

**The 4th International Conference on ALD Applications
& 2018 China ALD Conference**

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October 14 – 17th
Shenzhen Shangri-La Hotel,
1002 Jianshe Road, Luohu District,
Shenzhen, Guangdong

Program

Program Overview

Keynote Speech: 40 min + 5 min (Q&A)

Invited Talk: 25 min + 5 min (Q&A)

Oral Presentation: 12 min + 3 min (Q&A)

Day 1, Session K1, Oct. 15 th Monday, Guangzhou Hall		Session Chair: Shi-Jin Ding
08:30 – 08:45	Opening Ceremony	Page
08:45 – 09:30	Keynote Speech: Novel ALD Chemistry for 2D Materials and Metals Mikko Ritala <i>University of Helsinki, Finland</i>	
09:30 – 10:15	Keynote Speech: Applying Atomic and Molecular Layer Deposition to Catalyst Design Stacey F. Bent <i>Stanford University, USA</i>	
10:15 – 11:00	Keynote Speech: Low k Gate Spacer with Remote Plasma ALD Hyeongtag Jeon <i>Hanyang University, Korea</i>	
11:00 – 11:10	Take a Group Photo	

Session A1, “Precursors, Surface Chemistry, Process Development (I)”, Oct. 15 th Monday, Macau Hall 1		Session Chair: Stacey F. Bent
13:30 – 14:00	Invited: In Situ Monitoring of Surface Reactions During Plasma Assisted Atomic Layer Deposition of SiN_x Sumit Agarwal <i>Colorado School of Mines, USA</i>	
14:00 – 14:30	Invited: Surface Energy Tuning in Atomic Scale for Hydrophobic Coating Han-Bo-Ram Lee <i>Incheon National University, Korea</i>	
14:30 – 15:00	Special: New ALD Process Development at Peking University Shenzhen Xinwei Wang <i>School of Advanced Materials, Peking University Shenzhen Graduate School, China</i>	

15:00 – 15:15	<p>Low-temperature, High-growth Rate Atomic Layer Deposited SiO₂ Using Novel Aminodisilane Precursor</p> <p>Taewook Nam¹, Hyunho Lee¹, Taejin Choi¹, Seunggi Seo¹, Yunjung Choi², Heonjong Jeong², Hima K. Lingam³, Venkateswara R. Chitturi³, Andrey Korolev³, Hyungjun Kim¹</p> <p>¹<i>School of Electrical and Electronic Engineering, Yonsei University, Korea.</i> ²<i>Wonik Materials Co. LTD., Korea.</i> ³<i>Wonik Materials North America, LLC, USA</i></p>	
30 min Coffee Break		
<p>Session A2, “Precursors, Surface Chemistry, Process Development (II)”, Oct. 15th Monday, Macau Hall 1</p> <p style="text-align: right;">Session Chair: Han-Bo-Ram Lee</p>		
15:45 – 16:15	<p><u>Invited:</u> Interfacial Engineering Using ALD for MOF Thin Films</p> <p>Junjie Zhao <i>Zhejiang University, China</i></p>	
16:15 – 16:45	<p><u>Invited:</u> The quantitative analysis of XPS on high mobility semiconductors and high k dielectrics</p> <p>Hong Dong <i>Nankai University, China</i></p>	
16:45 – 17:00	<p>Surface Chemistry during Atomic Layer Deposition of Nickel Sulfide</p> <p>Ran Zhao, Zheng Guo, Xinwei Wang <i>School of Advanced Materials, Peking University Shenzhen Graduate School, China</i></p>	
17:00 – 17:15	<p>The photoemission study of InSb/HfO₂ stacks upon N₂ rapid thermal annealing</p> <p>Yong Sun¹, Jinxin Chen², Tao Wang², Xinglu Wang¹, Ze Feng¹, Chen Liu³, Jiali Zhao³, Feng Lu¹, Yahui Cheng¹, Wei-Hua Wang¹, Weichao Wang¹, Hui Liu¹, Kyeongjae Cho^{1,4}, Rui Wu³, Jiaou Wang³, Hongliang Lu², Hong Dong¹</p> <p>¹<i>Key Laboratory of Photoelectronic Thin Film Devices and Technology of Tianjin, Nankai University, China.</i> ²<i>State Key Laboratory of ASIC and System, School of Microelectronics, Fudan University, China.</i> ³<i>The Institute of High Energy Physics (IHEP), Chinese Academy of Sciences, China.</i> ⁴<i>Department of Materials Science and Engineering, The University of Texas at Dallas, USA</i></p>	
17:15 – 17:30	<p>Atomic Layer Deposition of Metallic Ruthenium by using H₂O reactant</p> <p>Chi Thang Nguyen, Jae Hong Yoon, Rizwan Khan, Han-Bo-Ram Lee <i>Incheon National University, Korea</i></p>	
17:30 – 17:45	<p>Verification, avoidance or utilization of by-product steric hindrance in atomic layer deposition</p> <p>Hao-ran Wang, Zhen-Yu Wang, Yu Duan <i>State Key Laboratory on Integrated Optoelectronics, College of electronic science and engineering, Jilin University, China</i></p>	

<p>Session B1, “Microelectronics (I)”, Oct. 15th Monday, Shenzhen Hall</p> <p style="text-align: right;">Session Chair: Mikko Ritala</p>		
13:30 – 14:00	<p><u>Invited:</u> Two-dimensional Electron Gas at Oxide Heterostructures Using Atomic Layer Deposition</p> <p>Hye Ju Kim, Sang Woon Lee <i>Department of Physics and Division of Energy Systems Research, Ajou University, Korea</i></p>	

14:00 – 14:30	Invited: Electronic Devices and Circuits Based on Two Dimensional Materials and Heterostructures Xiong Xiong, Shengman Li, Qianlan Hu, Mengfei Wang, Xuefei Li, Yanqing Wu <i>Wuhan National High Magnetic Field Center and School of Electrical and Electronic Engineering, Huazhong University of Science and Technology, China</i>	
14:30 – 15:00	Invited: High Performance Two Dimensional Materials Transistors Lei Liao <i>School of Physics & Electronics, Hunan University, China</i>	
15:00 – 15:15	Synthesis of 2D MoS₂ and MoS₂-graphene heterojunction by atomic layer deposition Jusang Park , Youngjun Kim, Hyungjun Kim <i>Yonsei University, Korea</i>	

30 min Coffee Break

Session B2, “Microelectronics (II)”, Oct. 15th Monday, Shenzhen Hall

Session Chair: **Hyeongtag Jeon**

15:45 – 16:15	Invited: Design and Performance Improvement of HfO_x-based RRAM through ALD Fabrication Process Yichen Fang, Zongwei Wang, Yimao Cai , Ru Huang <i>Institute of Microelectronics, Peking University, China</i>	
16:15 – 16:45	Invited: Resistive Switching Memory towards Embedded Application at 28 nm Node and Beyond Hangbing Lv , Xiaoxin Xu, Jing Liu, Danian Dong, Peng Yuan, Jie Yu, Lu Tai, Qing Luo, Tiancheng Gong, Ming Liu Key Laboratory of Microelectronics Devices and Integrated Technology, Institute of Microelectronics, Chinese Academy of Sciences, China	
16:45 – 17:15	Invited: Atomic Layer Deposited TMOs based RRAM and its Application in Artificial Neuromorphic System Lin Chen , Tian-Yu Wang, Hao Zhu, Qing-Qing Sun, Shi-Jin Ding, David Wei Zhang State Key Laboratory of ASIC and System, School of Microelectronics, Fudan University, China	
17:15 – 17:30	Investigation of Negative Differential Resistance Effect in Ru-based RRAM device Fabricated by Atomic Layer Deposition Yulin Feng , Peng Huang, Chen Liu, Xiangxiang Ding, Lifeng Liu, Xiaoyan Liu, Jinfeng Kang <i>Institute of Microelectronics, Peking University, China</i>	
17:30 – 17:45	Low Power Resistive Switching Characteristic in HfO₂/TiO_x Bi-layer Resistive Random Access Memory Xiangxiang Ding , Yulin Feng, Peng Huang, Lifeng Liu, Xiaoyan Liu, Jinfeng Kang <i>Institute of Microelectronics, Peking University, China</i>	

Session C1, “Display and Optics (I)”, Oct. 15th Monday, Macau Hall 2

Session Chair: **Simon D. Elliott**

13:30 – 14:00	Invited: Recent Progresses of Atomic Layer Deposited Oxide Semiconductors and Their Device Applications Jung-Hoon Lee, Jiazhen Sheng, Tae-Hyun Hong, Wan-Ho Choi, Jin-Seong Park <i>Division of Materials Science and Engineering, Hanyang University, Korea</i>	
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14:00 – 14:30	<p>Invited: Transparent and Flexible Driven Circuitry for Displays Prepared by Atomic Layer Deposition</p> <p>Xue Chen, Tao Guo, Guozhen Zhang, Hao Wu, Chang Liu</p> <p><i>Key Laboratory of Artificial Micro- and Nano-structures of Ministry of Education and School of Physics and Technology, Wuhan University, China</i></p>	
14:30 – 15:00	<p>Invited: Study for ALD Applications in the Next Generation Flexible Display</p> <p>Jun Yang, Jianhua Zhang</p> <p><i>Key Laboratory of Advanced Display and System Application, Ministry of Education, Shanghai University, China</i></p>	
15:00 – 15:15	<p>Chemical Stable, Defect Suppression of Amorphous Sn-doped Indium Zinc Oxide (IZTO) Semiconductor Materials for Thin Film Transistor without Etch-stop Layer</p> <p>Jiazhen Sheng¹, TaeHyun Hong¹, Junhyung Lim², Jin-Seong Park¹</p> <p><i>¹Division of Materials Science and Engineering, Hanyang University, Korea. ²Display Research and Development Center, Samsung Display Company, Korea</i></p>	
30 min Coffee Break		
<p>Session C2, “Display and Optics (II)”, Oct. 15th Monday, Macau Hall 2</p> <p style="text-align: right;">Session Chair: Jin-Seong Park</p>		
15:45 – 16:15	<p>Invited: Efficient light emission from rare earth doped nanolaminated gate oxides on silicon prepared by atomic layer deposition</p> <p>Jiaming Sun, C. Y. Jin, X. H. Xiong, Ben Liu, Na Li</p> <p><i>Research Center for Photonics and Electronics Materials, School of Materials Science and Engineering & National Institute for Advanced Materials, Nankai University, China</i></p>	
16:15 – 16:45	<p>Invited: Interface control of metal-oxide heterojunction devices – Taking LED and Memristor as an example</p> <p>Haiyang Xu, Weizhen Liu, Zhongqiang Wang, Yichun Liu</p> <p><i>Center for Advanced Optoelectronic Functional Materials Research and Key Laboratory for UV Light-Emitting Materials and Technology (Northeast Normal University) Ministry of Education, China</i></p>	
16:45 – 17:00	<p>The development of ALD stabilization approaches for quantum dots light emitting diodes based flexible displays</p> <p>Binze Zhou, Yun Li, Qinyong Xiang, Kun Cao, Rong Chen</p> <p><i>State Key Laboratory of Digital Manufacturing Equipment and Technology, School of Mechanical Science and Engineering, Huazhong University of Science and Technology, China</i></p>	
17:00 – 17:15	<p>Stability enhancement of CsPbBr₃ quantum dots/silica nano luminescent sphere structure encapsulated via atomic layer deposition</p> <p>Qinyong Xiang¹, Binze Zhou¹, Kun Cao¹, Bin Shan², Rong Chen¹</p> <p><i>¹State Key Laboratory of Digital of Manufacturing Equipment and Technology, ²State Key Laboratory of Material Processing and Die & Mould Technology, School of Materials Science and Engineering, Huazhong University of Science and Technology, China</i></p>	

17:15 – 17:30	<p>Size-Tunable Lead Sulfide Nanocrystal Grown with Near Infrared Emission by Atomic Layer Deposition</p> <p>Xiangping Pan, Yanhua Dong, Jianxiang Wen, Jiajia Zheng, Caiyun Su, Fufei Pang, Zhenyi Chen, Tingyun Wang</p> <p><i>Key laboratory of Specialty Fiber Optics and Optical Access Networks, Shanghai University, China</i></p>	
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18:00	Banquet	
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Day 2, Session K2, Oct. 16th Tuesday, Guangzhou Hall		Session Chair: Xinwei Wang
08:30 – 09:15	Keynote Speech: Applications of ALD/MLD for Energy Storage and Conversion Andy (Xueliang) Sun <i>University of Western Ontario, Canada</i>	
09:15 – 10:00	Keynote Speech: Crystalline Metal-Organic Thin-Film Structures by ALD/MLD Maarit Karppinen <i>Aalto University, Finland</i>	
30 min Coffee Break		
Session K2 Continues, Oct. 16th Tuesday, Guangzhou Hall		Session Chair: Hongliang Lu
10:30 – 11:15	Keynote Speech: Simulations of the Chemistry Underlying Atomic Level Processing Simon D. Elliott <i>Schrödinger Inc.</i>	
11:15 – 12:00	Keynote Speech: ALD and solution chemistry: differences and similarities Nicola Pinna <i>Humboldt University of Berlin, Germany</i>	

Session A3, “Catalysis and Energy Technology (I)”, Oct. 16th Tuesday, Macau Hall 1		Session Chair: Andy (Xueliang) Sun
13:30 – 14:00	Invited: Synthesis and Characterization of Single-Atom Catalysts for PEM Fuel Cells Shuhui Sun <i>Institut national de la recherche scientifique (INRS)-Énergie, Matériaux et Télécommunications (EMT), Canada</i>	
14:00 – 14:30	Invited: Narrow bandgap semiconductors for solar water splitting enabled by atomic layer deposition Tuo Wang, Jinlong Gong <i>School of Chemical Engineering and Technology, Tianjin University, China</i>	
14:30 – 14:45	Applications of Atomic Layer Deposition in Solar Energy Conversion Xianglin Li^{1,2}, Zhiwei Wang², Hongjin Fan², Alfred Iing Yoong Tok² <i>¹Hunan First Normal University, China. ²School of Material Science and Engineering, Nanyang Technological University, Singapore</i>	
14:45 – 15:00	Fabrication of Supercapacitor by using ALD Synthesized TiO₂ nanomembranes Farah Naeem^{1,2}, Sumayyah Naeem^{1,2}, Yuting Zhao¹, Yalan Li¹, Dingrun Wang¹, Lu Wang¹, Jing Zhang³, Linfeng Hu¹, Gaoshan Huang¹, Yongfeng Mei¹ <i>¹Materials Science Department, Fudan University, China. ²State Key Laboratory for Modification of Chemical Fibers and Polymer Material Science and Engineering, Donghua University, China. ³College of Science, Donghua University, China</i>	
15:00 – 15:15	Functional Nanosheets via Atomic Layer Deposition for Energy Storage Yuting Zhao, Gaoshan Huang, Yongfeng Mei <i>Department of Materials Science, Fudan University, China</i>	

30 min Coffee Break	
Session A4, "Catalysis and Energy Technology (II)", Oct. 16th Tuesday, Macau Hall 1	
Session Chair: Nicola Pinna	
15:45 – 16:15	Invited: ALD for nanostructured energetic electrodes fabrication, surface and interface engineering Chuanwei Cheng <i>Shanghai Key Laboratory of Special Artificial Microstructure Materials and Technology, School of Physics Science and Engineering, Tongji University, China</i>
16:15 – 16:45	Invited: Precise Fabrication of Catalytic Structures by Atomic Layer Deposition Hao Feng, Ting Gong, Lijun Qin <i>Xi'an Modern Chemistry Research Institute, China</i>
16:45 – 17:00	Synergistic effects in atomic-layer-deposited PtCo_xCNTs catalysts enhancing hydrolytic dehydrogenation of ammonia borane Chaoqiu Chen¹, Jiankang Zhang¹, Xuezhi Duan², Yong Qin¹ <i>¹State Key Laboratory of Coal Conversion, Institute of Coal Chemistry, Chinese Academy of Sciences, China. ²State Key Laboratory of Chemical Engineering, East China University of Science and Technology, China</i>
17:00 – 17:15	Bifunctional CO oxidation over Mn-mullite anchored Pt sub-nanoclusters via atomic layer deposition Xiao Liu,¹ Yuanting Tang,² Bin Shan², Rong Chen¹ <i>¹State Key Laboratory of Digital Manufacturing Equipment and Technology, School of Mechanical Science and Engineering, Huazhong University of Science and Technology, China. ²State Key Laboratory of Materials Processing and Die and Mould Technology, School of Materials Science and Engineering, Huazhong University of Science and Technology, China.</i>
17:15 – 17:30	Strategies of constructing composite metallic nanoparticles via selective atomic layer deposition for catalytic applications Kun Cao, Yun Lang, Bin Shan, Rong Chen <i>State Key Laboratory of Digital Manufacturing Equipment and Technology, School of Mechanical Science and Engineering, Huazhong University of Science and Technology, China</i>
17:30 – 17:45	Ultrathin zirconia passivation and stabilization of aluminum nanoparticles for energetic nanomaterials via atomic layer deposition Kai Qu, Jiawei Li, Jing Zhang, Xiao Liu, Rong Chen <i>State Key Laboratory of Digital Manufacturing Equipment and Technology, School of Mechanical Science and Engineering, Huazhong University of Science and Technology, China</i>

Session B3, "Microelectronics (III)", Oct. 16th Tuesday, Shenzhen Hall	
Session Chair: Maarit Karppinen	
13:30 – 14:00	Invited: Ferroelectric Negative Capacitance Field Effect Transistors with HfZrO_x Grown by ALD Genquan Han, Yan Liu, Yue Hao <i>School of Microelectronics, Xidian University, China</i>

14:00 – 14:30	<p>Invited: Modulation of Interface Quality and Electrical Properties of High-k/III-V gate stacks by MOCVD/ALD-derived Passivation Layer</p> <p>Gang He¹, Juan Gao², Shuang Liang¹, Die Wang¹</p> <p>¹<i>School of physics and Materials Science, Radiation Detection Materials & Devices Lab, Anhui University, China.</i> ²<i>School of Mechanics and Photoelectric Physics, Anhui University of Science and Technology, China</i></p>	
14:30 – 14:45	<p>Dielectric Enhancement of Atomic Layer Deposited Al₂O₃/ZrO₂/Al₂O₃ Nano-Stack by Microwave Annealing</p> <p>Bao Zhu, Wen-Jun Liu, Shi-Jin Ding, David Wei Zhang</p> <p><i>School of Microelectronics, Fudan University, China</i></p>	
14:45 – 15:00	<p>Modulation of the Properties of ZnO:N Film and Its Transistors</p> <p>Aiji Wang¹, Kai Zhao¹, Bowen Lv¹, Zhenglong Wu², Yinshu Wang</p> <p>¹<i>Department of Physics, Beijing Normal University, China.</i> ²<i>Analytical and Testing Center, Beijing Normal University, China</i></p>	
15:00 – 15:15	<p>Fabrication of the p-CuO/n-SnO₂ core-shell nanowire heterostructures for enhanced sensitive and selective formaldehyde detection</p> <p>Li-Yuan Zhu, Kaiping Yuan, Jian-Guo Yang, Hong-Liang Lu, David Wei Zhang</p> <p><i>State Key Laboratory of ASIC and System, Shanghai Institute of Intelligent Electronics & Systems, School of Microelectronics, Fudan University, China</i></p>	
30 min Coffee Break		
Session B4, “Microelectronics (IV)”, Oct. 16th Tuesday, Shenzhen Hall		
Session Chair: Christophe Detavernier		
15:45 – 16:15	<p>Invited: The Performance-Enhanced Solar Cells based on Group-III Nitrides Deposited by PEALD</p> <p>Huiyun Wei, Xinhe Zheng, Peng Qiu, Mingzeng Peng, Yunlai An, Sanjie Liu, Yingfeng He, Yimeng Song, Meiling Li</p> <p><i>Semiconductor Physics and Devices Group, School of Mathematics and Physics, University of Science and Technology Beijing, China</i></p>	
16:15 – 16:45	<p>Invited: GaN-based power devices and power module</p> <p>Xinke Liu¹, Jin-ping Ao¹, Qing Xia², Hsien-Chin Chiu³</p> <p>¹<i>Department of Materials Science and Engineering, Shenzhen University, China.</i> ²<i>School of Electrical Engineering, Xi’an Jiaotong University, China.</i> ³<i>Department of Electronic Engineering, Chang Gung University, Taiwan, China</i></p>	
16:45 – 17:00	<p>E-mode AlGaIn/GaN HEMT with P-GaN Gate and ALD Al₂O₃ Based Passivation Scheme</p> <p>Wei-Chih Cheng, Wenmao Li, Guangnan Zhou, Zeyu Wan, Judy Xilin An, Hongyu Yu</p> <p><i>Department of Electrical and Electronic Engineering, Southern University of Science and Technology, China</i></p>	
17:00 – 17:15	<p>Atomic layer deposition of buffer layers for the growth of vertically aligned carbon nanotube arrays</p> <p>Haohao Li¹, Guangjie Yuan¹, Bo Shan¹, Xiaoxin Zhang¹, Hongping Ma², Hongliang Lu², Johan Liu^{1,3}</p> <p>¹<i>SMIT Center, School of Automaool of Microelectronics, Fudan University, China.</i> ²<i>Electronics Materials and Systems Laboratory, Department of Microtechnology and Nanoscience, Chalmers University of Technology, Sweden</i></p>	

17:15 – 17:30	<p>Chemical vapor deposition of vertically aligned carbon nanotube arrays: Critical effects of oxide buffer layers</p> <p>Haohao Li¹, Guangjie Yuan¹, Bo Shan¹, Xiaoxin Zhang¹, Hongping Ma², Hongliang Lu², Johan Liu^{1,3}</p> <p>¹SMIT Center, School of Automation and Mechanical Engineering, Shanghai University, China. ²State Key Laboratory of ASIC and System, School of Microelectronics, Fudan University, China. ³Electronics Materials and Systems Laboratory, Department of Microtechnology and Nanoscience, Chalmers University of Technology, Sweden</p>	
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<p>Session C3, “Display and Optics (III)”, Oct. 16th Tuesday, Macau Hall 2</p> <p style="text-align: right;">Session Chair: Rong Chen</p>	
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13:30 – 14:00	<p>Invited: Optical and Structural Properties of Low Temperature HfO₂ for Micromirror Applications</p> <p>Claudia Wiemer CNR-IMM UoS of Agrate Brianza, Italy</p>	
14:00 – 14:30	<p>Invited: Atomic Layer Deposition of Functional Films for Organic Electronic Devices</p> <p>Yu Duan, Yun-Fei Liu, Hao-ran Wang, Zhen-Yu Wang, Tao Ding State Key Laboratory on Integrated Optoelectronics, College of electronic science and engineering, Jilin University, China</p>	
14:30 – 14:45	<p>HfO₂-SiO₂ Rugate filters fabricated by atomic layer deposition</p> <p>Yaowei Wei, Qiao Xu, Qian Wu, Zhen Wang, Fei Zhang, Jin Luo, Qinghua Zhang, Jian Wang Chengdu Fine Optical Engineering Research Center, China</p>	
14:45 – 15:00	<p>Onset voltage shift in the organic thin-film transistor with an atomic-layer deposited charge-injection interlayer</p> <p>Yuhao Shi, Yuanhong Gao, Hong Meng, Xinwei Wang School of Advanced Materials, Peking University Shenzhen Graduate School, China</p>	
15:00 – 15:15	<p>Thin Film Encapsulation in Flexible OLEDs by Using Atomic Layer Deposition Technology</p> <p>Min Li¹, Hua Xu¹, Wei Zhang¹, Chongpeng Ruan¹, Jianhua Zou², Hong Tao², Lei Wang², Miao Xu², Junbiao Peng² ¹Guangzhou New Vision Optoelectronic Co., Ltd., China. ²Institute of Polymer Optoelectronic Materials and Devices, State Key Laboratory of Luminescent Materials and Devices, South China University of Technology, China</p>	

30 min Coffee Break

<p>Session C4, “Modeling and Industrialization”, Oct. 16th Tuesday, Macau Hall 2</p> <p style="text-align: right;">Session Chair: Wei-Min Li</p>	
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15:45 – 16:15	<p>Invited: The Role Numerical Modelling Plays in the Atomic Layer Deposition Process for Current and Future Product Development</p> <p>Tien-Chien Jen University of Johannesburg, South Africa</p>	
16:15 – 16:30	<p>A Numerical Study on the Spatial Atomic Layer Deposition Process of Al₂O₃</p> <p>Wentao Cong, Zoushuang Li, Yun Li, Yili Huang, Rong Chen State Key Laboratory of Digital Manufacturing Equipment and Technology, School of Mechanical Science and Engineering, Huazhong University of Science and Technology, China</p>	

16:30 – 16:45	<p>Low-temperature thermal ALD of SiO₂ - increasing the possibilities</p> <p>Miia Mäntymäki¹, Jesse Kalliomäki¹, Tiina Sarnet¹, Tero Pilvi¹, Quentin Demarly², Nicolas Blasco³ ¹ Picosun Oy, Finland. ²Air Liquide Electronics, France. ³ Air Liquide Advanced Materials, France</p>	
16:45 – 17:00	<p>Low Temperature Plasma-enhanced Atomic Layer Deposition for SiO₂ Using Carbon Dioxide</p> <p>Zhen Zhu¹, Perttu Sippola², Oili M.E. Ylivaara³, Kenichiro Mizohata⁴, Emma Salmi¹, Saoussen Merdes¹, Hele Savin² ¹Beneq Oy, Finland. ²Department of Electronics and Nanoengineering, Aalto University, Finland. ³VTT Technical Research Centre of Finland Ltd., Finland. ⁴Division of Materials Physics, Physics Department, University of Helsinki, Finland</p>	
17:00 – 17:15	<p>Stresses in ALD films: Aiming for zero stress thin films</p> <p>Riina Ritasalo, Oili Ylivaara, Tero Pilvi, Tommi Suni Picosun</p>	
17:15 – 17:30	<p>Area-selective ALD on copper vs Low-k (and oxides) with octadecanethiol blocking layers using a single reactor</p> <p>L. Lecordier Veeco, USA</p>	
17:30 – 17:45	<p>Homogeneous and Stress Controlled PEALD Films with the New SILAYO System</p> <p>Hassan Gargouri¹, Franziska Naumann¹, Sebastian Golka¹, Kristin Pfeiffer², Vivek Beladiya³, Adriana Szeghalmi^{2,3} ¹SENTECH Instruments GmbH, Germany. ²Fraunhofer Institute for Applied Optics and Precision Engineering IOF, Germany. ³Friedrich Schiller University, Inst. of Applied Physics, Germany</p>	
17:45 – 18:00	<p>Large-Scale ALD Particle Coating on Battery Electrodes for High-Temperature, High Energy Density Lithium Ion Batteries</p> <p>Ming Xie Battflex Technologies, Inc., China</p>	
18:00 – 20:00	Poster Session	

Day 3,		
Session K3, Oct. 17th Wednesday, Shenzhen Hall		
		Session Chair: Yongfeng Mei
08:30 – 09:15	Keynote Speech: Atomic Layer Deposition for Non-conventional Nanomaterials and Their Applications Hyungjun Kim <i>Yonsei University, Korea</i>	
09:15 – 10:00	Keynote Speech: ALD-based routes towards the controlled deposition of (bi)metallic nanoparticles Christophe Detavernier <i>Ghent University, Belgium</i>	
15 min Coffee Break		
Session K3 Continues, Oct. 17th Wednesday, Shenzhen Hall		
		Session Chair: Yongfeng Mei
10:15 – 11:00	Keynote Speech: Recent Advance of ALD Technology for High-Volume-Manufacturing Applications-A Prospect of Innovation and Localization in China Wei-Min Li <i>Jiangsu Leadmicro Nano-Technology Ltd.</i>	
11:00 – 12:00	China ALD Student Awards and Closing Remarks	

Poster Session, Oct. 16 th Tuesday, 18:00 – 20:00	
Cald-P01	<p>Interfacial Catalysis in Al₂O₃ Atomic Layer Deposition by Non-Hydrolytic Sol-Gel Chemistry</p> <p>Lina Xu, Guoyong Fang <i>College of Chemistry and Materials Engineering, Wenzhou University, China</i></p>
Cald-P02	<p>In-situ Photoelectron Spectroscopic Investigation on the Interface Energy Alignment of Atomic-Layer-Deposited VO_x on Pentacene</p> <p>Ran Zhao, Yuanhong Gao, Xinwei Wang <i>School of Advanced Materials, Peking University Shenzhen Graduate School, China</i></p>
Cald-P03	<p>Investigation of Annealing on Interfacial Properties of AlN/SiC Structure Prepared by Atomic Layer Deposition</p> <p>Jun Chen^{1,2}, Feng Zhang^{1,2}, Xingfang Liu¹, Guoguo Yan¹, Zhanwei Shen¹, Zhengxin Wen^{1,2}, Lei Wang¹, Wanshun Zhao¹, Guosheng Sun^{1,2}, Yiping Zeng^{1,2} <i>¹Key Laboratory of Semiconductor Material Sciences, Institute of Semiconductors, Chinese Academy of Sciences, China. ²College of Materials Science and Opto-Electronic Technology, University of Chinese Academy of Sciences, China</i></p>
Cald-P04	<p>Highly sensitive and stable SERS substrate fabricated by co-sputtering and atomic layer deposition</p> <p>Shiheng Baia², Xing long Tu, ZhengLi^{1,2}, Yanpeng Zhang^{1,2}, Weiming Wang³, Jing Lu², Dannong He^{1,2} <i>¹School of Material Science and Engineering, Shanghai Jiao Tong University, China. ²National Engineering Research Center for Nanotechnology, China. ³School of Mechanical Engineering, Shanghai JiaoTong University, China</i></p>
Cald-P05	<p>Influence of buffer on InN growth by PEALD</p> <p>Yunlai An, Sanjie Liu, Huiyun Wei, Yingfeng He, Meiling Li, Peng Qiu, Yimeng Song, Jiadong Cheng, Xinhe Zheng, Mingzeng Peng <i>University of Science and Technology Beijing, China</i></p>
Cald-P06	<p>Eptaxial Growth of Single-crystal AlN films at Low Temperature by Atomic Layer Deposition</p> <p>Yuan Zhang^{1,2}, Hong-Liang Lu², Shi-Jin Ding², David Wei Zhang² <i>¹School of Physics and Electronic Information, Huai Bei Normal University, China. ²State Key Laboratory of ASIC and System, School of Microelectronics, Fudan University, China.</i></p>
Cald-P07	<p>Realization of Synaptic Behaviors in HfO₂-Based Bilayer-Structure Memristors by Atomic Layer Deposition</p> <p>Chang Liu, Lai-Guo Wang, Yan-Qiang Cao, Di Wu, Ai-Dong Li <i>National Laboratory of Solid State Microstructures, Department of Materials Science and Engineering, College of Engineering and Applied Sciences, Collaborative Innovation Center of Advanced Microstructures, Nanjing University, China</i></p>

Cald-P08	<p>An Ultra-thin (~2 nm) HfO₂: W RRAM Device with Quasi-linear Current-Voltage Characteristics for Neuromorphic Inference</p> <p>Xumeng Zhang^{1,2}, Rui Wang^{1,2}, Jinsong Wei¹, Jian Lu¹, Yilin Fang¹, Tuo Shi^{1,2}, Qing Luo^{1,2}, Wei Wang¹, Xiaolong Zhao¹, Rongrong Cao^{1,2}, Zuheng Wu^{1,2}, Hangbing Lv^{1,2}, Qi Liu^{1,2}, Ming Liu^{1,2}</p> <p>¹Key Laboratory of Microelectronics Devices and Integrated Technology, Institute of Microelectronics, Chinese Academy of Sciences, China. ²University of the Chinese Academy of Sciences, China</p>	
Cald-P09	<p>A Fully CMOS Compatible and Forming-free ReRAM Device with Current-limit and Excellent Self-rectifying Functionalities</p> <p>Haili Ma, Peng Yuan, Shengjie Zhao, Yu Liu, Kaiping Zhang, Cheng Lu, Peiwen Zhang, Hangbing Lv</p> <p>Key Laboratory of Microelectronics Devices and Integrated Technology, Institute of Microelectronics, Chinese Academy of Sciences, China</p>	
Cald-P10	<p>Fabrication and characterization of undoped β-Ga₂O₃ thin-film transistors</p> <p>Shun-Ming Sun¹, Ya-Wei Huan¹, Hao Liu¹, Yi-Fan Xiao¹, Wen-Jun Liu¹, Hong-Yu Yu², Chang-Tai Xia³, Shi-Jin Ding¹, David Wei Zhang¹</p> <p>¹State Key Lab ASIC & Syst., School of Microelectronics, Fudan University, China. ²Department of Electrical and Electronic Engineering, Southern University of Science and Technology, China. ³Key Laboratory of Materials for High Power Laser, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China</p>	
Cald-P11	<p>Conduction and valence band offsets of atomic-layer- deposited ZnO on β-Ga₂O₃</p> <p>Shun-Ming Sun¹, Ya-Wei Huan¹, Hao Liu¹, Yi-Fan Xiao¹, Wen-Jun Liu¹, Xin-Ke Liu², Chang-Tai Xia³, Shi-Jin Ding¹, David Wei Zhang¹</p> <p>¹State Key Lab ASIC & Syst., School of Microelectronics, Fudan University, China. ²State Key Laboratory of Luminescence and Applications, Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China. ³Key Laboratory of Materials for High Power Laser, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China</p>	
Cald-P12	<p>Conduction and valence band offsets of indium-gallium-zinc oxide on β-Ga₂O₃ (-201)</p> <p>Ya-Wei Huan¹, Shun-Ming Sun¹, Hao Liu¹, Xiao-Bing Tang¹, Wen-Jun Liu¹, Hong-Yu Yu², Shi-Jin Ding¹, David Wei Zhang¹</p> <p>¹State Key Lab ASIC & Syst., School of Microelectronics, Fudan University, China. ²Department of Electrical and Electronic Engineering, Southern University of Science and Technology, China</p>	
Cald-P13	<p>Physical analysis of polycrystalline GaN thin films on KAPTON Flexible Substrate by PEALD</p> <p>Meiling Li, Sanjie Liu, Yimeng Song, Yunlai An, Yingfeng He, Peng Qiu, Abdul Rehman, Huiyun Wei, Mingzeng Peng, Xinhe Zheng</p> <p>University of Science and Technology Beijing, China</p>	

Cald-P14	<p>Ferroelectric Polarization improvement of the of Fully ALD-grown TiN/HfZrO_x/TiN stack by Non-uniform Doping</p> <p>Haoran Yu¹, Qing Luo^{1,2}, Tiancheng Gong^{1,2}, Jie Yu¹, Hangbing Lv^{1,2}, Xiaoxin Xu^{1,2}, Danian Dong¹, Jiahao Yin^{1,2}, Peng Yuan¹, Lu Tai¹, Shibing Long^{1,2}, Qi Liu^{1,2}, Ming Liu^{1,2}</p> <p>¹Key Laboratory of Microelectronics Devices and Integrated Technology, Institute of Microelectronics, Chinese Academy of Sciences, China. ²University of the Chinese Academy of Sciences, China</p>	
Cald-P15	<p>Grown GaN Thin Films on MoS₂/SiO₂/Si Substrates by Plasma Enhanced Atomic Layer Deposition</p> <p>Yimeng Song, Sanjie Liu, Yingfeng He, Yunlai An, Meiling Li, Peng Qiu, Abdul Rehman, Huiyun Wei, Mingzeng Peng, Xinhe Zheng</p> <p>University of Science and Technology Beijing, China</p>	
Cald-P16	<p>GaN Films Grown over a Graphene/SiO₂/Si Stack by Plasma Enhanced Atomic Layer Deposition</p> <p>Yingfeng He, Sanjie Liu, Yimeng Song, Yunlai An, Meiling Li, Peng Qiu, Abdul Rehman, Huiyun Wei, Mingzeng Peng, Xinhe Zheng</p> <p>University of Science and Technology Beijing, China</p>	
Cald-P17	<p>Impacts of Cu-doping on the performance of La-based RRAM devices</p> <p>Yongte Wang, Hongxia Liu, Xing Wang, Lu Zhao</p> <p>Key Laboratory for Wide-Band Gap Semiconductor Materials and Devices of Education, School of Microelectronics, Xidian University, China</p>	
Cald-P18	<p>Low temperature plasma-enhanced atomic layer deposition of Cobalt thin films using Co(EtCp)₂ and NH₃ precursors</p> <p>Zi-Jun Ding, Bao Zhu, Wen-Jun Liu, Shi-Jin Ding</p> <p>State Key Laboratory of ASIC and System, Department of Microelectronics, Fudan University, China</p>	
Cald-P19	<p>Influence of hydrogen concentration on the optimized thermal annealing temperature for a-IGZO thin film transistors with PEALD Al₂O₃ dielectrics</p> <p>Yan Shao, Mei-Na Zhang, Wen- Jun Liu, Xiao-Han Wu, Shi-Jin Ding, David Wei Zhang</p> <p>State Key Lab ASIC and System, School of Microelectronics, Fudan University, China</p>	
Cald-P20	<p>Synergistic effects in atomic-layer-deposited PtCo_x/CNTs catalysts enhancing hydrolytic dehydrogenation of ammonia borane</p> <p>Chaoqiu Chen¹, Jiankang Zhang¹, Xuezhi Duan², Yong Qin¹</p> <p>¹State Key Laboratory of Coal Conversion, Institute of Coal Chemistry, Chinese Academy of Sciences, China. ²State Key Laboratory of Chemical Engineering, East China University of Science and Technology, China</p>	
Cald-P21	<p>Electrical properties and interfacial issues of HfO₂/Ge MIS capacitors characterized by the thickness of La₂O₃ interlayer</p> <p>Lu Zhao, Hongxia Liu, Yongte Wang, Xing Wang</p> <p>Key Laboratory for Wide Band Gap Semiconductor Materials and Devices of Education, School of Microelectronics, Xidian University, China</p>	

Cald-P22	<p>Ultra-thin ALD Al₂O₃ Film for Resistive Switching Memory Application</p> <p>Xiaolong Zhao^{1,2}, Zuheng Wu¹, Rui Wang¹, Xumeng Zhang¹, Wei Wang¹, Rongrong Cao¹, Xiangheng Xiao^{1,2}, Changzhong Jiang^{1,2}, Hangbing Lv¹, Qi Liu¹, Ming Liu¹</p> <p>¹Key Laboratory of Microelectronics Devices and Integrated Technology, Institute of Microelectronics, Chinese Academy of Sciences, China. ²Department of Physics Hubei Nuclear Solid Physics Key Laboratory and Center for Ion Beam Application, Wuhan University, China</p>	
Cald-P23	<p>The Self-rectifying HfO based RRAM with MLC capability fabricated by Atomic Layer Deposition</p> <p>Xiaoxin Xu, Lu Tai, Danian Dong, Jie Yu, Qing Luo, Tiancheng Gong, Peng Yuan, Qingting Ding, Jiahao Yin, Qi Liu, Hangbing Lv, Ming Liu</p> <p><i>Institute of Microelectronics, Chinese Academy of Sciences, China</i></p>	
Cald-P24	<p>Investigation of Soft Error in the CBRAM with Cu/Ta₂O₅/Ta/W structure</p> <p>Jie Yu, Xiaoxin Xu, Tiancheng Gong, Lu Tai, Qing Luo, Jiahao Yin, Danian Dong, Hangbing Lv, Shibing Long, Qi Liu, Ming Liu</p> <p><i>Institute of Microelectronics, Chinese Academy of Sciences, China</i></p>	
Cald-P25	<p>Multi-level Memristors Based on Al Doped HfO₂ Thin Film</p> <p>Lei Wu, Jiabin Li, Hongxia Liu, Shulong Wang</p> <p><i>School of Microelectronics, Xidian University, China</i></p>	
Cald-P26	<p>Feasibility of large-scale high-performance MoS₂ transistors on GaN Substrate</p> <p>Yang Wang¹, Zhenghao Gu¹, Hao Liu¹, Lin Chen¹, Qingqing Sun¹, Xinke Liu², David Wei Zhang¹</p> <p>¹State Key Laboratory of ASIC and System, School of Microelectronics, Fudan University, China. ²College of Materials Science and Engineering, Shenzhen Key Laboratory of Special Functional Materials, Shenzhen University, China</p>	
Cald-P27	<p>Low Forming Voltage and Better Uniformity Achieved by High Temperature Forming operation</p> <p>Lu Tai, Xiaoxin Xu, Tiancheng Gong, Jiahao Yin, Peng Yuang, Qing Luo, Jie Yu, Hangbing Lv</p> <p><i>Key Laboratory of Microelectronics Devices and Integrated Technology, Institute of Microelectronics, Chinese Academy of Sciences, China</i></p>	
Cald-P28	<p>Growth of High-K Dielectric Films on Graphene via Atomic Layer Deposition for Preparation of High Transparent Capacitors</p> <p>Tao Guo, Guozhen Zhang, Xue Chen, Jiaxian Wan, Hao Wu, Chang Liu</p> <p><i>Key Laboratory of Artificial Micro- and Nano-structures of Ministry of Education, and School of Physics and Technology, Wuhan University, China</i></p>	
Cald-P29	<p>Rational Design of Double-layer ZnO Thin Film Transistors by Using Different Oxidant Prepared by Atomic Layer Deposition</p> <p>Xue Chen, Jiaxian Wan, Hao Wu, Chang Liu</p> <p><i>Key Laboratory of Artificial Micro- and Nano-structures of Ministry of Education, and School of Physics and Technology, Wuhan University, China</i></p>	

Cald-P30	<p>Interfacial chemistry and energy band alignment of Al₂O₃-AlN bilayer on 4H-SiC</p> <p>Bowen Lv¹, Jun Chen², Feng Zhang², Zhenglong Wu³, Yinshu Wang</p> <p>¹Department of Physics, Beijing Normal University, China. ²Institute of Semiconductors, Chinese Academy of Sciences, China. ³Analytical and Testing Center, Beijing Normal University, China</p>	
Cald-P31	<p>Temperature Characteristics of ALD Deposition HZO Ferroelectric Film</p> <p>Yue Peng, Genquan Han, Jincheng Zhang, Yue Hao</p> <p>State Key Discipline Laboratory of Wide Band Gap Semiconductor Technology, School of Microelectronics, Xidian University, China</p>	
Cald-P32	<p>Thermal Stability of the ALD Deposited Hf_{0.5}Zr_{0.5}O₂ ferroelectric film</p> <p>Wenwu Xiao, Min Liao, Yichun Zhou</p> <p>Key Laboratory of Low Dimensional Materials and Application Technology of Ministry of Education, Xiangtan University, China</p>	
Cald-P33	<p>IGZO Thin Film Transistors with High-k Dielectrics via Atomic Layer Deposition for Photoelectric Applications</p> <p>Quantan Wu^{1,2}, Congyan Lu^{1,2}, Hangbing Lv^{1,2}, Ling Li^{1,2}, Ming Liu^{1,2}</p> <p>¹Key Laboratory of Microelectronic Devices & Integrated Technology, Institute of Microelectronics of Chinese Academy of Sciences, China. ²University of Chinese Academy of Sciences, China</p>	
Cald-P34	<p>Electrode Dependence of ALD Hf_{0.5}Zr_{0.5}O₂ Ferroelectric Thin Films</p> <p>Rongrong Cao^{1,2}, Yan Wang^{1,2}, Shengjie Zhao^{1,2}, Yang Yang^{1,2}, Xiaolong Zhao¹, Wei Wang¹, Xumeng Zhang^{1,2}, Hangbing Lv^{1,2}, Qi Liu^{1,2}, Ming Liu^{1,2}</p> <p>¹Key Laboratory of Microelectronics Device & Integrated Technology, Institute of Microelectronics Chinese Academy of Sciences, China. ²University of Chinese Academy of Sciences, China</p>	
Cald-P35	<p>Chemical, Optical, and Electrical Characterizations of Ga₂O₃ Thin Films Grown by Plasma-enhanced Atomic Layer Deposition</p> <p>Xing Li, Hong-Ping Ma, Tao Wang, Jian-Guo Yang, Hong-Liang Lu, David Wei Zhang</p> <p>State Key Laboratory of ASIC and System, Shanghai Institute of Intelligent Electronics & Systems, School of Microelectronics, Fudan University, China</p>	
Cald-P36	<p>ALD Fabrication of hBN/Si Substrate for Terahertz Polarization Converter</p> <p>Lei Liu¹, Wei Zhang², Liyong Jiang²</p> <p>¹Chuzhou Guo Kai Science&Technology Co., Ltd., China. ²Department of Physics, School of Science, Nanjing University of Science and Technology, China</p>	
Cald-P37	<p>Aluminum Surface Plasmon-enhanced Light Emission from ZnO Prepared by Atomic Layer Deposition</p> <p>Heng Zhang, Xi Su, Hao Wu, Chang Liu</p> <p>Key Laboratory of Artificial Micro- and Nano-structures of Ministry of Education, and School of Physics and Technology, Wuhan University, China</p>	
Cald-P38	<p>Investigation of Tin/Zinc Oxide Films Grown by Atomic Layer Deposition as Active Layer in Thin Film Transistors</p> <p>Tao Wang, Jin-Xin Chen, Hong-Liang Lu, David Wei Zhang</p> <p>State Key Laboratory of ASIC and System, Shanghai Institute of Intelligent Electronics & Systems, School of Microelectronics, Fudan University, China</p>	

Cald-P39	<p>Enhanced electroluminescence from ZnO quantum dots LED via introducing Al₂O₃ retarding layer and Ag@ZnO hybrid nanodots</p> <p>Weizhen Liu, Haiyang Xu, Yichun Liu</p> <p><i>Centre for Advanced Optoelectronic Functional Materials Research and Key Laboratory of UV-Emitting Materials and Technology (Northeast Normal University), Ministry of Education, China</i></p>	
Cald-P40	<p>Robustness Enhancement of Adhesive Layer during Flexible Thin Film Transistor Fabrication by Atomic Layer Deposited Al₂O₃ Buffer Layer</p> <p>Jiazhen Sheng¹, TaeHyun Hong¹, Young Bae Kim², Tae Hee Han², Jin-Seong Park¹</p> <p>¹<i>Division of Materials Science and Engineering, Hanyang University, Korea.</i> ²<i>Department of Organic and Nano Engineering, Hanyang University, Korea</i></p>	
Cald-P41	<p>Interface Control for Perovskite Solar Cells using GaN Thin Film Deposited by PEALD</p> <p>Huiyun Wei, Peng Qiu, Yunlai An, Yingfeng He, Yimeng Song, Mingzeng Peng, Xinhe Zheng</p> <p><i>Semiconductor Physics and Devices Group, School of Mathematics and Physics, University of Science and Technology Beijing, China</i></p>	
Cald-P42	<p>Improvement of Silicon Surface Passivation by Atomic Layer Deposited Aluminum Oxide with Two-step Post Annealing</p> <p>Chia-Hsun Hsu, Yun-Shao Cho, Wan-Yu Wu, Shui-Yang Lien</p> <p><i>Department of Materials Science and Engineering, Da-Yeh University, Taiwan, China</i></p>	
Cald-P43	<p>Study on Growth of Nitride on Quantum Dots Solar Cells by Plasma Enhanced Atomic Layer Deposition</p> <p>Peng Qiu, Huiyun Wei, Sanjie Liu, Yingfeng He, Meiling Li, Yimeng Song, Yunlai An, Abdul Rehman, Mingzeng Peng, Xinhe Zheng</p> <p><i>University of Science and Technology Beijing, China</i></p>	
Cald-P44	<p>Influence of annealing temperature on the crystallization of ALD HfO₂ thin films and HfO₂/Si interface</p> <p>Xiao-Ying Zhang¹, Chia-Hsun Hsu², Sin-Liang Ou³, Shui-Yang Lien², Song-Yan Chen³, Wei Huang³, Wen-Zhang Zhu¹, Fei-Bing Xiong¹</p> <p>¹<i>School of Opto-electronic and Communication Engineering, Fujian Provincial Key Laboratory of Optoelectronic Technology and Devices, Xiamen University of Technology, China.</i> ²<i>Department of Materials Science and Engineering, Da-Yeh University, Taiwan, China.</i> ³<i>Bachelor Program for Design and Materials for Medical Equipment and Devices, Da-Yeh University, Taiwan, China.</i> ⁴<i>Department of Physics, OSED, Xiamen University, China</i></p>	
Cald-P45	<p>Low-temperature growth of crystalline InN thin films on silicon substrate with sharp interface via PEALD</p> <p>Sanjie Liu, Yingfeng He, Yimeng Song, Yunlai An, Meiling Li, Peng Qiu, Abdul Rehman, Huiyun Wei, Mingzeng Peng, Xinhe Zheng</p> <p><i>University of Science and Technology Beijing, China</i></p>	

Cald-P46	<p>ZnO/TiO₂ Nanolaminate Prepared by Atomic Layer Deposition as Ultralong Life Anode Material for Lithium Ion Batteries</p> <p>Yan-Qiang Cao, Shan-Shan Wang, Chang Liu, Wei Zhang, Di Wu, Ai-Dong Li <i>National Laboratory of Solid State Microstructures, Materials Science and Engineering Department, College of Engineering and Applied Sciences, Collaborative Innovation Center of Advanced Microstructures, Nanjing University, China</i></p>	
Cald-P47	<p>Fabrication of well-defined WO₃@SnO₂ core-shell nanosheets for NH₃ sensing</p> <p>Kaiping Yuan, Li-Yuan Zhu, Yuan-Yuan Wang, Hong-Liang Lu, David Wei Zhang <i>State Key Laboratory of ASIC and System, Shanghai Institute of Intelligent Electronics & Systems, School of Information Science and Technology, School of Microelectronics, Fudan University, China</i></p>	
Cald-P48	<p>Plasma enhanced atomic layer deposition of SnO₂ films from semiconductor to transparent conductive oxide</p> <p>Yang Gu, Tao Wang, Hong-Ping Ma, Jian-Guo Yang, Hong-Liang Lu, David Wei Zhang <i>State Key Laboratory of ASIC and System, Shanghai Institute of Intelligent Electronics & Systems, School of Microelectronics, Fudan University, China</i></p>	
Cald-P49	<p>Indirect Energy Level Alignment in Configured Dielectric-Metal-Dielectric Structure Working as Transparent Conductive Electrode</p> <p>Tao Ding, Yun-Fei Liu, Yu Duan <i>State Key Laboratory on Integrated Optoelectronics, College of Electronic Science and Engineering, Jilin University, China</i></p>	
Cald-P50	<p>High Stability and Long Life Microchannel Plate Processed by Atomic Layer Deposition</p> <p>Cao Weiwei^{1,2}, Zhu Bingli¹, Bai Xiaohong¹, Xu Peng¹, Wang Bo¹, Qin Junjun¹, Gou Yongsheng¹, Lei Fanpu¹, Bai Yonglin¹, Zhu Jingping² <i>¹State Key Laboratory of Transient Optics and Photonics, Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences, China. ²Key Laboratory for Physical Electronics and Devices of the Ministry of Education and Shaanxi Key Laboratory of Information Photonic Technique, Xi'an Jiaotong University, China</i></p>	
Cald-P51	<p>Successive pulse method for in-layer doped films prepared by atomic layer deposition technology</p> <p>Zhen-yu Wang, Hao-ran Wang, Yu Duan <i>State Key Laboratory on Integrated Optoelectronics, College of electronic science and engineering, Jilin University, China</i></p>	
Cald-P52	<p>Growth of TiO₂ thin films by microwave generated plasma enhanced atomic layer deposition</p> <p>Ji Hye Kim, Young duck Tak, Hyung Sang Park <i>Department of advanced materials research and development, ISAC Research Inc., Korea</i></p>	
Cald-P53	<p>Effects of Annealing Temperature on the Photoluminescence Properties of ZnO/Al₂O₃/Pt Core-shell Nanowires Based on Atomic Layer Deposition</p> <p>Qinghua Ren, Yan Zhang, Xin Ou, Wenjie Yu, Hongliang Lu <i>¹State Key Laboratory of Functional Materials for Informatics, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, China</i></p>	

Cald-P54	<p>Hafnium aluminum oxide non-volatile array logic device based on atomic layer deposition for next generation computing</p> <p>Zhen-Yu He, Lin Chen, Tian-Yu Wang, Hao Zhu, Qing-Qing Sun, David Wei Zhang <i>State Key Laboratory of ASIC and System, School of Microelectronics, Fudan University, China</i></p>	
Cald-P55	<p>Engineering Fluorescence Intensity and Electron Concentration of Monolayer MoS₂ by Forming Heterostructures with Semiconductor Dots</p> <p>Qiushi Feng, Weizhen Liu, Haiyang Xu <i>Key Laboratory of UV-Emitting Materials and Technology, Northeast Normal University, Ministry of Education, China</i></p>	
Cald-P56	<p>Investigation of The Band Alignment At The Multilayer MoS₂/HfO₂ and MoS₂/HfZrO₄ Heterojunction</p> <p>Zhiwen Li, Kuilong Li, Yuehua Hong, Jiale Wang, Cong Hu, Xinke Liu <i>College of Materials Science and Engineering, Shenzhen Key Laboratory of Micro-scale Optical Information Technology, Shenzhen Key Laboratory of Special Functional Materials, Chinese Engineering and Research Institute of Microelectronics, Guangdong Research Center for Interfacial Engineering of Functional Materials, Shenzhen University, China</i></p>	
Cald-P57	<p>Three-dimensional Nonvolatile Random Access Memory for Storage Class Memory Application</p> <p>Xiaoxin Xu, Lu Tai, Danian Dong, Jie Yu, Qing Luo, Tiancheng Gong, Peng Yuan, Qingting Ding, Jiahao Yin, Qi Liu, Hangbing Lv, Ming Liu <i>Institute of Microelectronics, Chinese Academy of Sciences, China</i></p>	
Cald-P58	<p>Investigation of Domain Switching in Mg-doped LiNbO₃ Single Crystal Films with Al₂O₃ Buffer Layer by Atomic Layer Deposition</p> <p>Yan Zhang, Qinghua Ren, Xiaojie Chai, Anquan Jiang <i>State Key Laboratory of ASIC & System, School of Microelectronics, Fudan University, China.</i></p>	
Cald-P59	<p>Improved Resistive Switching Characteristics of Atomic Layer Deposited Al₂O₃/La₂O₃/Al₂O₃ multi-stacked films with Al⁺ implantation</p> <p>Xing Wang, Hongxia Liu, Lu Zhao, Yongte Wang <i>Key Laboratory for Wide-Band Gap Semiconductor Materials and Devices of Education, School of Microelectronics, Xidian University, China</i></p>	