10 years of ferroelectric HfO_2 — March 10th

Time				
	Intro			
09:00:00	Intro	U. Schroeder	Namlab	Introduction / Overview of ferroelectric properties in doped HfO_2 or ZrO_2
	Impact of dopants and oxygen vacancies			
09:20:00	Exp	P. Polakowski/J. Mueller	Fraunhofer IPMS/CNT	Ferroelectricity in dopant free HfO2
09:35:00	Exp	T. Dimoulas	Demokritos, Athens	Field induced ferroelectricity in Ge doped ZrO_2
09:50:00	Exp	J. Jones	NC State	Structural characterization of doped HfO2 films: From XRD to TOFSIMS
10:05:00	Discussion			
10:25:00	Exp/Sim	L. Larcher/M. Pešić	Modena/NaMLab	Field cycling of HfO: impact of oxygen vacancies
10:40:00	Sim	A. Kersch	UAS Munich	Simulation: different dopants in HfO2
10:55:00	Sim	R. Batra/R. Ramprasad	Univ. Connecticut	Simulation: different dopants and vacancies in HfO2
11:10:00	Discussion			
11:30:00	Break			
	Domain structure, nucleation and switching dynamics on nanoscale			
12:00:00	Exp	H. Mulaosmanovic	NaMLab	Single domain switching in FeFET devices
12:15:00	Exp	I. Stolichnow	EPFL Lausanne	Low temperature Piezo Force Microsopy of ferroelectric HfO2
12:30:00	Exp	T. Schenk	NLB/ORNL	Piezo Force Microsopy of doped HfO2 layers
12:45:00	Discussion			
13:05:00	Lunch @MPI			
	Negative capacitance			
14:05:00	Exp + SIM	S. Salahuddin	UC Berkeley	Multi-domain phase field model simulations of PZT switching and negative capacitance transience
14:20:00	Exp + SIM	C.S. Hwang	SNU Seoul	Emergence and frustration of negative capacitance effect in dielectric/ferroelectric bi-layers
14:35:00	Exp	A. Ionescu	EPFL Lausanne	Condition for the negative capacitance effect in metal-ferroelectric-insulator-semiconductor devices
14:50:00	Exp + SIM	M. Hoffmann	NaMLab	Modeling and Design Considerations for Negative Capacitance Field-Effect Transistors
15:05:00	Discussion			
15:25:00	Break			
	Thickness Scaling without losing FE properties			
15:55:00	Exp	A. Zenkevich	Moscow IPT	Thickness scaling in Hf0.5Zr0.5O2 films: ferroelectricity and transport properties
16:10:00	Exp	U. Boettger	RWTH Aachen	Ferroelectric HfO2 films on a micrometer scale
16:25:00	Sim	A. Kersch	UAS Munich	Simulation: Impact of Grains Size on Phase transitions
16:40:00	Discussion			
	Epitaxial growth			
17:00:00	Exp	T. Shimizu/Funakubo	TIT Tokyo	Growth of epitaxial orthorhombic doped HfO2 thin films
17:15:00	Exp	J. Schubert	FZ Juelich	Epitaxial HfO2 on Si substrates
17:30:00	Exp	J. LeBeau	NC State	Phase distributions and local epitaxy of HfO2 on TiN: a TEM study
17:45:00	Discussion			
18:00:00	End			