

## TUESDAY, FEBRUARY 3, 2009

### Sessions 1,2,3,4 – Anasazi Ballroom

8:00-9:50 AM	SESSION 1	MARKET OUTLOOK Session Chair: Dr. Mark Hartney, FlexTech Alliance	
8:00-8:10 AM	1.0	Welcome & Intro	FlexTech Alliance, Michael Ciesinski & Dr. Mark Hartney
8:10-8:50 AM	1.1	Keynote: New Opportunities for Thin Film Nanomanufacturing	Dr. Mark Pinto, Applied Materials
8:50-9:20 AM	1.2	Contributed Talk: Flexible Displays Enter the Mainstream	Jennifer Colgrove, DisplaySearch
9:20-9:45 AM	1.3	Contributed Talk: New and Overlooked Markets for Printed Electronics	Kevin Closson, Nerac
<b>Q&amp;A</b>			
<b>9:50-10:10 AM</b> <i>Break - Poster Sessions &amp; Exhibits</i>			
10:10 AM - 12:00	SESSION 2	NEW MARKETS & APPLICATIONS Session Chair: Dieter Schroth, EMD Chemicals	
10:10-10:35 AM	2.1	Invited Talk: A Time of the Signs	Dr. Jim Huber, Nor-Com
10:35-11:00 AM	2.2	Invited Talk: Building-Integrated Thin Film Photovoltaics	Dr. Louay Eldada, HelioVolt
11:00-11:25 AM	2.3	Invited Talk: White Phosphorescent OLEDs for Flexible Lighting Applications	Ray Ma, Universal Display Corporation
11:25-11:50 AM	2.4	Invited Talk: Additive Metal Circuit Technologies	Rick Mental, GSI Technologies
<b>Q&amp;A</b>			
<b>12:00-1:15 PM</b> <i>Lunch - Poster Sessions &amp; Exhibits</i>			
1:15-3:05 PM	SESSION 3	FUTURE FLEXIBLE ELECTRONIC PRODUCTS Session Chair: Mark McDonald, Alien Technology	
1:15-1:40 PM	3.1	Invited Talk: Future Plans for Flexible Electronics	Eliav Haskal, Philips Research
1:40-2:05 PM	3.2	Invited Talk: Applications of Flexible Circuits in Batteries	Han Wu, Renata Batteries
2:05-2:30 PM	3.3	Invited Talk: Gen II e-Books with Flexible Displays	Ian French, Prime View
2:30-2:55 PM	3.4	Invited Talk: Stretchable Electronics Using Printed Organic Transistors	Takao Someya, University of Tokyo
<b>Q&amp;A</b>			
<b>3:05-3:30 PM</b> <i>Break - Poster Sessions &amp; Exhibits</i>			
3:30-5:45 PM	SESSION 4	FUTURE DISPLAY PRODUCTS Session Chair: Greg Raupp, Arizona State University	
3:30-3:55 PM	4.1	Invited Talk: Flexible Display Manufacturing Using Plastic Electronics	Dr. Seamus Burns, Plastic Logic
3:55-4:20 PM	4.2	Invited Talk: Manufacturing Plastic Display for Mobile Devices	Dr. Nam-Seok Roh, Samsung Electronics
4:20-4:45 PM	4.3	Invited Talk: Roll-to-Roll, Flexible Displays...Are We There Yet?	Dr. Albert Green, Kent Displays
4:45-5:15 PM	4.4	Invited Talk: Microencapsulated Electrophoretic Display Technology: Leading the Way to Volume Production of Flexible Displays	Dr. Michael McCreary, E Ink Corporation
5:15-5:35 PM	4.5	Invited Talk: Advances in Flexible Display Research	Dr. I.B. Kang, LG Display
<b>Q&amp;A</b>			
<b>5:45-5:55 PM</b> <i>Special Drawing: Win a Gift Card for Turning in the Day One Survey</i>			

**5:30-7:00 PM**     *Exhibitor Reception - Poster Sessions & Exhibits*

## WEDNESDAY, FEBRUARY 4, 2009 - TRACK A

### Sessions 5,7,9,11 – Kiva Ballroom Section

8:30-9:55 AM	SESSION 5	SOLAR & PHOTOVOLTAIC DEVELOPMENTS & APPLICATIONS Session Chair: Dr. Louay A. Eldada, Heliovolt	TRACK A
8:30-8:55 AM	5.1	Invited Talk: Konarka Technologies: Roll-to-Roll Production of Carbon Based Photovoltaic Devices	Dr. Stuart M. Spitzer, Konarka Technologies
8:55-9:20 AM	5.2	Invited Talk: Latest Developments In Polyester Film For Flexible Electronics And PV	Keith Rollins, DuPont Teijin Films
9:20-9:45 AM	5.3	Contributed Talk: Flexible Photovoltaics - Manufacturing and Applications	Frank Jeffrey, PowerFilm
<b>Q&amp;A</b>			
<b>9:55-10:20 AM</b>	<i>Break - Poster Sessions &amp; Exhibits</i>		
10:20 AM-12:10 PM	SESSION 7	TRANSISTORS, DEVICES & CIRCUITS Session Chair: Bruce Kahn, Printed Electronics Co.	TRACK A
10:20-10:45 AM	7.1	Invited Talk: The Road Towards Living Chips	Ronald Dekker, Philips Circonflex & Delft University
10:45-11:10 AM	7.2	Contributed Talk: Direct-Write Printing of Highly Functional, Passive, Microwave Frequency Circuits and Devices	Dr. Keith W. Whites, South Dakota School of Mines & Technology
11:10-11:35 AM	7.3	Contributed Talk: Critical Technologies for Highly Stable AMOLED Pixels on Clear Plastic with a-Si TFT's	Professor James Sturm, Princeton University
11:35-12:00 AM	7.4	Contributed Talk: Flexible Curved TFT Backplanes and Sensors	Dr. Robert Street, Palo Alto Research Corporation
<b>Q&amp;A</b>			
<b>12:10-1:15 PM</b>	<i>Lunch - Poster Session &amp; Exhibits</i>		
1:15-3:05 PM	SESSION 9	SOLID STATE LIGHTING & FLEXIBLE OLEDs Session Chair: Jack Hou, General LED	TRACK A
1:15-1:40 PM	9.1	Invited Talk: Progress in OLED and Flexible Electronics Technology at GE	Anil Duggal, General Electric
1:40-2:05 PM	9.2	Invited Talk: The 2009 iNEMI Roadmap for Solid State Illumination	Marc Chason, iNEMI
2:05-2:30 PM	9.3	Contributed Talk: OLED Lighting Market Perspective	Andy Chin, ITRI
2:30-2:55 PM	9.4	Contributed Talk: Taking Polymer OLED (Poled) Technology to Commercial Exploitation	Dr. Geoff Williams, Zumtobel LED Division
<b>Q&amp;A</b>			
<b>3:05-3:30 PM</b>	<i>Break - Poster Sessions &amp; Exhibits</i>		
3:30-5:20 PM	SESSION 11	MANUFACTURING APPROACHES Session Chair: Abbie Gregg, AGI	TRACK A
3:30-3:55 PM	11.1	Invited Talk: Connecting Printed Electronics to the Real World	David G. Sime, Soligie
3:55-4:20 PM	11.2	Contributed Talk: Instant Sintering of Conductive Inks and Thin Films on Low Temperature Substrates	Stan Farnsworth, NovaCentrix
4:20-4:45 PM	11.3	Contributed Talk: Emerging Technology Evaluation – A Case of Flexible Electronics	Srikanth Poranki, Binghamton University
4:45-5:10 PM	11.4	Contributed Talk: Forget the Killer App, Is There a Killer Technology?	Dr. Robert Reuss, CET
<b>Q&amp;A</b>			
<b>5:20-5:30 PM</b>	<i>Special Drawing: Win a Gift Card for Turning in the Day Two Survey</i>		
<b>6:30-9:00 PM</b>	<i>FLEXI Awards Dinner - Apache Ballroom, 3<sup>rd</sup> Floor Conference Center</i>		

**WEDNESDAY, FEBRUARY 4, 2009 - TRACK B****Session 6,8,10,12 – Mohave/Adobe/Arroyo/Kachina Ballroom Sections**

<b>8:30-9:55 AM</b>		<b>SESS 6</b>		<b>MEDICAL APPLICATIONS</b>	
				<b>Session Chair: Jim Turner, Binghamton University</b>	
8:30-8:55 AM	6.1	Invited Talk: The Next Big Challenge for Flexible Electronics: Solving Biomedical Problems		Jim Turner, Binghamton University	
8:55-9:20 AM	6.2	Contributed Talk: Printed Sensor Tape: Integration of Sensors, Printed Electronics and Printed Memory		Ana Claudia Arias, Palo Alto Research Corporation	
9:20-9:45 AM	6.3	Contributed Talk: Emerging Opportunities and Development Activities in Healthcare Market		Darrel Drinan, PhiloMetron	
<b>Q&amp;A</b>					
<b>9:55-10:20 AM</b>		<b>Break - Poster Session &amp; Exhibits</b>			
<b>10:20 AM-12:10</b>		<b>SESS 8</b>		<b>ADVANCED MANUFACTURING TECHNOLOGY</b>	
				<b>Session Chair: Mark Fihn, Veritas et Visus</b>	
10:20-10:45 AM	8.1	Invited Talk: Dev. of Low Temperature a-Si Backplanes and Displays on Plastic Substrates		Shawn O'Rourke, Flexible Display Center	<b>TRACK B</b>
10:45-11:10 AM	8.2	Invited Talk: Advances in Flexible Manufacturing Technology		Greg Gibson, NexTech FAS	
11:10-11:35 AM	8.3	Contributed Talk: How Vision Inspection Systems Can Improve Yield and Throughput for Roll-to-roll Processing of Thin Films and Other Electronic Substrates		Mark Wegner, Northfield Automation Systems	
11:35 AM-12:00	8.4	Contributed Talk: 3D Measurements for Real-time, In-process Inspection of Printed Electronic Circuitry Features		Tim Skunes, CyberOptics	
<b>Q&amp;A</b>					
<b>12:10-1:15 PM</b>		<b>Lunch - Poster Session &amp; Exhibits</b>			
<b>1:15-3:05 PM</b>		<b>SESS 10</b>		<b>PRINTED ELECTRONICS DEVELOPMENTS</b>	
				<b>Session Chair: Shawn Decker, South Dakota School of Mines &amp; Technology</b>	
1:15-1:40 PM	10.1	Invited Talk: Inkjet Printed OTFT Array for Flexible Display Backplane Application		Ian Chan, ITRI	
1:40-2:05 PM	10.2	Contributed Talk: A Comparative Study of Via Drilling and Scribing on PEN and PET Substrates for Flexible Electronic Applications Using Excimer and NdYAG Laser Sources		Dr. Ir. Geert Van Steenberge, Centre for Microsystems Technology (CMST) Ghent University	
2:05-2:30 PM	10.3	Contributed Talk: 2020 Vision: An Alternative View of Plastic Electronics		Ric Allott, UK Displays and Lighting	
2:30-2:55 PM	10.4	Contributed Talk: Developments in Printed Electro-Optic Technology		Dr. Robert Petcavich, Uni-Pixel Displays	
<b>Q&amp;A</b>					
<b>3:05-3:30 PM</b>		<b>Break - Poster Sessions &amp; Exhibits</b>			
<b>3:30-5:20 PM</b>		<b>SESS 12</b>		<b>ELECTRONICS &amp; SENSOR INTEGRATION</b>	
				<b>Session Chair: Doug Schulz, North Dakota State University</b>	
3:30-3:55 PM	12.1	Invited Talk: Printed Electronic Tags and Sensors for Smart Packaging Applications		Vivek Subramanian, University of California, Berkeley	
3:55-4:20 PM	12.2	Contributed Talk: Wallpaper Computers: Conformal Computing by the Roll		Dr. Mark J. Pavicic, NDSU Center for Nanoscale Science and Engineering	
4:20-4:45 PM	12.3	Contributed Talk: Low Temperature Integration of CMOS Devices on Flexible Substrates		Manuel A. Quevedo-Lopez, University of Texas at Dallas & Arizona State University	
4:45-5:10 PM	12.4	Contributed Talk: Printing Flexible Circuits with Digital Conductive Inks		Claire Jalbert, IIMAK	
<b>Q&amp;A</b>					

5:20-5:30 PM *Special Drawing: Win a Gift Card for Turning in the Day Two Survey*  
6:30-9:00 PM *FLEXI Awards Dinner – Apache Ballroom, 3<sup>rd</sup> Floor Conference Center*

## THURSDAY, FEBRUARY 5, 2009 - TRACK A

### Sessions 13, 16, 19 – Kiva Ballroom Section

8:30-9:55 AM	SESS 13	R2R MANUFACTURING ISSUES Session Chair: Mark Poliks, Endicott Interconnect Technologies	TRACK A
8:30-8:55 AM	13.1	Contributed Talk: An Examination of Transport Processes Associated with Inkjet Printing of Functional Materials on Flexible Substrates for Roll-to-Roll Microelectronics Fabrication	Ying Sun, Binghamton University
8:55-9:20 AM	13.2	Contributed Talk: Precision Overlay Registration of Micron Sized Features on Unsupported Flexible Films	Hao Zhang, Binghamton University Panel of Industry Experts: Chasm Technologies, Robert Praino; Kent Displays, Asad Khan; Northfield Automation Systems, Mark Wegner; SiPix Imaging, Robert Sprague
9:20-9:45 AM	13.3	Panel Discussion: Lessons Learned in R2R Manufacturing <i>Moderated by Abbie Gregg, Inc.</i>	

**Q&A**

**9:55-10:20 AM**    *Break - Poster Sessions & Exhibits*

10:20 AM-12:10	SESS 16	MANUFACTURING TOOLS Session Chair: Marc Chason, iNEMI	TRACK A
10:20-10:45 AM	16.1	Invited Talk: Latest Results on ITO Coatings for Flexible Electronic Applications	Peter Sauer, Applied Materials, Germany
10:45-11:10 AM	16.2	Contributed Talk: Atomic Layer Deposition for Flexible Displays	Christophe Pomarède, ASM-America
11:10-11:35 AM	16.3	Contributed Talk: Clear Plastic with a-Si TFT's	Michael J. Renn, Optomec
11:35 AM-12:00	16.4	Contributed Talk: Radial & Linear Source Evaluation for Plasma Etching	Bob Henderson, Etched in Time

**Q&A**

**12:10-1:15 PM**    *Lunch - Student Research Poster Awards, Poster Sessions & Exhibits*

1:15-3:55 PM	SESS 19	DISPLAY APPLICATIONS Session Chair: Dr. Nam-Seok Roh, Samsung Electronics	TRACK A
1:15-1:40 PM	19.1	Invited Talk: RADIUS®: The First Rollable Display Product	Dr. Edzer Huitema, Polymer Vision
1:40-2:05 PM	19.2	Invited Talk: Add-Vision's High Brightness, Low Voltage Flexible OLED Displays, Applications and Print-Based Manufacturing Scale-up	Dr. J. Devin MacKenzie, Add-Vision
2:05-2:30 PM	19.3	Contributed Talk: 4" Full-Color Flexible Active Matrix Organic Light Emitting Display with Reduced Bending Radius	Juhn S. Yoo, LG Display
2:30-2:55 PM	19.4	Contributed Talk: Wearable Electrophoretic Display Device for Military Applications	James P. Edmiston, Raytheon Systems & Flexible Display Center
2:55-3:20 PM	19.5	Contributed Talk: 6 inch-Flexible AM-OLED Moving Image Display	Dr. Shizuo Tokito, NHK Science & Technical Research Laboratories
3:20-3:45 PM	19.6	Contributed Talk: Development of Grey Level MicroCup Electrophoretics for Ereader Applications	Dr. Robert Sprague, SiPix Imaging

**Q&A**

**3:55-4:00 PM**    *Special Drawing: Win a Gift Card for Turning in the Day Three Survey*

**4:00 PM**    *Conference Adjourns*

## THURSDAY, FEBRUARY 5, 2009 - TRACK B

### Session 14, 17, 20 – Kachina Ballroom Section

8:30-9:55 AM	SESS 14	NOVEL PRINTING TOOLS Session Chair: Jay Sperry, Clemson University	TRACK B
8:30-8:55 AM	14.1	Contributed Talk: Progress on R2R Manufactured Backplanes Using Self-Aligned Imprint Lithography (SAIL)	Carl Taussig, Hewlett Packard
8:55-9:20 AM	14.2	Contributed Talk: Roll-to-Roll Subtractive Patterning of Metallic Layers	Dr. W. Dennis Slafer, MicroContinuum
9:20-9:45 AM	14.3	Contributed Talk: Spatially Selective Crystallization of Amorphous Silicon for Flexible Electronics	Nick Doudoumopoulos, Potomac Photonics
<b>Q&amp;A</b>			
<b>9:55-10:20 AM</b> <i>Break - Poster Sessions &amp; Exhibits</i>			
10:20 AM-12:10	SESS 17	INKS Session Chair: Erika Hrehorova, Western Michigan University	TRACK B
10:20-10:45 AM	17.1	Invited Talk: Opportunities and Challenges of Printed Electronics in the Graphics Industry	Robert Weiss, manroland AG
10:45-11:10 AM	17.2	Contributed Talk: High Speed Printable Environmentally Friendly Conductive Inks	Rudie Oldenzijl, Emerson Cuming & Henkel
11:10-11:35 AM	17.3	Contributed Talk: Low Temperature Sintering Nanoparticle Inks for Printed and Flexible Electronic Devices on Plastics	Zhihao Yang, Ph. D., NanoMas Technologies
11:35 AM-12:00	17.4	Contributed Talk: Conductive Inks Using Nano-Flake Pigments	Dr. Gordon Goodyear, Sigma Technologies International, Inc.
<b>Q&amp;A</b>			
<b>12:10-1:15 PM</b> <i>Lunch - Student Research Poster Awards, Poster Sessions &amp; Exhibits</i>			
1:15-3:55 PM	SESS 20	GRAPHICS PRINTING TECHNOLOGY Session Chair: Dr. Robert Reuss, CET	TRACK B
1:15-1:40 PM	20.1	Invited Talk: A Practical Approach to Implementation/ How do we Turn the Technology into Profit Generation?	Kevin Manes, Mark Andy Inc.
1:40-2:05 PM	20.2	Contributed Talk: Use of Inert Piezo Printhead Technology for Display and Flexible Electronics	Steve Liker, Trident Industrial Ink Jet
2:05-2:30 PM	20.3	Contributed Talks: Micro Lens and Printed Electronics Advancements for Gravure Cylinders	Eric Serenius, Daetwyler R&D Corporation
2:30-2:55 PM	20.4	Contributed Talk: Printing and Scaling of Metallic Traces and Capacitors Using a Laboratory-Scale Rotogravure Press	Alejandro de la Fuente Vornbrock, Univeristy of California, Berkeley
2:55-3:20 PM	20.5	Contributed Talk: The "Print" in Printed Electronics	Jay Sperry, Clemson University
3:20-3:45 PM	20.6	Contributed Talk: Printed Electronics Using Drop-on-Demand Inkjet Printing	Jan Sumerel, Ph.D., FUJIFILM Dimatix, Inc.
<b>Q&amp;A</b>			
3:55-4:00 PM	<i>Special Drawing: Win a Gift Card for Turning in the Day Three Survey</i>		
4:00 PM	<i>Conference Adjourns</i>		

## THURSDAY, FEBRUARY 5, 2009 - TRACK C

### Session 15, 18, 21 – Mohave/Adobe/Arroyo Ballroom Sections

8:30-9:55 AM	SESS 15	SMART CARD AND CLOTHING APPLICATIONS	TRACK C
		Session Chair: Bruce Gnade, University of Texas at Dallas	
8:30-8:55 AM	15.1	Contributed Talk: Application of Flexible Electronics to Electronic Textiles	Bruce Gnade, University of Texas at Dallas
8:55-9:20 AM	15.2	Contributed Talk: Wearable Health Monitor for Astronauts	John Bell, Nyx
9:20-9:45 AM	15.3	Contributed Talk: Flexible Optical Fiber Displays	H. Lee Wainwright, JFMagic
<b>Q&amp;A</b>			
<b>9:55-10:20 AM</b> <i>Break - Poster Sessions &amp; Exhibits</i>			
10:20 AM-12:10	SESS 18	RFID APPLICATIONS	TRACK C
		Session Chair: Greg McCarthy, Center for Nanoscale Science and Engineering/NDSU	
10:20-10:45 AM	18.1	Invited Talk: RFID: Beyond the Obvious	Mark McDonald, Alien Technology
10:45-11:10 AM	18.2	Contributed Talk: Low Cost Printed RFID Directly to Packaging	Geva Barash, Parelec
11:10-11:35 AM	18.3	Contributed Talk: Printed Hybrid Circuits	Eric MacDonald, SciPerio & University of Texas at El Paso
11:35 AM-12:00	18.4	Contributed Talk: Printed Paper-Based Low-Cost PIFA Antenna for Handheld Devices	Dimitrios Anagnostou, South Dakota School of Mines & Technology
<b>Q&amp;A</b>			
<b>12:10-1:15 PM</b> <i>Lunch - Student Research Poster Awards, Poster Sessions &amp; Exhibits</i>			
1:15-3:55 PM	SESS 21	NOVEL MATERIALS	TRACK C
		Session Chair: Keith Rollins, DuPont Teijin Films	
1:15-1:40 PM	21.1	Invited Talk: Printed Electronics - Recent Material Advances and Why Open Cooperation is the Key to Success	Dr. Giles Lloyd, Merck Chemicals Ltd.
1:40-2:05 PM	21.2	Contributed Talk: Barix Barrier Films for protection of Thin Film Photovoltaic Devices	Chyi-Shan Suen, Vitex Systems
2:05-2:30 PM	21.3	Contributed Talk: Tailored Carbon Nanotube Inks for Printed Electronics	Viktor Vejins, Nano-C Inc.
2:30-2:55 PM	21.4	Contributed Talk: High-Performance Solution-Processed Flexible Thin-Film Transistors Based on Small-Molecule Semiconductors and Self-Sorted Carbon Nanotube Networks (#929)	Zihong Liu, Stanford University
2:55-3:20 PM	21.5	Contributed Talk: Development of High Mobility Low Cost Channel Material TFTs	Yan Ye, AKT & Oregon State University
3:20-3:45 PM	21.6	Contributed Talk: Low Thermal Curing Materials for Flexible Electronic Applications	Deb Yellowaga, Honeywell Electronic Materials
<b>Q&amp;A</b>			
<b>3:55-4:00 PM</b> <i>Special Drawing: Win a Gift Card for Turning in the Day Three Survey</i>			
<b>4:00 PM</b> <i>Conference Adjourns</i>			