

PROGRAM COMMITTEE

- Dr. Jonas Sundqvist** — BALD Engineering AB,
Dresden, Germany
- Dr. Christoph Hossbach** — Picosun Oy and Picosun Europe GmbH,
Dresden, Germany
- Dr. Katrin Ferse** — European Society of Thin Films (EFDS),
Dresden, Germany
- Dr. Henry Bernhardt** — Infineon Technologies Dresden GmbH,
Dresden, Germany
- Dr. Lukas Mayr** — BASF SE, Ludwigshafen, Germany
- Bernd Hintze** — Research Fab Microelectronics Germany (FMD),
Dresden, Germany

GENERAL INFORMATION

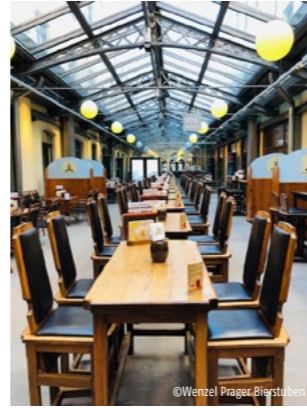
	ALD for Industry	Workshop only	Tutorial only
Standard	790,00 EUR	590,00 EUR	390,00 EUR
Students	395,00 EUR	290,00 EUR	180,00 EUR

Workshop fees are free of VAT according to §4 (22a) UStG (German value-added tax law).



Get-Together – Wednesday, December 02, 2020

19:00
Wenzel Prager Bierstuben Dresden
Königstraße 1, 01097 Dresden
www.wenzel-prager-bierstuben.de



RECOMMENDATION FOR HOTEL



HYPERION Hotel Dresden am Schloss
Schlossstraße 16, 01067 Dresden
Code: ALD
Deadline: October 21, 2020
Room rate:
159,00 € p. night/single room
Tel.: +49 341 98389137
reservation.dresden@h-hotels.com
www.h-hotels.com



ibis Dresden Zentrum
Prager Straße 5, 01069 Dresden
Code: ALD
Deadline: October 29, 2020
Room rate:
69,00 € p. night/single room
Tel.: +49 351 48564856
reservierung@ibis-dresden.de
www.ibis-dresden.de

Platinum Sponsors:



Gold Sponsors:



Additional Sponsors:



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Registration Fee Covers:

The registration fee includes the participation of the chosen event, conference proceedings, coffee and lunch breaks, the social evening and company tour. Please note, that the number of participants is limited, so please register early.

Online Registration:

Please use the online registration:
<https://www.efds.org/event/ald2020/>

Event Organizer:

European Society of Thin Films
Gostritzer Straße 63
01217 Dresden, Germany
Tel.: +49 351 8718372
info@efds.org, www.efds.org

Event Location:

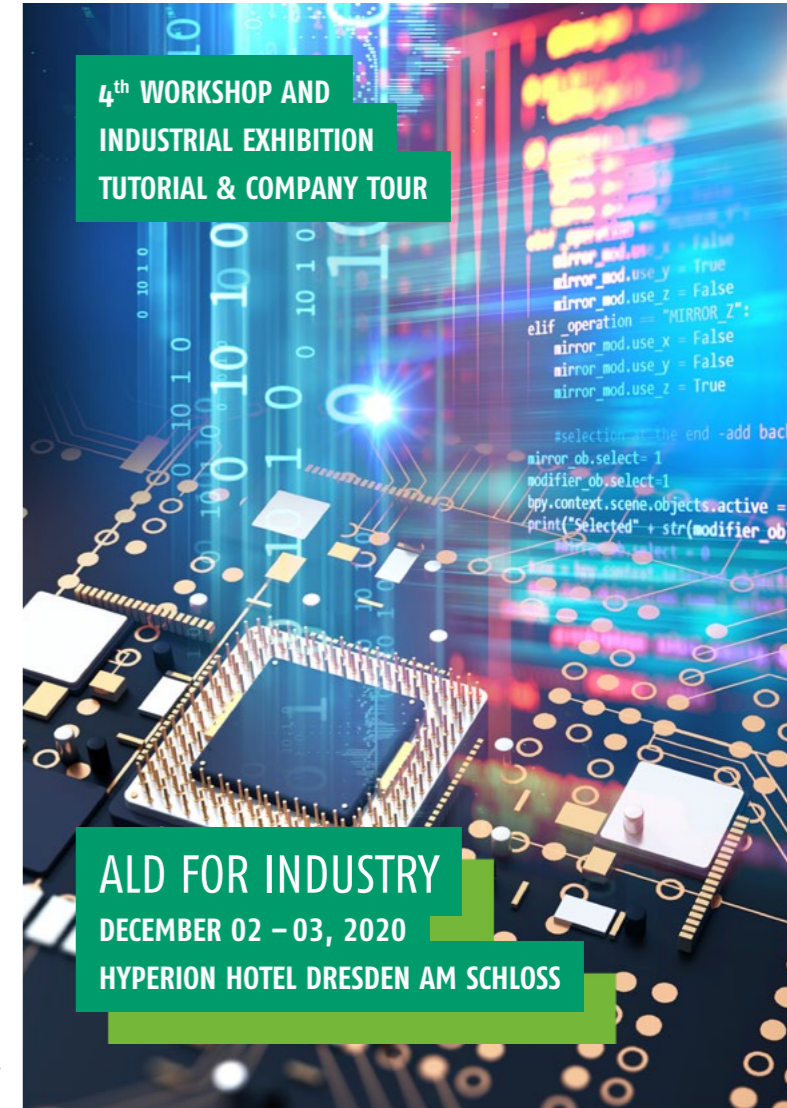
HYPERION Hotel Dresden
Am Schloss
Schlossstraße 16
01067 Dresden, Germany
Tel.: +49 341 98389137
www.h-hotels.com

The general terms and conditions of sale of the EFDS apply (www.efds.org/agb). Cancellations must be made in written form. In case of the cancellation of your registration before November 17, 2020, a cancellation fee of 50,00 EUR will be charged. After this date, a refund is not possible.



Europäische Forschungsgesellschaft Dünne Schichten e. V.
European Society of Thin Films

4th WORKSHOP AND INDUSTRIAL EXHIBITION TUTORIAL & COMPANY TOUR



ALD FOR INDUSTRY DECEMBER 02 – 03, 2020 HYPERION HOTEL DRESDEN AM SCHLOSS





PREFACE

A topical workshop with focus on industrialization and commercialization of ALD for current and emerging markets.

Atomic Layer Deposition (ALD) is used to deposit ultra-conformal thin films with sub-nm film thickness control. The method is unique in the sense that it employs sequential self-limiting surface reactions for growth in the monolayer thickness regime. Today, ALD is a key technology in leading edge semiconductor technology and the field of application in other industries is increasing rapidly. According to market estimates the equipment market alone is currently at an annual revenue of US\$ 1.8-1.9 billion (2018) and it is expected to double in the next 4-5 years.

In a European context ALD was invented independently twice in Europe (Russia & Finland) and since the last 15 years Germany has grown to become one of the strongest European markets for ALD in R&D, chemicals, equipment and end users.

This year we will organize the 4th EFDS "ALD For Industry Workshop" in Dresden (Germany), one of the European ALD-Hotspots for industrial applications and research. ALD for Industry provides the opportunity to get in contact with industrial and academic partners, to learn more about fundamentals of ALD technology and to get informed about recent progress in the field.

The Event will focus on the current markets for ALD and addresses the applications in Semiconductor industry, MEMS & Sensors, Battery Technology, Medical, Display, Lightning, Barriers and Photovoltaics.

PROGRAM | Wednesday, December 2, 2020

Company Tour, Tutorial, Industrial Exhibition & Get-Together

08:00 – 09:30	Setup of Exhibition & Registration
09:30 – 12:00	Company Tour
12:00	Lunch Break & Opening of Industrial Exhibition
13:00	Opening of Tutorial
13:15	Current and Emerging ALD Processes, Precursors, IP Trends and Applications in High Volume Production Jonas Sundqvist, BALD Engineering AB, Dresden, Germany
13:45	ALE for Nanopatterning Dmitry Suyatin, Lund University, Lund, Sweden
14:15	Elevator Pitch
14:45	Coffee Break & Industrial Exhibition
15:15	Precursor Chemistry for the ALD of Functional Thin Films: Synthesis, Evaluation and Applications Nils Boysen, Ruhr-Universität, Bochum, Germany
15:40	In Situ Metrology for ALD Processes Martin Knaut, TU Dresden, Dresden
16:05	Optimization of Atomic Layer Deposition Processes Using Simulation: an Overview Linda Jäckel, Fraunhofer ENAS, Chemnitz
16:30	ALD for Photovoltaic Applications Tobias Törndahl, Uppsala University, Uppsala, Sweden
16:55	End of first day program
19:00	Get-Together Restaurant »Wenzel Prager Bierstuben Dresden« Königstraße 1, 01097 Dresden



PROGRAM | Thursday, December 3, 2020

Workshop & Industrial Exhibition

09:00	Opening
09:05	Keynote Lecture When Time-Resolved CVD Outperforms Continuous CVD-ALD as the Enabler for InN Based Electronics Henrik Pedersen, Linköping University, Sweden
09:50	Conformal Thick Dielectric Deposition on 3D Structures at CVD Speed Veronique De Jonghe, Plasma-Therm, St. Petersburg, USA
10:10	ALD of Noble Metals - Challenges & Perspectives for Ru and Pt ALD Precursors Nicolas Blasco, Air Liquide, Paris, France
10:30	Coffee Break & Industrial Exhibition
11:00	ALD at CEA-Leti: From Research to Applications Remy Gassilloud, CEA Leti, Grenoble, France
11:20	ALD for Challenging 3D Structures: Industrial Applications Christoph Hossbach, Picosun Oy and Picosun Europe GmbH, Dresden, Germany
11:40	Plasma ALD Processing of GaN Power and RF Devices for High Volume Manufacturing Aileen O'Mahony, Oxford Instruments, Bristol, United Kingdom
12:00	Large Area ALD Coatings for Health, Environment and Energy Applications Jacques Kools, Encapsulix SAS, Simiane-Collongue, France
12:20	Lunch Break & Industrial Exhibition

13:20	ALD of Titanium Nitride as Ultra-Thin-Lithium-Ion Diffusion Barrier Sascha Böhnhardt, Fraunhofer IPMS CNT, Dresden, Germany
13:40	Industrial Production of Moisture Barrier Coatings by Atomic Layer Deposition Kalle Niiranen, Beneq Oy, Espoo, Finland
14:00	Innovative ALD Industrial Services Joël Matthey, Positive Coating, La Chaux-de-Fonds, Switzerland
14:20	Direct Atomic Pattern Printing Maksym Plakhotnyuk, ATLANT 3D Nanosystems, Kgs. Lyngby, Denmark
14:40	Coffee Break & Industrial Exhibition
15:10	In-Situ-Real-Time and Ex-Situ Spectroscopic Analysis of Al₂O₃ Films Prepared by Plasma Enhanced Atomic Layer Deposition Paul Plate, SENTECH Instruments GmbH, Berlin, Germany
15:30	Batch ALD for 5G High Volume Applications Ganesh Sundaram, Veeco Instruments, Waltham, USA
15:50	Aspects of ALD Work within the FMD and Potential Extensions Bernd Hintze, Research Fab Microelectronics Germany (FMD), Dresden, Germany
16:10	Final Discussion
16:15	End of Workshop

