

The 6<sup>th</sup> International Conference on **Nanjing**  
 Computer Aided Design for Thin-Film Transistors | 15-17 October, 2014

2014/10/15 Wednesday Day 1 (1/3)		
<b>Tutorials (Hall 309)</b>		
10:00 – 11:00	<b>Benjamin Iniguez</b>	Universitat Rovirai Virgili, Spain “Universal Methods for TFT Modeling and Parameter Extraction”
11:00 – 12:00	<b>Arokia Nathan</b>	University of Cambridge, UK “Device Physics and Compact Models for Design of Oxide TFT Circuits”
Registration (09:00 – 18:00)		
14:00 – 15:00	<b>Didier Pribat</b>	Sunkyunkwan University, Korea “Thin Film Transistors with Carbon Nanotubes, Graphene and Semiconductor Nanowires”
15:00 – 16:00	<b>Yvan Bonnasieux</b>	Ecole Polytechnique, France “Gaussian Approach of Charge Transportation Models”
16:00 – 17:00	<b>Dongming Sun</b>	Institute of Metal Research, CAS China “Carbon Nanotube Thin-film Transistors and Integrated Circuits”

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2014/10/16 Thursday Day 2 (2/3)

<b>08:45 – 09:00</b>				<b>Opening (Nanjing Hall)</b>			
<b>09:00 – 10:30</b>				<b>Plenary Session 1 (Nanjing Hall)</b>			
09:00 - 09:30				<b>Kaushik Roy</b> Purdue University, USA “Integrated Systems of the Future: Low-Cost & Energy-Efficiency using Heterogeneous Components”			
09:30 - 10:00				<b>Arokia Nathan</b> University of Cambridge, UK “Fast CAD of Oxide TFTs and Circuits”			
10:00 - 10:30				<b>Weiping Liu</b> Huada Emphyrean Software Co. Ltd., China “Enhancement of Design Techniques Greets China FPD Industry Spring”			
<b>CAD-TFT</b>				<b>TFT Technology &amp; Applications</b>			
<b>10:50 – 12:20</b>				<b>10:50 – 12:20</b>			
<b>CAD Session 1: Design Automation (Nanjing Hall)</b>				<b>Technology Session 1: Silicon TFTs (Hall 309)</b>			
10:50 – 11:10 Invited		<b>Jordi Carrabina Bordoll</b> Univ Autonoma de Barcelona, Spain “EDA Tools & Design Kits for Building Complex Organic Circuits”		10:50 – 11:10 Invited		<b>Xiaoyu Gao</b> Kunshan New FPD Technology Center Co., Ltd. “LTPS TFT Backplane Technology for Flexible Displays”	
11:10 – 11:30 Invited		<b>Tse Nga Ng</b> Palo Alto Research Center, USA “Inkjet Design Rules for Printing Organic Complementary Circuits”		11:10 – 11:25		<b>Hang Zhang</b> Semilab Co. Ltd. “Spectrum Ellipsometry for Thin-Film Characterization in Advanced TFT Technologies”	
11:30 – 11:45		<b>Jiaqing Zhao</b> Shanghai Jiao Tong University, China “Analytical Yield Model for Unipolar for TFT Logic Circuits and Verification with Monte Carlo Simulations”		11:25 – 11:40		<b>Juan Li</b> Nankai University, China “H Plasma Assisted Solid Phase Crystallization of Poly Silicon”	
11:45 – 12:00		<b>Manuel Llamas</b> Universitat Autònoma de Barcelona, Spain “A Novel Design Flow for Application Specific Printed Electronics Circuits”		11:40 – 11:55		<b>Dongli Zhang</b> Soochow Univ., China “Effect of Gate Oxide Layer on Metal-Induced Lateral Crystallized Polycrystalline Silicon TFTs”	

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12:00 – 12:15	<b>Sheng-Chin Hung</b> National Chiao Tung University, Taiwan “Circuit Simulation-Based Multi-objective Evolutionary Algorithm for Design Optimization”	11:55 – 12:10	<b>Xiaoming Chen</b> Sun Yat-Sen University, China “Fabrication of Amorphous Thin Film Transistors with High Breakdown Voltage for Field Emitter Array Application”
<b>14:00 – 15:25 CAD Session 2: Circuit Design (1) (Nanjing Hall)</b>			
14:00 – 14:20 Invited	<b>Shengdong Zhang</b> Peking University, China “Design of Low Power and Highly Reliable TFT Gate Driver on Array”	14:00 – 14:20 Invited	<b>Hai Lu</b> Nanjing University, China “Towards High Performance a-IGZO Thin Film Transistors and Circuits”
14:20 – 14:40 Invited	<b>Byong-Deok Choi</b> Hanyang University, Korea “Design of Thin-Film-Transistor Gate Driver Circuits: Decoder vs. Shift Register”	14:20 – 14:35	<b>Linfeng Lan</b> South China University of Technology, China “Progress on High-Mobility and High-Stability Oxide TFTs”
14:40 – 14:55	<b>Guan-Ming Li</b> South China University of Technology, China “Low Power Gate Driver Integrated by IZO-TFTs Using DC-type Output Module”	14:35 – 14:50	<b>Xu Gao</b> Soochow University, China “Probing the Effects of Self-formed Copper Oxide Contact Interlayer in Oxide Thin Film Transistors”
14:55 – 15:10	<b>Kun Cao</b> BOE Technology Group Co.,Ltd, China “Study on Integrated Gate Drive Circuit Employing IGZO TFTs”	14:50 – 15:05	<b>Yu-Guang Chen</b> Sun Yat-Sen University, China “Effects of Si-H Bonding Intensity in Gate Insulator to Performance of a-IGZO Thin Film Transistor”
15:10 – 15:25	<b>Chien-Hsueh Chiang</b> , National Chiao Tung University, Taiwan “Design, Fabrication and Characterization of Low-Noise and High Reliability Amorphous Silicon Gate Driver Circuit”	15:05 – 15:20	<b>Honglong Ning</b> South China University of Technology, China “Correlation between Cu Source/Drain Contact and Performance of a-IGZO TFT”
<b>15:40 – 16:50 CAD Session 3: Device Modeling (1) (Nanjing Hall)</b>			
15:40 – 16:00 Invited	<b>Ling Li</b> Institute of Microelectronics, CAS, China “Compact Models for Organic Thin Film Transistors”	15:40 – 16:00 Invited	<b>Xike Gao</b> Institute of Organic Chemistry, CAS, China “Core-Expanded Naphthalene Diimides-Based Organic Semiconductors for High Performance n-channel TFTs: from Small Molecules to Polymers”

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16:00 – 16:20 Invited	<b>Antonio Valletta</b> CNR, Italy “Characterization and Modeling of Organic Thin Film Transistors”	16:00 – 16:15	<b>Jinhua Li</b> Hubei University, China “The Applications of High-k Relaxor Ferroelectric Polymer in Low Voltage Organic Thin Film Transistors”
16:20 – 16:40 Invited	<b>Sungsik Lee</b> University of Cambridge, UK “Physically-based Modeling and Parameter Extraction of Oxide TFTs”	16:15 – 16:30	<b>Longzhen Qiu</b> Hefei University of Technology, China “Self-Organization of Inkjet-Printed Semiconductor Films for Organic Transistors”
		16:30 – 16:45	<b>Linrun Feng</b> Shanghai Jiao Tong University, China “Printable Low Voltage Organic Transistors and Circuits”
<b>16:45-18:15</b>	<b>Poster Session (Nanjing Hall)</b>		

2014/10/17 Friday Day 3 (3/3)			
<b>9:00 – 10:30</b>	<b>Plenary Session 2 (Nanjing Hall)</b>		
09:00 - 09:30	<b>Jin Jang</b> Kyunghee University, Korea “Oxide TFT and Circuits for Transparent Electronics”		
09:30 - 10:00	<b>Slobodan Mijalkovic</b> Silvaco Corp., UK “Physics-Based Compact Modeling Solutions for Amorphous Metal-Oxide Semiconductor TFTs”		
10:00 - 10:30	<b>Yunqi Liu</b> Institute of Chemistry, CAS, China “High Performance and Multi-functional OTFTs”		
<b>CAD-TFT</b>		<b>Technology &amp; Applications</b>	
<b>10:50 – 12:00</b>	<b>CAD Session 4: Device Modeling (2) (Nanjing Hall)</b>	<b>10:50 – 12:00</b>	<b>Technology Session 4: Oxide TFTs (2) (Hall 309)</b>
10:50 – 11:10 Invited	<b>Dae Hwan Kim</b> Kookmin University, Korea “Subgap Density-of-States (DOS)-based Simulation for Instability-Aware Design of Oxide TFTs”	10:50 – 11:10 Invited	<b>Lei Wang</b> Guangzhou New Vision Optoelectronic Tech. Co. Ltd. “Flexible Oxide TFTs for AMOLED Display Applications”
11:10 – 11:30 Invited	<b>Makoto Watanabe</b> Japan Display Inc., Japan “Dynamic Behavioral Modelling of LTPS TFTs and Liquid Crystal Cells for FPD devices”	11:10 – 11:30 Invited	<b>Xifeng Li</b> Shanghai University, China “Development of Hafnium-based Oxide Films Dielectric Films Prepared by Sol-gel Process”
11:30 – 11:45	<b>Nianduan Lu</b> Institute of Microelectronics, CAS, China “Physical Model of Thermopower in Organic Thin-film Transistor”	11:30 – 11:45	<b>Zhongfei Zou</b> Infovision Optoelectronics, China “Development 5 inch FHD Narrow Border Panel using Oxide TFT”
11:45 – 12:00	<b>Jingwen Yin</b> BOE Technology Group Co. Ltd., China “Oxide TFT Model Incorporating Hysteresis and Stress Effects”	11:45 – 12:00	<b>Zheng Chen</b> Suzhou Institute of Nano-Tech and Nano-Bionics, CAS “Low Temperature Solution Processed Indium Gallium Zinc Oxide Thin Film Transistors”



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12:05 – 12:20	<b>Siwei Xu</b> Soochow University, China “Study of Instability of a-IGZO TFTs under Negative Bias Temperature Stress”	12:00 – 12:15	<b>Yana Gao</b> Shanghai University, China “Solution-Processed Zirconium Oxide Gate Insulators for Top Gate and Low Operating Voltage Thin Film Transistor”
<b>14:00 – 15:30 CAD Session 5: Circuit Design (2) (Nanjing Hall)</b>		<b>14:00 – 15:30 Technology Session 5: New TFT Applications (Hall 309)</b>	
14:00 – 14:20 Invited	<b>Tung Huei Ke</b> IMEC, Belgium “Design and Realization of Thin Film Complementary Circuits”	14:00 – 14:20 Invited	<b>Feng Yan</b> Hong Kong Polytechnic University “Solution-Gate Thin Film Transistors for Biosensors”
14:20 – 14:40 Invited	<b>Radu A. Sporea</b> University of Surrey, UK “High-resilience Logic based on Poly-Si Source-Gated Transistors”	14:20 – 14:40 Invited	<b>Qing Wan</b> Nanjing University, China “Oxide-based Electric-Double-Layer Thin-Film Transistors for Synaptic Electronics”
14:40 – 14:55	<b>Lirong Zhang</b> New Vision Optoelec. Tech Co. Ltd., China “A Novel IZO-TFTs Narrow Bezel Gate Driver Circuit for High Resolution Displays”	14:40 – 14:55	<b>Lin Han</b> Yale University, USA “A New SiO <sub>2</sub> -silicone Hybrid for TFT-based Flexible Electronics”
14:55 – 15:10	<b>Wenjiang Liu</b> Shanghai Jiao Tong University, China “An AMOLED Driving Scheme with Ultra Low Supply Voltage”	14:55 – 15:10	<b>Ning Liu</b> Ningbo Institute of Materials Technology and Engineering, CAS “Low-voltage Solution-processed Chitosan-Gated Flexible Oxide-based Electric-double-layer Transistor for Hydrogen Ion Detection”
15:10 – 15:25	<b>Li Qiang Zhu</b> Ningbo Institute of Materials Technology and Engineering, CAS “Short-Term Synaptic Plasticity and Synaptic Network Mimicked on Oxide Electric Double Layer Thin-Film Transistors Arrays”	15:10 – 15:25	<b>Hai Ou</b> Sun Yat-Sen University, China “Fabrication and Characterization of a Thick-Layered Etched-Contact Amorphous Silicon Dual-Gate Photo TFT for Low-Dose X-ray Imaging”
<b>15:45-16:40</b>	<b>CAD session 6:</b>	<b>15:45-16:40</b>	<b>Technology Session 6: New TFT Technologies (Hall 309)</b>

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<b>Device Simulation &amp; Characterization (Nanjing Hall)</b>			
15:45 – 16:05 Invited	<b>Tao Sun</b> Silvaco, Singapore “Study of Device Physics for Various TFT Technologies by TCAD”	15:45 – 16:05 Invited	<b>Lei Liao</b> Wuhan University, China “Amorphous Metal Oxide/1D Nanomaterials Hybrid Thin-Film Transistors: A New Avenue to High Speed Macroelectronics”
16:05 – 16:25 Invited	<b>Mingxiang Wang</b> Soochow University, China “Charge Pumping Characterization of Polycrystalline Si TFTs and Its Geometric Current Elimination”	16:05 – 16:25 Invited	<b>Hongtao Cao</b> Ningbo Institute of Material Technology and Engineering, CAS “Conduction Conversion from p- to Ambipolar-type SnO Thin Film Transistors caused by the Hole Collector at the Back Channel Interface”
16:25 – 16:40	<b>Wei Wang</b> Institute of Microelectronics, CAS, China “Simulation of Microscopic Hopping Transport in Organic Thin Film Transistors”	16:25 – 16:40	<b>Zheyuan Chen</b> Peking University, China “P-Type CuO Thin Film Transistor by DC Reactive Sputtering of Copper”
16:40 – 16:55	<b>Pengfei Yu</b> Shanghai Jiao Tong University, China “Numerical Simulation and Analysis of Solution Processed Low Voltage OTFTs”	16:40 – 16:55	<b>Yang Hui Liu</b> Ningbo Institute of Material Technology and Engineering, CAS “Flexible Oxide TFTs Gated by Sodium Alginate Film on Paper Substrates”
16:55 – 17:10	<b>Luting Wang</b> Sun Yat-sen University, China “A Numerical Study of an Amorphous Silicon Dual-Gate Photo Thin-Film Transistor for Low-Dose X-ray Imaging”	16:55 – 17:10	<b>Peng Xiao</b> South China University of Technology, China “High Performance IGZO TFTs by Employing Phenyltriethoxysilane SAMs”
<b>17:30-18:00</b> <b>(Nanjing Hall)</b>	<b>Award Session</b> <b>Announcement of next year’s conference</b> <b>Closing remarks</b>		

### Abstracts for Poster Presentations

NO.	Title	Topic	Author	Affiliation
P101	An Analytical Model of the Subthreshold Drain Current for Amorphous InGaZnO Thin Film Transistors	<b>Device Modeling</b>	Lei Qiang	South China University of Technology, China
P102	Above-threshold Modeling for Amorphous Oxide Thin-Film Transistors Considering Percolation Conduction Mechanisms		Chile Chen	South China University of Technology, China
P103	The Gate Leakage Current Model of Organic Thin Film Transistors		Guangwei Xu	Institute of Microelectronics, CAS, China
P104	Compact Model for Threshold Voltage of Organic Transistors		Long Wang	Institute of Microelectronics, CAS, China
P105	Parameter Extraction of Surface Potential Model for OTFT Device based on Improved Differential Evolution		Zhigang Li	Institute of Microelectronics, CAS, China
P106	A Trap Density-of-States based Numerical Drain Current Model for a-IGZO TFTs		Zhiyuan Han	Soochow University, China
P107	A Simple SPICE Model Implemented in Circuit Simulator for Amorphous Metal Oxide Semiconductor TFTs		Guangyu Yao	Shanghai Jiao Tong University, China
P108	Surface-Potential Based Compact Model for a-IGZO TFTs		Zhiwei Zong	Institute of Microelectronics, CAS, China
P109	Pixel Circuit Modeling and ELVDD Wire Layout for Improving the Uniformity of AMOLEDs		Tingting Zhang	Kunshan New FPD Technology Center Co., Ltd., China
P201	2D Simulation Study of Polycrystalline p-type PbS Thin-Film Transistors”, ,	<b>Simulation &amp; Characterization</b>	Abimael Jiménez-P	Universidad Autónoma de Ciudad Juárez, Mexico
P202	Calibration Procedures of Leakage Currents in Amorphous Silicon Thin-Film Transistors		Nam-Kyun Tak	Silvaco Co. Ltd., Korea
P203	Thermal Stability of Amorphous InGaZnO Thin Film Transistors with Different Oxygen-Contained Active Layers		Zhe Hu	Shanghai Jiao Tong University, China



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<b>P204</b>	AC/DC Mixed Degradation of a-IGZO TFTs under Negative Gate Voltage Pulses		Huaisheng Wang	Soochow University, China
<b>P301</b>	A New Oxide Gate Driver Employing A Single Low Voltage Power Line	<b>Circuit Design</b>	Xiaofeng Song	South China University of Technology, China
<b>P302</b>	Low Voltage Organic Thin-Film Transistor Sensory Transducer Circuit with a Calibration Approach for pH Sensing		Wei Hu	Shanghai Jiao Tong University, China
<b>P303</b>	A New LTPS Pixel Compensation Circuit for AMOLED Display		Siming Hu	Kunshan New FPD Technology Center Co., Ltd., China
<b>P401</b>	GALAXY: A Multi-Circuit Simulator based on Inverse Jacobian Matrix Reuse	<b>Design Automation</b>	Hung-Yi Lee	National Taiwan University, Taiwan.
<b>P402</b>	Analytical Noise Margin, Power and Delay Models for Unipolar TFT Logic Circuits		Qingyu Cui	Shanghai Jiao Tong University, China
<b>P403</b>	A Method to Reduce Duplicated DRC Violations Reported by Hierarchal DRC Tool in FPD Design		Xiaoming Liu	Huada Emphyrean Software Co. Ltd., China
<b>P404</b>	Fast yet Accurate Multilevel Hierarchical Isomorphism Technology for Full Panel TFT Simulation		Zhenya Zhou	Huada Emphyrean Software Co. Ltd., China
<b>P405</b>	Fault-Tolerant Inkjet Gate Array for Application Specific Printed Electronic Circuits		M. Mashayekhi	Universitat Autònoma de Barcelona, Spain
<b>P501</b>	Enhancement in Electrical Performance of Amorphous In-Ga-Zn-O Thin-Film Transistors by Second Time Post-Annealing in Air	<b>Oxide TFT</b>	An-Qi Hu	Beijing University of Technology, China
<b>P502</b>	The Effects of Tantalum Incorporation on Tin-Tantalum-Oxide Thin-Film Transistors		Zhenguo Lin	South China University of Technology, China
<b>P503</b>	Light Stress Stability of Oxide TFT with UV Illumination		Juan Li	Nankai University, China
<b>P601</b>	Fabrication and Performance of Pentacene Field-Effect Transistors with AlOx:Nd	<b>Organic TFT</b>	Sheng Sun	South China University of Technology, China

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	/Cytop Bilayer Dielectric			
<b>P602</b>	Electrical Characterization of Pentacene-based Single Molecule Layer Field Effect Transistor”,		Jiawei Wang	National Centre for Nanoscience and Technology, China
<b>P603</b>	All Solution Processed Organic Transistors with Fine Inkjet Printed Electrodes and Patterned Channel Regions through Surface Wettability Control		Wei Tang	Shanghai Jiao Tong University, China
<b>P604</b>	High Current Polymer Transistors for Driving Inorganic Light Emitting Diodes		Xianyi Shao	Shanghai Jiao Tong University, China