

PROGRAM

pro flex



2013



VACUUM ROLL-TO-ROLL PROCESSING OF FLEXIBLE MATERIALS

SEPTEMBER 24TH – 25TH, 2013
FRAUNHOFER FEP, DRESDEN, GERMANY

PARTNERS:



CHAIRMAN'S WELCOME

A few years ago, the General Manager of a film producing company said to me: »Today's world is a world of alliances«. What I took home from this conversation was that in business as well as in research and development one needs to collaborate to be successful. We, at Fraunhofer FEP, are dedicated to make the symposium pro flex 2013 a starting point for a prosperous collaboration between research and development and industry towards successful industrial commercialization.

As in the past, the pro flex 2013 continues to be international and multidisciplinary in its scope. The event will provide a colorful program of presentations covering exciting topics from the field of vacuum roll-to-roll coating. Moreover, the program committee also extended invitations to renowned experts presenting related technologies like non-vacuum roll-to-roll coating. In addition, this year's pro flex offers an »industry lunch« with an exhibition as a networking event. It gives us a great pleasure and honor to welcome you here in Dresden on the occasion of the pro flex 2013.

Nicolas Schiller

Dr. Nicolas Schiller
General Chair

ORGANIZERS

The symposium pro flex 2013 is organized by:



Program Chair:

Dr. Nicolas Schiller
Dr. Steffen Günther
Dr. John Fahlteich
Dr. Matthias Fahland
Dr. Marita Mehlstäubl

Symposium Administrator:

Mrs. Annett Arnold, M.Sc.

proflex@fep.fraunhofer.de | www.fep.fraunhofer.de/proflex

PROGRAM

TUESDAY, SEPTEMBER 24TH

SESSION 1 | CHAIR: DR. N. SCHILLER

09:30 – 09:40	Opening <i>N. SCHILLER</i> <i>Fraunhofer FEP [Germany]</i>
09:40 – 10:20	Invited Paper New technologies for vacuum roll-to-roll coating PECVD for high barrier coatings – Sputter deposition on flexible glass <i>H. TAMAGAKI, T. OKIMOTO, Y. KUROKAWA, T. SEGAWA, Y. IKARI, N. OHBA</i> <i>Kobe Steel Ltd. [Japan]</i>
10:20 – 10:40	Ultra-thin flexible glass substrates for electronics applications <i>J.-M. JOUANNO</i> <i>Corning Inc. [USA]</i>

10:40 – 11:10 Coffee Break

SESSION 2 | CHAIR: DR. M. FAHLAND

11:10 – 11:30	A study of adhesive improvement of a Cr-Ni alloy layer on a polyimide surface by low pressure gas plasma modification <i>K. MIYAUCHI, H. YAMABE, M. YUASA</i> <i>Sumitomo Metal Mining Co., Ltd. [Japan]</i>
11:30 – 11:50	Successful substrate cleaning in a high vacuum environment <i>S. HAMILTON</i> <i>Teknek, Ltd. [UK]</i>
11:50 – 12:10	Managing flexible webs for vacuum roll-to-roll deposition for electronic or ultra-barrier applications <i>C. A. BISHOP</i> <i>C. A. Bishop Consulting, Ltd. [UK]</i>

12:10 – 15:30	Industry Lunch: Networking event and exhibition Take the opportunity to meet our exhibitors: Adenso GmbH, amtec Analysenmesstechnik GmbH, DTF Technology GmbH, MKS Instruments Deutschland GmbH, robeko, SEMPA SYSTEMS GmbH and VON ARDENNE Anlagentechnik GmbH
---------------	---

PROGRAM

TUESDAY, SEPTEMBER 24 TH	
SESSION 3 CHAIR: DR. J. FAHLTEICH	
15:30 – 15:50	Flexible solar cells <i>U. BEWERSDORFF-SARLETTE</i> <i>Heliatek GmbH [Germany]</i>
15:50 – 16:10	Printing versus coating technologies – In which direction the future production technologies for printed electronic is going? <i>A. GLAWE, F. SCHÄFER</i> <i>KROENERT GmbH & Co. KG [Germany]</i>
16:10 – 16:30	Freeform and flexible electronics manufacturing using roll-to-roll printing and hybrid integration techniques <i>J. HAST, K. RÖNKÄ</i> <i>VTT Technical Research Centre of Finland [Finland]</i>
16:30 – 16:50	Roll-to-roll processing of flexible OLEDs <i>C. LEHMANN, S. MOGCK, T. WANSKI, C. MAY</i> <i>Fraunhofer COMEDD [Germany]</i>
16:50 – 17:10	Direct laser interference patterning, a new tool for large area surface functionalization of flexible materials <i>A.-F. LASAGNI, S. ECKHARDT, J. BERGER, D. BENKE</i> <i>Fraunhofer IWS [Germany]</i>
17:10 – 17:30	Activities of Saint Gobain in window film <i>C. LEYDER</i> <i>Saint Gobain Performance Plastic [France]</i>
20:00	Dinner Restaurant »Sophienkeller im Taschenbergpalais«

PROGRAM

WEDNESDAY, SEPTEMBER 25 TH	
SESSION 4 CHAIR: DR. J. FAHLTEICH	
09:30 – 09:50	Roll-to-roll processes and equipment for displays: State of the art and outlook <i>R. KUKLA, N. MORRISON, T. DEPPISCH</i> <i>Applied Materials GmbH & Co. KG [Germany]</i>
09:50 – 10:10	Piloting roll-to-roll ALD – Status and results with 500 mm wide web system <i>M. SÖDERLUND, P. SOININEN</i> <i>Beneq Oy [Finland]</i>
10:10 – 10:30	Spatial atmospheric atomic layer deposition for next-generation flexible devices <i>F. ROOZEBOOM, P. POODT, A. ILLIBERI</i> <i>Holst Centre TNO [The Netherlands]</i>
10:30 – 11:00	Coffee Break
SESSION 5 CHAIR: DR. S. GÜNTHER	
11:00 – 11:20	ALD and MLD passivation layers for flexible OLED and OPV <i>C. HOSSBACH, H. KLUMBIES, F. NEHM, C. RICHTER, A. SINGH, C. KEIBLER, M. GEIDEL, L. MÜLLER-MESKAMP, U. SCHRÖDER, M. ALBERT, J. W. BARTHA</i> <i>Technische Universität Dresden, Institute for Semiconductor and Microsystems Technology (IHM) [Germany]</i>
11:20 – 11:40	PPD – An innovative technology for deposition on flexible substrates <i>C. TALIANI, A. NERI, D. YARMOLICH</i> <i>Organic Spintronics Srl. [Italy]</i>
11:40 – 12:00	Flash lamp annealing: High temperature processing of layers on flexible substrates <i>T. GEBEL, H. LIEPACK, M. NEUBERT, W. SKORUPA, R. ENDLER</i> <i>DTF Technology GmbH [Germany]</i>
12:00 – 13:00	Lunch

PROGRAM

WEDNESDAY, SEPTEMBER 25 TH	
SESSION 6 CHAIR: DR. M. FAHLAND	
13:00 – 13:20	Rotatable magnetron sputtering in roll-to-roll web coating of optical layer stacks <i>H. PRÖHL, M. DIMER, M. HENTSCHEL, F. OTTO, J. STRÜMPFEL</i> VON ARDENNE Anlagentechnik GmbH [Germany]
13:20 – 13:40	The gas barrier and adhesion properties of organic thin layer deposited by physical vapor deposition <i>T. EBATA</i> TOYOBO Co. Ltd. [Japan]
13:40 – 14:00	The effects of intrinsic and extrinsic defects on moisture-barrier coatings on polymer substrates <i>A. SMITH, D. BIRD, D. ROBBINS, S. EDGE, A. COOK</i> The Centre for Process Innovation Ltd., CPI [UK]
14:00 – 14:20	High performance gas barrier encapsulating materials for flexible organic devices <i>Y. HAGIHARA, K. NISHIJIMA, S. NAGANAWA, K. NAGAMOTO, T. KONDO</i> LINTEC Corporation R&D Div. Research Center [Japan]
14:20 – 14:40	RF plasma polymer coating on polymeric substrates: Study of barrier properties <i>S. LIGOT, C. NOUVELLON, F. AJOUAOUI, F. RENAUX, R. SNYDERS</i> Université de Mons [Belgium]
14:40 – 15:00	Photochemical approach to thin barrier films for the encapsulation of flexible laminar electronic devices <i>L. PRAGER, U. HELMSTEDT, H. HERRNBERGER, M. MÜNCH, O. KAHLE, F. KITA, A. PENDER, M. STASIAK</i> Leibniz-Institut für Oberflächenmodifizierung IOM [Germany]
15:00 – 15:20	Ultra-low water vapor permeation measurement using Tunable Laser Absorption Spectroscopy (TDLAS) <i>W. GRÄHLERT, H. BEESE, J. GRÜBLER, J. KOCH, K. PIETSCH</i> Fraunhofer IWS [Germany]

PROGRAM

WEDNESDAY, SEPTEMBER 25 TH	
CLOSING	
15:20 – 15:30	Farewell and closing remarks <i>N. SCHILLER</i> Fraunhofer FEP [Germany]
15:30 – 17:30	Laboratory Tour Fraunhofer FEP [Germany]
ca. 17:30	The End

ATTIRE

All attire is business casual. Ties are not required, or expected.

EXHIBITORS

Please visit our exhibitors during Industry Lunch in the Technikum.



www.adenso.de



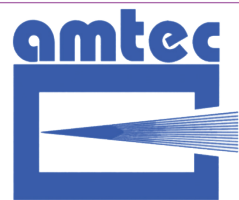
www.dtf-technology.de



www.sempa.de



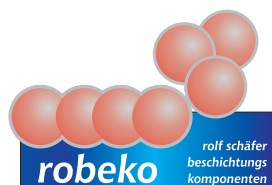
www.vonardenne.biz



www.amtec-spectro.de



www.mksinst.com



www.robeko.de

PARTNERS

pro flex 2013 is supported by:



www.aimcal.org

AIMCAL Association of International
 Metallizers, Coaters and Laminators
 201, Springs St.
 Fort Mill, SC 29715, USA



www.oes-net.de

Organic Electronics Saxony e. V.
 Würzburger Str. 51
 01187 Dresden, Germany



www.svc.org

Society of Vacuum Coaters
 71 Pinon Hill Place NE
 Albuquerque, NM 87122-1914, USA