Novel High-k Application Workshop — March 14th, 2016

	Time	Presenter	Institute	Title of Presentation
	9:00	T. Mikolajick/U. Schroeder	Namlab	Welcome
		High-k Devices	*chair: U. Schroeder*	
1	9:15	K. Cherkaoui/P. Hurley	Tyndall National Institute, Cork IE	High-k on III/V semiconductors
2	9:35	J. Roberts/P. Chalker	Univ. Liverpool, GB	Dielectrics for AlGaN/GaN MISHEMT power electronics
3	9:55	J. Schubert	FZ Juelich, D	Rare eath oxides on GaN
4	10:15	N. Szabo	Namlab Dresden, D	ALD Al_2O_3 as a high-k dielectric material for future GaN power devices
5	10:30	M. Drescher	Fraunhofer IPMS-CNT, Dresden, D	Deciphering Reliability in High-K Metal Gate Technology
		Coffee break: 10:50 - 11:20h		
		Novel Devices	*chair: T. Mikolajick*	
6	11:20	E. Erben	GlobalFoundries Dresden, D	Workfunction tuning and gate stack for 22nm FD-SOI
7	11:40	F. Winkler/J. Bartha	TU Dresden, IHM, D	Novel vertical TSV field effect transistor using ALD high-k gate dielectrics
8	12:00	A. Thomas	IFW Dresden, D	ALD deposited HfO_2 based magnetic tunnel junctions
9	12:20	M. Godlewski	Acad. of Sc. Warsaw, PL	High-k oxides by ALD - from applications in electronics to biology and medicine
		Lunch - Alte Mensa (Helmholtz Strasse): 12:40 - 14:00h		
		Memory Devices	*chair: U. Schroeder*	
10	14:00	J. Van Houdt	IMEC Leuven, B	High k in memory devices
		Ferroelectric devices		
11	14:30	M.H. Park/ CS Hwang	Seoul National University, Seoul, KR	Current understanding of ferroelectricity and field-induced-ferroelectricity in (Hf,Zr)O_2 films based on first order phase transition theory
12	14:50	S. Starschich	RWTH Aachen IWE, D	Rare earth oxide doped ferroelectric HfO_2 layers
13	15:10	R. Materlik/A. Kersch	UAS Munich, D	Ferroelectricity in HfZrO: A Computational Investigation
14	15:30	T. Tromm/J. Schubert	FZ Juelich, D	PLD grown ferroelectric HfO_2
15	15:50	H. Mulaosmanovic	Namlab Dresden, D	Single domain switching in ferroelectric HfO_2
		Coffee break: 16:05 - 16:30h		
		RRAM	*chair: S. Slesazeck*	
16	16:30	E. Jalaguier	CEA-LETI, Grenoble, F	Reliability improvement thanks to Al_2O_3 in HfO_2 based RRAM
17	16:50	K. Fröhlich	Acad. of Sc., Bratislava, SK	Memory application of HfO_2-based resistive switching structures
18	17:10	S. Spiga	CNR-IMM, Agrate Brianza, I	HfO_2-based memristive devices for RRAM and neuromorphic applications
19	17:30	C. Wenger	IHP Frankfurt/Oder, D	Switching Performance of HfO_2-based Resistive Memory Arrays
20	17:50	U. Böttger	RWTH Aachen, D	Resistive switching oxides
21	18:10	H. Wylezich	Namlab Dresden, D	Operating resistive switching cells in passive cross-bar arrays
	18:25	End		

Location: Goerges Bau, TU Dresden, Helmholtzstrasse

	19:30	Workshop Dinner	Brauhaus Waldschlösschen	co-sponsored by Oxford Instruments, Pegasus, and FAB Support

Novel High-k Application Workshop — March 15th, 2015

		Solar 1	*chair: I. Dirnstorfer*	
1	9:00	F. Roozeboom	TU Eindhoven/TNO, NL	Spatial Atomic Layer Deposition of Zn(O,S) buffer layers for CIGS solar cells
2	9:20	M. Szindler	Silesian Univ. of Technology, Gliwice, PL	Silicon solar cells with Al_2O_3 antireflection coating deposited by ALD
3	9:40	M. Sowińska	BTU Cottbus - Senftenberg, D	ALD growth of Al_2O_3 on $CH_3NH_3PbI_3$: spectroscopic investigation for perovskite solar cells
4	10:00	P. Jordan	Namlab Dresden, D	Conductive Al_2O_3 based passivation layers
5	10:15	F. Kersten/J. Heitmann	TUBA Freiberg	Degradation of Multi PERC cells
6	10:30	M. Godlewski	Acad. of Sc. Warsaw, PL	Transparent 3D electrodes for solar cell applications
		Coffee break: 10:50 - 11:20h		
		Solar 2/TCOs	*chair: I. Dirnstorfer*	
7	11:20	R. Klenk	Helmholtz-Zentrum Berlin, D	ALD processes for junction formation in CIGS solar cells
8	11:40	T. Törndahl	Uppsala University, S	High performing hydrogen doped In_2O_3 for CIGS solar cells
9	12:00	H. Knoops	Oxford Instruments, NL	Advances in transparent conductive oxides by ALD: Doped ZnO, In_2O_3 and related materials
10	12:20	R. Zazpe	University of Pardubice, CZ	Antireflection In_2O_3 coating of self-organized TiO_2 nanotube layers
11	12:40	S. Taeger	OSRAM, D	Requirements for TCOs in 2D and 3D commercial LEDs
12	13:00	R. Puruunen	VTT Technical Research Centre of Finland	High-k thin films in 3-D structures: metrology with microscopic lateral high-aspect-ratio structures
		Lunch - Alte Mensa (Helmholtz Strasse): 13:20 - 14:15h		
		Atomic Layer Etching (ALE)	chair: J. Sundqvist	
13	14:15	V. Sessi/T. Mikolajick	TU Dresden, IHM, D	High-k materials on Nanowire Devices (Device talk shifted from Monday)
12	14:30	F. Roozeboom	TU Eindhoven/TNO, NL	Spatial Atomic Layer Etching
13	14:50	M. Junige	TU Dresden, D	Chemical path to ALE
14	15:10	D. Suyatin	Lund University, S	Evaluation of ALE for semiconductor nanowire devices
15	15:30	H. Knoops	Oxford Instruments, NL / TU Eindhoven, NL	Atomic Layer Etching: What Can We Learn from Atomic Layer Deposition?

Location: Goerges Bau, TU Dresden, Helmholtzstrasse

Namlab / TU Dresden IHM Tour: 16:00h

Poster

Room 229 Monday and Tuesday during coffee breaks

1	E. Langenberg	Universidad de Zaragoza, ES	Dielectric characterization of $(Sr_{1-x}Ba_x)MnO_3$ epitaxial thin films in the perovskite phase
2	K. Henkel	BTU Cottbus - Senftenberg, D	Plasma-enhanced atomic layer deposition of titanium oxynitrides films: A comparative spectroscopic and electrical study
3	C. Das	BTU Cottbus - Senftenberg, D	Spectroscopic study of ALD TiO_2 on Si