

WOCSDICE 2017 FINAL PROGRAMME

MAY, MONDAY 22ND – WEDNESDAY 24TH

MONDAY	
08:45-09:00 Opening Ceremony	
09:00-10:45	
SESSION 1-I: Novel device and circuit concepts - Chair: D. Pavlidis	
M. Shur (Invited)	THz devices using graphene
D. Pavlidis	ALD High-k ZrO ₂ Dielectrics for Wide and Ultra-Wide Bandgap Semiconductor Devices
V.P. Sirkeli	Room-temperature terahertz quantum cascade lasers based on ZnSe/ZnMgSe
O. Tizno	Room-temperature, non-volatile charge storage in III-V semiconductor memory cells
Y.M. Meziani	Experimental and theoretical studies of Sub-THz detection using strained-Si MODFETs
A. Laha	Epitaxial lanthanide oxide on III-Nitride substrates for high power MOS HEMT application
10:45-11:15 Coffee Break	
11:15-13:15	
SESSION 2: Compound semiconductor-based devices and their circuits including wide bandgap semiconductor - Chair: E. Muñoz	
J.L. Jiménez (Invited)	Current Understanding of Base-emitter Linearity on GaN Power amplifiers and the influence of starting material
K Horio	Analysis of Breakdown Voltage Enhancement in AlGaIn/GaN HEMTs with Double Passivation Layers Using a High-k Dielectric
C. Koller	Leakage and Voltage Blocking Behavior of Carbon-Doped GaN Buffer Layers
S. Riedmüller	Influence of Fe buffer doping profile on InAlN/GaN HEMTs
P. Kurpas	β-Ga ₂ O ₃ (100) MISFETs for power electronics applications
A. Debald	High-Quality n-GaN Drift Layers for Quasi-Vertical GaN- on-Sapphire Schottky Diodes grown by MOVPE
E.V. Erofeev	High threshold voltage self-aligned MIS-gated GaN transistors for power electronics
13:15-15:00 LUNCH	
15:00-16:30	
SESSION 3: Two-dimensional layered (2D) and Graphene devices and their materials - Chair: J.-C. Mendes	
P.S. Park (Invited)	Vertical transport in Metal/Graphene/AlGaIn/GaN structure
D. Jiménez	Scalability of graphene transistors supported on h-BN targeting RF applications
M ³ M. Giangregorio	Graphene hybrids for optical gas- and bio-sensing
J. Martínez	Effects of mist exposure on SiN-passivated AlGaIn/GaN-based MISHEMTs with and without graphene top layer
M. Dineen	Characterization of disorder in MoS ₂ fabrication processes using Raman Metrology
16:30-16:45 Coffee Break	
16:45-17:45	
SESSION 1-II: Novel device and circuit concepts - Chair: J.-Y. Duboz	
T. Grotzjohn (Invited)	Diamond Electronic Device Technology
J.-C. Mendes	Thermal analysis of high power LEDs
J.-C. Mendes	Diamond-SiC heterojunctions – the influence of argon flow on the electrical behavior of CVD diamond
20:00-22:00 Welcome Reception - Hotel restaurant	

TUESDAY	
09:00-10:45	
SESSION 4: Device process and characterization - Chair: M.J. Uren	
Y.E. Wang (Invited)	Non-Reciprocal, Parametric Amplification of Electromagnetic Waves for Future Generation of RF Front-Ends
P.Kordos	Residual stress in recessed-gate AlGaIn/GaN heterostructure field-effect transistors
M Woško	AlN/GaN superlattices for enhancement of epitaxially grown AlGaIn/GaN/Si(111) HEMT's structures performance
D. Haško	Optical and probe microscopy investigations of materials for hybrid photonics
R. Caulmilone	GaN Based Advanced substrates by Smart-Cut™ for power devices
R. Rodríguez	DC characteristics with substrate temperature for GaN on Si MOS-HEMTs
10:45-11:15 Coffee Break	
11:15-13:15	
SESSION 5-I: Applications of devices and structures - Chair: G. Meneghesso	
P. Offermans (Invited)	GaN based gas sensing
D. Pavlidis	III-Nitride Based Plasmonic Optical Modulators and Splitters
A. Gonzalo	Strain-balanced type-II GaAsSb/GaAsN superlattices for efficient multi-junction solar cells
N. Trivellin	White light source based on GaN Laser Diode
D.M. Kabanau	GaNAsSb LEDs for measurement of water concentration in oil and petroleum products
D.M. Kabanau	InAs/InAsSb/InAsSbP LEDs for carbon monoxide and dioxide concentration measurement
D.V. Shabrov	Powerful laser diode matrices for active vision systems
13:15-15:00 LUNCH	
15:00-17:00	
SESSION 6: Device modelling - Chair: P. Kordos	
B. Iñiguez (Invited)	Physically-Based compact modeling of AlGaIn/GaN HEMTs
W.E Muhea	DC model for AlGaIn/GaN HEMTs with the effect of polarization
A.Chvála	Thermal Analysis of Multifinger Power HEMTs Supported by 3-D Simulation
J.-Y. Duboz	Avalanche in GaN and AlGaIn
M. Uren	Simulation of GaN Power Transistors: A "Leaky Dielectric" Model
V. Letka	Modelling and measurement of bandgap behavior in MWIR InAs/InAs(0.82)Sb(0.18) strained-layer superlattices
Y. Nishidate	Modeling of InGaIn/GaN Light-Emitting Diodes with Designed p-Electrode
17:00-17:15 Coffee Break	
17:30-21:00 Social Event - Hotel Entrance 17:30	
21:00 Gala Dinner	
City Sightseeing (only for Accompanying Persons) - Hotel entrance: 9:30	

WEDNESDAY	
09:00-10:00	
SESSION 5-II: Applications of devices and structures - Chair: D. Donoval	
E.Y. Chang (Invited)	InGaAs FinFET for Next Generation CMOS Application
S. Mateos	SET Analysis and Radiation Hardening Approaches for Different LNA Topologies
R. Pecheux	Low RF losses up to 110 GHz in GaN-on-silicon HEMTs
10:00-11:00	
SESSION 7-I: POWERBASE - Chair: D. Donoval	
J. Marek	Modern PGaN power devices under UIS conditions
A. Barbato	A Novel System to Measure the Dynamic On-Resistance of On-Wafer 600 V Normally-Off GaN HEMTs in Real Application C.
M. Glavanovics	Application Related Reliability Test Concept for GaN HEMT Power Devices
S. Stoffels	Next generation 200mm substrates for GaN power devices
11:00-11:15 Coffee Break	
11:15-13:30	
SESSION 7-II: POWERBASE - Chair: A. Núñez	
K. Geens	CMOS Process-Compatible 200 mm polycrystalline AlN Substrates for GaN Power Transistors
M. Borga	Buffer-induced vertical leakage and charge trapping in normally-off GaN-on-Si HEMTs
M. Ruzzarin	Study of trapping in GaN-based power HEMTs based on High-Voltage Double-Pulsed Backgating Measurement System
X. Li	200 V enhancement-mode p-GaN HEMTs fabricated on 200 mm GaN-on-SOI with trench isolation for monolithic integration
L. Lymperakis	Thermodynamics, kinetics, and electronic structure of H ₂ and F ₂ passivation of defect states in GaN: An ab-initio study.
F.P. Pribahnsnik	High temperature failure mode in power GaN devices Florian
S. Brand	Evaluation of the capabilities of scanning acoustic microscopy towards assessing the porosity of Ag-sinter layers for GaN ...
J. Priesol	Identification of critical regions in AlGaIn/GaN-on-Si Schottky barrier diode using Electron beam induced current method
D.Poppitz	Strain analysis and dicing defects of GaN on Si substrates
13:30-13:45 Closing Ceremony	
13:45 LUNCH	