

Novel High k Application Workshop

March 10th, 2015

	Time	Presenter	Institute	Title of Presentation
	9:00	T. Mikolajick/U. Schroeder	Namlab	Welcome
High k Devices <i>chair: U. Schroeder</i>				
1	9:15	J. Roberts/P. Chalker	U. Liverpool	Fluorine-doped alumina dielectrics in GaN-on-silicon power electronics
2	9:35	H. Knoops	Oxford Instr.	ALD for gallium nitride devices: Al ₂ O ₃ , AlN, and plasma pretreatment
3	9:55	A. Winzer/N. Szabo	Namlab Dresden	ALD Al ₂ O ₃ as a high k dielectric for future GaN power devices
4	10:15	J. Schubert	FZ Jülich	Hexagonal epitaxial LaLuO ₃ as high-k dielectric
Coffee break: 10:35 - 11:05h				
RRAM <i>chair: S. Slesazek</i>				
5	11:05	G. Niu/T.Schroeder	IHP Frankfurt/Oder	HfO ₂ -based RRAM: from materials engineering to integrated modules
6	11:25	K. Fröhlich	U. Bratislava	Memory application of HfO ₂ -based resistive switching structures
7	11:45	U. Böttger	RWTH Aachen	Voltage-time dilemma in resistive switching oxides
8	12:05	H. Wylezich	Namlab Dresden	Analog resistive switching in Al ₂ O ₃ /Nb ₂ O ₅ double layer
Lunch - Alte Mensa (Helmholtz Strasse): 12:25 - 13:30h				
Passivation <i>chair: I. Dirnstorfer</i>				
9	13:30	B. v.d. Loo	TU Eindhoven	Atomic Layer Deposited SiO ₂ /Al ₂ O ₃ stacks for the Simultaneous Passivation of n+ and p+ Silicon Surfaces in Solar Cells
10	13:50	D.K. Simon	Namlab Dresden	Al ₂ O ₃ -based nanolaminates for solar cells
11	14:10	K. Henkel	BTU Cottbus	Passivation of a Si-Photocathode
Memory Devices				
12	14:30	M. Popovici	IMEC Leuven	Ru/STO/Ru DRAM MIM capacitors by atomic layer deposition
13	14:50	D. Lehninger/J. Heitmann	TUBA Freiberg	Charge trapping of Ge-Nanocrystals embedded in ZrO ₂ -based high-k materials
Coffee break: 15:10 - 15:40h				
Devices <i>chair: U. Schroeder</i>				
14	15:40	G. Luka/M. Godlewski	Acad. of Sc. Warsaw	ALD growth of titanium dioxide: from insulating to highly conductive layers
15	16:00	C. Hossbach/J. Bartha	IHM/TU Dresden	ALD of Dielectric Layers for Organic Field Effect Transistor Devices
Ferroelectric devices				
16	16:20	S. Starschich	RWTH Aachen IWE	Progress in CSD prepared ferroelectric HfO ₂ layers
17	16:40	R. Materlik/A. Kersch	UAS München	Ferroelectricity in HfZrO: A Computational Investigation
18	17:00	T. Schenk	Namlab Dresden	Stabilizing the ferroelectric phase in Gd:HfO ₂
17:20 End				