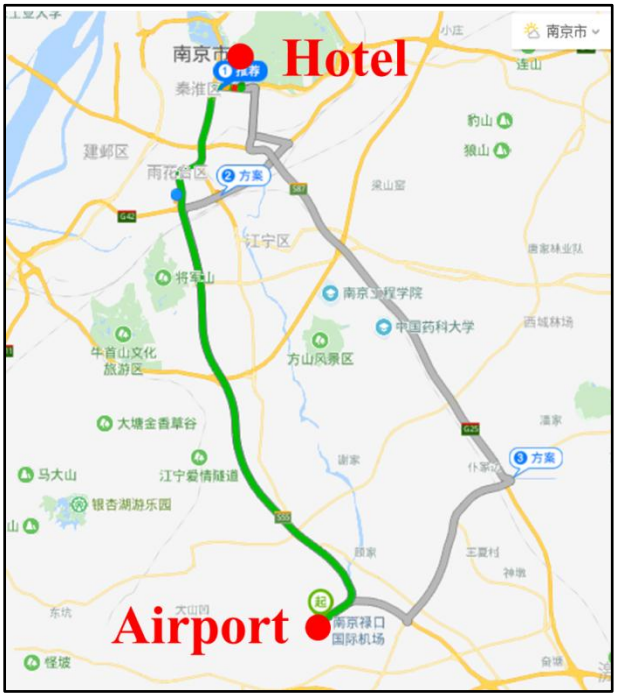
E: Taoli Yuan Restaurant (桃李苑)

Main Venue of AFM^2 2018

2. CONGRESS TRAFFIC

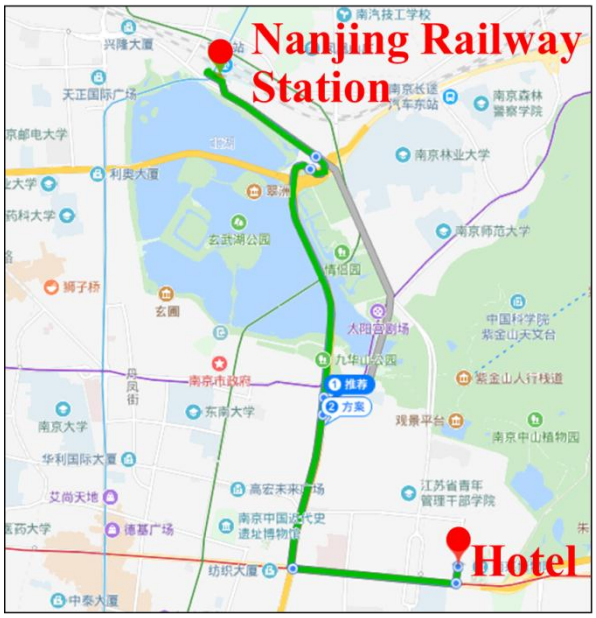
The Yuyuan Hotel and the Grand Metropark Hotel, Nanjing are very near to each other and located near to the metro station "Ming Palace Station" (明故宫站).

- **From Nanjing Lukou International Airport (南京禄口国际机场) to the Yuyuan Hotel and the Grand Metropark Hotel, Nanjing:**
  - **By metro: ~85 minutes, 7 RMB: First, take No. S1 metro from "Lukou Airport Station"(禄口机场站) to "Nanjing South Station"(南京南站). Then, transfer to No. 1 metro and take it to "Xinjiekou Station"(新街口站). Transfer again to No. 2 metro and take it to "Ming Palace Station" (明故宫站). Last, walk straight to the south for about 550 m to the Yuyuan Hotel (御苑宾馆), or walk straight to the east for about 400 m to the Grand Metropark Hotel, Nanjing (南京维景国际大酒店).**
  - **By taxi: ~45 km, ~45 minutes, ~140 RMB**



- **From Nanjing South Railway Station (南京南站) to the Yuyuan Hotel and the Grand Metropark Hotel, Nanjing:**
  - **By metro: ~45 minutes, 3 RMB: First, take No. 1 metro from "Nanjing South Station" (南京南站) to "Xinjiekou Station"(新街口站). Transfer to No. 2 metro and take it to "Ming Palace Station" (明故宫站). Last, walk straight to the south for about 550 m to the Yuyuan Hotel (御苑宾馆), or walk straight to the east for about 400 m to the Grand Metropark Hotel, Nanjing (南京维景国际大酒店).**
  - **By taxi: ~10 km, ~30 minutes, ~30 RMB**

- **From Nanjing Railway Station (南京站) to the Yuyuan Hotel and the Grand Metropark Hotel, Nanjing:**
  - **By metro: ~35 minutes, 2 RMB: First, take No. 1 metro from "Nanjing Railway Station" (南京站) to "Xinjiekou Station"(新街口站). Transfer to No. 2 metro and take it to "Ming Palace Station" (明故宫站). Last, walk straight to the south for about 550 m to the Yuyuan Hotel (御苑宾馆), or walk straight to the east for about 400 m to the Grand Metropark Hotel, Nanjing (南京维景国际大酒店).**
  - **By taxi: ~8.5 km, ~20 minutes, ~25 RMB**



TOURS & FOOD

Nanjing is the capital of Jiangsu province and second largest city in eastern China after Shanghai. Nanjing was one of the earliest established cities in 495 BC in China.

It was the national capital during part of the Ming dynasty and in the 20th century, the Republic of China. Many monuments and landmarks remain, including Zhonghuamen (Gate of China), a preserved 14th-century section of the massive city wall (longest city wall in the world)

Today, with a long cultural tradition and strong support from local educational institutions, Nanjing is commonly viewed as a "city of culture" and one of the more pleasant cities to live in China.

Nanjing has long been a national center of education, research, transport networks and tourism. It was the host city of the 2014 Summer Youth Olympics.

TOURS

1. Nanjing City Wall (城墙)

Nanjing City Wall is one of the key historical and cultural remains of Ming Dynasty (1368-1644) under state protection. It is a masterpiece of China's ancient architecture. With an original perimeter of about 35 kilometers (22 miles), the City Wall has a height of 14-21 meters (46-67 feet). The footing has a width of 14 meters (about 46 feet). The present remains have a length of about 21 kilometers (13 miles).

2. The Sun Yat-Sen Mausoleum (中山陵)

Dr. Sun Yat-sen's Mausoleum is situated at the foot of the second peak of Mount Zijin (Purple Mountain) in Nanjing. Construction of the tomb started in January 1926, and was finished in spring of 1929. The architect was Lü Yanzhi, who died shortly after it was finished. His representative and project partner was his close friend Huang Tanpu.

3. Xuanwu Lake (玄武湖)

Xuanwu Lake is located in Xuanwu District in the central-northeast part of Nanjing. It is near the Nanjing Railway Station and Ji Ming Temple. Five islands within the lake are interconnected by arched bridges. A visit to the lake and its park can include up to a five-hour walk. Within the park are temples,

pagodas, pavilions, gardens, teahouses, restaurants, entertainment venues, a small zoo, and other attractions. Its main entrance is the Xuanwu Gate.

4. Fuzi Miao (夫子庙) and Qinhuai River (秦淮河)

Fuzi Miao is located on banks of the Qinhuai River. Within the area are cultural attractions, arts, shopping and entertainment. Rather than being a place of quiet reflection and study, the area has become a tourist trap of the first order, overrun with people and souvenir shops and with prices to match.

Qinhuai River is a tributary of the Yangtze with a total length of 110 km. It flows through central Nanjing and is called "Nanjing's mother river". It is the "life blood" of the city.

FOOD

1. Salted Duck (盐水鸭)

Nanjing is a culinary center famous for its Jinling dishes (金陵菜系), especially quality ducks and a whole variety of duck dishes. Salted Duck is often regarded as a dish to share. As a popular pastime, whether locals on family holidays or simply daily visitors, people in Nanjing often take to the streets to buy Nanjing Salted Duck.

2. Duck Blood and Vermicelli Soup (鸭血粉丝汤)

Duck blood and vermicelli soup is a traditional delicacy of Nanjing, capital of Jiangsu province, and is also eaten in other regions of China. A similar dish is also eaten in Poland, Belarus and Lithuania where it's called czernina.

3. Yuhua Tea (雨花茶)

Yuhua tea originates from Nanjing. The name Yuhua means "Rain Flower", and it is so called because the tea leaves are harvested from within the Rain Flower Terrace area. As one of the Ten Famous Tea in China, Yuhua Tea appears green and round resembling pine and is covered with white hair, which is as tight and straight as the pine needle.