CENTER FOR DIELECTRIC STUDIES FALL 2010 MEETING The Atherton Hotel

State College, Pennsylvania October 26-27, 2010

Tentative Agenda

Monday, October 25, 2010:

3:00 PM Optional Tour of MRL facilities

Tuesday, October 26, 2010:

7:30–8:30 AM	Registration/Continental breakfast (Lobby)			
8:00-8:10	Welcome and Introduction (Regency Ballroom)	Clive Randall		
8:10 AM-10:00 AM Session I. Electrical Characterization of Elasto-dielectric Materials (Regency Ballroom)				
8:10-8:30	Electrical Characterization and Determination of Defects and Ionic Conductivity	Russell Maier		
8:30–8:50	Recent Developments in Electrical and Electromechanical Characterization of Dielectrics and Piezoelectrics	Derek Wilke		
8:50–9:10	High Field Dielectric Characterization and Dynamic a.c. Field Analysis	Mike Lanagan		
9:10–9:25	From Material Testing to Device Characterization for piezoMEMS Applications	Andreas Roelofs aixACCT		
9:25–9:40	Interpretation of Electrochemical Measurements in Various Ultracapacitors	Ramakrishnan Rajagopalan		
9:40-10:00	The Effects of Mechanical Damage on MLCC Performance	Wade Lanning or Chris Muhlstein		
10:00-10:15	Break	om is namistem		
10:15 AM-12:00 PM Session II. Dielectric-Microstructural-Property Relations (Regency Ballroom)				
10:15–10:35	Focus Ion Beam Serial Sectioning and Local Field Modeling in Thin Multilayer Capacitors	Malay Samantaray		
10:35–11:00	Characterization and Interpretation of Anodization in Ta Electrolytics	Angela Kramer/Beth Dickey		
11:00–11:15	Transmission Electron Microscopy of Defects and Domains	Weiguo Qu		

in Ferroelectric and Related Materials	
Rapid Thermal Binder Removal from Multilayer Ceramic Capacitors	Stephen Lombardo (Univ. of Missouri- Columbia)

11:30–12:00 Recent Developments in Texturing Functional Ceramics Gary Messing

12:00–1:10 PM *Lunch (Tarragon)*

11:15-11:30

1:15-2:30 PM	Session III.	(Regency Ballroom)	
1:15–1:30	Summary of the ISAF Highlights for CDS Members	Susan Trolier- McKinstry	
1:30-2:00	History and Future Perspective of Electroceramics	Yukio Sakabe (Murata Mfg.)	
2:00–2:25	Alternative Opportunities for Multilayer Capacitors and its Potential for an Energy Based Economy	Clive Randall	
2:25–2:50	Understanding Defect Chemistry through First-principles Calculations and Thermodynamic Modeling	Zi-Kui Liu	
2:50–3:05	Break		
3:05-3:30	Novel Use of High-K Powders in the Improvement of Medica Imaging with MRI	ıl Mike Lanagan	
3:30–3:45	Thermodynamics and Ionic/Electronic Transport in Oxides	Long-Qing Chen	
3:45-4:00	High Throughput Synthesis and Characterization of the $Pb_nNb_2O_{5+n}$ (0.5 <n<4.1) a="" chip<="" on="" single="" system="" td=""><td>Mehdi Mirsaneh</td></n<4.1)>	Mehdi Mirsaneh	
4:00–4:10	Defect and Domain Studies of Non-Lead Piezoelectrics	Keisuke Kobayashi (Penn State/Taiyo Yuden)	
4:10–4:20	Defects and Designing Higher Performance BaTiO ₃ -based Dielectrics	Noriyuki Inoue (Penn State/Murata)	
4:20–4:35	Impedance Analysis of Amorphous and Polycrystalline Tantalum Oxide Thin Sputtered Films	Eugene Furman	
4:35–4:55	Flexure Mode Flexoelectric Piezoelectric Composites	L.E. Cross	
4:55–5:30	Break		
5:30-7:00	Session IV: Poster Session/Reception (Upper Lobby)		
7:00	Buessem Award Dinner (2010 Recipient: Yukio Sakabe, Mura	ata Mfg. Co., Ltd.)	

(Regency Ballroom A)

Wednesday, October 27, 2010:

7:30–8:30 AM Continental breakfast (Lobby)

8:15 AM-9:15 PM Session V. Integrated Piezoelectrics (Regency Ballroom)

8:15–8:45	Designing Piezoelectric Films for MEMS Applications	Susan Trolier- McKinstry
8:45–9:15	Inkjet Printhead Technologies with Piezoelectrics	James Huffman (Kodak)
9:15–9:30	High Energy Density Thin Film Capacitors Fabricated by Spin Spray	Song Won Ko
9:30–9:45	Piezo MEMS Actuators for RF and mm-Scale Robotics Applications	Ron Polcawich (Army Research Lab)
9:45–10:00	Piezoelectric Micro Power Generators for Low Frequency Applications	S.S.N Bharadwaja
10:00–10:20	Thermoelectric Oxides and Characterization of Key Physical Parameters	Soonil Lee
10:20-10:35	Break	

10:35 am-12:00 pm

Session VI. Ultracapacitors and Supercapacitors (Regency Ballroom)

10:35–10:55	Design Philosophy of High Energy Density Electrochemical Capacitors	Ramakrishnan Rajagopalan
10:55–11:20	High Electrostatic Energy Density at Elevated Temperatures—the Glass Capacitor	Mike Lanagan
11:20–12:00	Future Vision for CDS and Workshop Discussion for Spring 2011	Clive Randall
12:00–1:00 PM	Buffet Lunch (Upper Lobby)	
12:30–3:00 PM	Industrial Advisory Board Meeting [MEMBERS ONLY] (Regency A)	