

pro flex

2019

► ROLL-TO-ROLL COATING OF FLEXIBLE MATERIALS

FOCUS 2019: TECHNOLOGY CROSS-OVER

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OF THE PREVIOUS
CONFERENCES**

Innovative application of ETFE films in architecture

PROF. DR. J. CREMERS

Hochschule für Technik Stuttgart [Germany]

R2R processing of flexible glass substrates

S. C. LEWIS

Corning Incorporated [USA]

Ultra-Clean and High Performance Substrates for Large Area Flexible Electronics

V. VON MORGEN

DuPont Teijin Films Ltd., [UK]

Roll-to-roll Nanoimprint Lithography Patterning of Polymer surfaces and using it for patterned electrodes

DR. B. STADLOBER

Joanneum Research Graz [Austria]

Direct laser ablation of nanoparticle-filled polymers for microstructured print and replication master surfaces

DR. U. HELMSTEDT

Leibniz-Institut für Oberflächenmodifizierung [Germany]

All-in-one Roll-to-Roll solution producing flexible devices via additive printing and laser technology

C. RIEDEL

3D-Micromac AG [Germany]

High-performance silver interconnects prepared on thin and ultrathin flexible substrates by inkjet-printing and laser treatment

DR. M. FRITSCH

Fraunhofer IKTS [Germany]

R2R production of anisotropic conductive polymer films

DR. H. HEMMEN

Condalign AS [Norway]

Industrial scale production of low cost, transparent, low resistance (1 Ohm/sq) flexible electrode

A. DOLBUNOV

FunNano USA Inc. [USA]

Atmospheric Pressure SDBD plasma treatment for printed electronics applications

PROF. DR. C.I.M.A. SPEE

Maan Research & Development B.V. [Netherlands]

Resource and Energy Efficient Coating of Flexible Substrates by Roll-to-Roll Atomic Layer Deposition at Atmospheric Pressure

D. BAUER

Fraunhofer IVV [Germany]

Upscaling Roll-To-Roll Atomic Layer Deposition to Production

DR. D. BORSA

Meyer Burger (Netherlands) B.V. [Netherlands]

Roll-to-roll deposition of high performance gas diffusion barriers on polymers using a new atmospheric plasma technology platform

S. STAROSTIN

FUJIFILM Manufacturing Europe B.V. [Netherlands]

Electronic or smart fabrics - considerations for scale-up

DR. C. A. BISHOP [UK]

Compact Roll-2-Roll multipurpose coating system for DC, quasi-DC and AC sputtering

T. NIEDERHAUSEN

VON ARDENNE GmbH [Germany]

Application of Bipolar Pulsed Magnetron Sputtering and Bipolar High Power Impulse Magnetron Sputtering for functional coating deposition on flexible substrates

W. GAJEWSKI

TRUMPF Huettinger [Germany]

The exceptional performance of the Cascade Coater

M. GRAF ZU EULENBURG

InovisCoat GmbH [Germany]

Intermittent Slot die coating

DR. K. CRONE

Coatema Coating Machinery GmbH [Germany]

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N. MORRISSON

Applied Materials, Inc. [USA]

Flexible Packaging: Ressource Efficiency and Recyclebility

PROF. DR. A. GREFENSTEIN

Constantia Hueck Folien GmbH & Co. KG [Germany]

Advanced R2R Metallizing For Flexible Packaging & Security

PROF. N. AHMED

Idvac Ltd. [UK]

Flexible protected metallized polymeric reflector for use in „Heliotube“- solar – thermal energy conversion plants

DR. R. THIELSCH

Southwall Europe GmbH, a subsidiary of Eastman Chemical Company [Germany]

Encapsulation technology for OLED or OPV modules

DR. T. IZUMI

Lintec Corporation [Japan]

High-Volume Solution Processed OLEDs Using a Roll-to-Roll Pilot Coating Line

H. GORTER

Holst Centre [Netherlands]

Thin glass OLEDs and the challenges in roll-to-roll production

DR. W. DÖTTER

OLED Works [USA]

Challenges in the Design and Manufacture of OLED Lighting

DR. N. BARDSLEY

Bardsley Consulting [UK]

New technologies for vacuum roll-to-roll coating PECVD for high barrier coatings – Sputter deposition on flexible glass

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Ultra-thin flexible glass substrates for electronics applications

J.-M. JOUANNO
Corning Inc. [USA]

A study of adhesive improvement of a Cr-Ni alloy layer on a polyimide surface by low pressure gas plasma modification

K. MIYAUCHI, H. YAMABE, M. YUASA
Sumitomo Metal Mining Co., Ltd. [Japan]

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S. HAMILTON
Teknek, Ltd. [UK]

Managing flexible webs for vacuum roll-to-roll deposition for electronic or ultra-barrier applications

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C. A. Bishop Consulting, Ltd. [UK]

Flexible solar cells

U. BEWERSDORFF-SARLETTE
Heliatek GmbH [Germany]

Printing versus coating technologies – In which direction the future production technologies for printed electronic is going?

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Freeform and flexible electronics manufacturing using roll-to-roll printing and hybrid integration techniques

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Roll-to-roll processing of flexible OLEDs

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Direct laser interference patterning, a new tool for large area surface functionalization of flexible materials

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Activities of Saint Gobain in window film

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Roll-to-roll processes and equipment for displays: State of the art and outlook

R. KUKLA, N. MORRISON, T. DEPPISCH
Applied Materials GmbH & Co. KG [Germany]

Piloting roll-to-roll ALD – Status and results with 500 mm wide web system

M. SÖDERLUND, P. SOININEN
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Spatial atmospheric atomic layer deposition for next-generation flexible devices

F. ROOZEBOOM, P. POODT, A. ILLIBERI
Holst Centre TNO [The Netherlands]

ALD and MLD passivation layers for flexible OLED and OPV

C. HOSSBACH, H. KLUMBIES, F. NEHM, C. RICHTER, A. SINGH, C. KEIBLER, M. GEIDEL, L. MÜLLER-MESKAMP, U. SCHRÖDER, M. ALBERT, J. W. BARTHA

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PPD – An innovative technology for deposition on flexible substrates

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Flash lamp annealing: High temperature processing of layers on flexible substrates

T. GEBEL, H. LIEPACK, M. NEUBERT, W. SKORUPA, R. ENDLER

DTF Technology GmbH [Germany]

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H. PRÖHL, M. DIMER, M. HENTSCHEL, F. OTTO, J. STRÜMPFEL

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The gas barrier and adhesion properties of organic thin layer deposited by physical vapor deposition

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The effects of intrinsic and extrinsic defects on moisture-barrier coatings on polymer substrates

A. SMITH, D. BIRD, D. ROBBINS, S. EDGE, A. COOK

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High performance gas barrier encapsulating materials for flexible organic devices

Y. HAGIHARA, K. NISHIJIMA, S. NAGANAWA, K. NAGAMOTO, T. KONDO

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RF plasma polymer coating on polymeric substrates: Study of barrier properties

S. LIGOT, C. NOUVELLON, F. AJOUAOUI, F. RENAUX, R. SNYDERS

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Photochemical approach to thin barrier films for the encapsulation of flexible laminar electronic devices

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Ultra-low water vapor permeation measurement using Tunable Laser Absorption Spectroscopy (TDLAS)

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Advanced Plasma Technology for Large Area PECVD Processes on Flexible Substrates

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Roth & Rau MicroSystems GmbH

Dynamic VHF-PECVD Deposition Concept Tool with Linear Plasma Sources for Flexible Substrate Coating

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PVD / PECVD Web Processing Solutions

S. KREHER, L. KÖHLER
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Recent Developments in Fast and Fine Temperature Measurement

U. KRAUSE, M. RITZHEIMER
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Roll-to-Roll ALD for Coating of Polymer Webs

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Advanced Oxygen Plasma Polymer Substrate Pre-Treatment and Coating for Flexible Electronics Applications

M. AUDRONIS, V. BELLIDO-GONZALEZ
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S. F. DRIBINSKIY, C. STRULLER, H.-C. LANGOWSKI
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Moisture Barrier on Plastic Substrates by Atomic Layer Deposition (ALD) and Sputtering

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Large Scale Flexible Electrochromic Devices: Towards Roll-to-Roll Processing

E. AVENDANO, S. VON KRÆMER, T. ALMESJÖ, C. G. GRANQVIST
ChromoGenics AB

Production Proven Vacuum Web Coating System for Robust and Environmentally-Friendly Transparent Barriers

R. LUDWIG, H.-G. LOTZ, G. HOFFMANN
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Nanoparticulate Barrier Films and Encapsulation Method for Solar and Display Applications

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ITO for Flexible Electronics Applications

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The Development of Transparent Conductive Films of Organic-Inorganic Lamination Type

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Demands on Barrier for Organic PV on Flexible Substrates

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Characterization of Ultra-Barrier Films

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Magneto-Optical Studies of Magnetic Clusters and Thin Films on PET Substrates

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Imaging Technologies for Reliability Assessment in Flexible Photovoltaics

T. SWONKE, M. WAGNER, C.-J. BRABEC, U. HOYER, J. BACHMANN, C. BUERHOP-LUTZ

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Insulating Layers on Flexible Metallic Substrates

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Permeation Testing for Organic Electronics: Review of Needs and Technological Options

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System Integration Technologies on Polymer Substrates

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Laser Scribing of Organic Solar Cells

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R2R Production Solutions for Touch Panels, Flex PV and other Flex Electronic Applications

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OLED for Lighting – R2R Fabrication and Inspection

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Recent Developments in Silicon Based Solar Cells Deposited on Plastic Film

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Silicon-Light: a New EU Project on Roll-to-Roll Fabrication of Thin Film Silicon Solar Cells on Foil

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Manufacturing and Applications of Cu(In,Ga)Se₂ Solar Cells on Flexible Substrates

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Magnetron Based PECVD: an Innovative High-Speed Process

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Control of a sheet resistance and light transmission in TCO production

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Study of influence of under layer on Indium Tin Oxide crystallization

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2D Web coating simulator software

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Recent developments in plasma generation for web coating applications

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Roll-to-roll surface modification of fluoropolymers

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Plasma surface treatment

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Precise power for flexible substrate coating

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Wet coating - opportunity for ultrathin layers

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Flexible printing of transparent conducting oxides for display applications

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Roll to roll sputtering for flexible electronic applications

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Laser machining of thin films on top of flexible substrate carriers

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Permeation Barrier Properties of Oxide Layers on Polymer Film Deposited by Pulsed Magnetron Sputtering

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Specialty films for organic solar cells

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Flexible Silicon based solar cells: challenges and chances

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CIGS thin film solar cells on polymer substrates – the next generation of photovoltaics

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The European Project FLEXCELLENCE: roll to roll technology for the production of high efficiency low cost thin film solar cells

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Production and coating techniques for polymer solar cells

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High efficiency flexible solar cells: challenges and prospects of manufacturing and applications

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Permeation measurements at 0.001 g/m²/day and below for applications in flexible electronics

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In-line monitoring of ultrathin metallic films on PET substrates with sub-nm resolution

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Roll-to-roll fabrication of OLED on metal foils for lighting applications

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Advanced process control for surface treatment in roll-to-roll and other processes

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XRF-Inline measuring unit - an important tool to control coating processes

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High adhesion coatings on polymer films for flexible circuit boards

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Design Features of Sputter Roll Coaters and Application of Optical Multi Layers on Flexible Substrates

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SMARTWEB, A new Vacuum Web Coater with Multiprocess Capabilities

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Copper-Indium-Gallium-DiSelenide based Thin Film Solar Cells on Polyimide

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Optical in-situ process monitoring using spectroscopic ellipsometry and Raman scattering

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Electron Beam Web Coating of Silicon Oxide On Production Scale

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Barrier films for vacuum insulation panels

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Ion track technology for the production of polymeric foils with nanostructures and for vacuum surface treatment methods

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Linear Ion Source for In-Line Treatment of Polymers and Glass

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Production and Applications of flexible printed circuits

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Microwave assisted sputtering for polymers

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Vacuum Equipment for TCO and AR Coatings Deposition by Reactive Magnetron Sputtering

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Sidrabe Inc.

SiOx Hard Coat Films Deposited at High Rates by a Novel PECVD Roll to Roll Process

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Reactive Gas Control of Non Stable Plasmas

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Permeation Studies of Gas Barrier Films

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EBPVD Roll Coater and Related Technology Issues for Coating on Flexible Materials

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Low damage processing of thin films on flexible substrates by ultra-short pulse lasers

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Roll-to-roll laser patterning of vacuum coated flexible substrates

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In-line Monitoring of coating processes with fiber optical spectrometers - possibilities and limitations

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Forgery-proof optical codings made by vacuum coating

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UV Curing: Plain and structured coatings as sub- and superstrate for vacuum web coatings

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Thickness and element contents of thin films on foils - measured online by X-ray

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Coating of polymer films with low resistance transparent electrodes

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