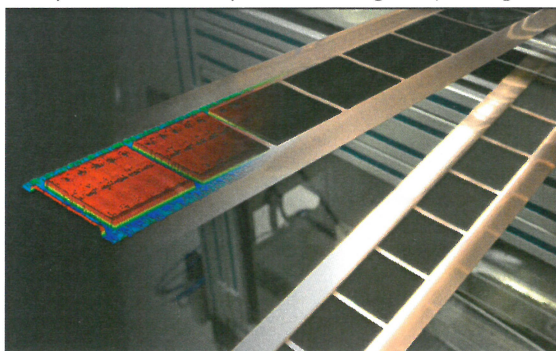




8th Short Course Coating and Drying of Thin Films

4-day short course on fundamentals and applications
with practical workshop in the coating and printing lab



1st Thin Film Technology Forum

1-day forum on May 12 on advances in printed electronics,
direct printing for industry 4.0 & battery processing



May 9-12, 2016

KIT-Tagungszentrum (FTU)

Seminar room 157 / lecture hall (TFT Forum)

Hermann-von-Helmholtz-Platz 1

76344 Eggenstein-Leopoldshafen



Organisation: Prof. Dr.-Ing. Dr. h. c. Wilhelm Schabel
Dr.-Ing. Philip Scharfer
with 18 experts from industry and academia

4-day short course program

29 contributions from 22 speakers

Schedule 09.05.2016 – Short course day 1

- 09:30 *Registration and hand out of course material*
- 10:00 *Welcome and introduction*
Prof. Dr.-Ing. Dr. h. c. W. Schabel / Dr.-Ing. P. Scharfer
- 10:30 *From theory to practice in coating technologies*
Dipl.-Ing. Andrea Glawe (Kroenert)
- 11:15 *Rheology of coating fluids*
Prof. Dr. Norbert Willenbacher (KIT)
- 12:15 *Lunch break*
- 13:15 *Coating fluids characterisation*
Dipl.-Ing. Gilbert Gugler (Polytype, CH)
- 14:30 *Introduction to self- and premetered coating*
Dr. Peter Schweizer (Fribourg, CH)
- 15:30 *Coffee break*
- 16:00 *Curtain and slot die coating*
Dr. Peter Schweizer (Fribourg, CH)
- 19:30 *Social dinner at BESITOS (Karlsruhe town square)*

Schedule 10.05.2016 – Short course day 2

- 09:00 *Dip and blade coating*
Prof. Dr. Hadj Benkreira (University of Bradford, UK)
- 09:45 *Gravure and roll coating*
Prof. Dr. Hadj Benkreira (University of Bradford, UK)
- 10:30 *Coffee break*
- 11:00 *Fluid flow in coating tools*
Prof. Dr. Dr. h. c. mult. Franz Durst (FMP)
- 12:00 *Inkjet printing - fundamentals and applications*
Prof. Fritz Bircher (iPrint, CH)
- 13:00 *Lunch break*
- 14:00 *Fundamentals of drying technology*
Prof. Dr.-Ing. Dr. h. c. Wilhelm Schabel (KIT)
- 15:00 *Film drying and drying studies*
Prof. Dr.-Ing. Dr. h. c. Wilhelm Schabel (KIT)
- 16:00 *Coffee break*
- 16:30 *Drying of particulate coatings and crack formation*
Dr. Alex Routh (Cambridge, UK)

Schedule 11.05.2016 – Short course day 3

- 08:30 *Simulation & design of industrial thin film dryers*
Dr.-Ing. Philip Scharfer (KIT)
- 10:00 *Sorption and phase equilibrium*
Dipl.-Ing. Anna-Lena Riegel (KIT)
- 10:20 *Impingement drying with comb nozzles*
Dipl.-Ing. Philipp Cavadini (CND Solutions)
- 10:40 *Coffee break*
- 11:10 *Coating apps and web handling*
Prof. Dr. Steven Abbott (TCNF, UK)
- 12:25 *Industrial perspectives of slot die coating*
Dipl.-Ing. Harald Döll (TSE)
- 12:55 *Lunch break*
- 13:55 *Experimental workshop at the TFT coating and printing laboratory*
 - Characterisation of material systems
 - Pilot-scale coating trials
 - Heat and mass transfer coefficients
 - Experimental drying curves
- 19:30 *Get-together TFT Forum at BESITOS (town square)*

Schedule 12.05.2016 – Forum & short course day 4

- 08:30 *Welcome & Introduction to TFT Forum*
Prof. Dr.-Ing. Dr. h. c. W. Schabel / Dr.-Ing. P. Scharfer
- 08:40 *Processing of organic & printed electronics*
Ir. Ike de Vries (Holst Centre, NL)
- 09:40 *Printed optoelectronic devices from solution*
Prof. Dr. Uli Lemmer (KIT)
- 10:10 *Coffee break*
- 10:40 *Industrial R2R processing of organic electronics*
Dr. Michael Niggemann (Eight19, UK)
- 11:10 *Multilayer coating of organic electronics*
Dipl.-Ing. Sebastian Raupp (KIT)
- 11:40 *Drying and diffusion in printed nanofilms*
Dr.-Ing. Philip Scharfer (KIT)
- 12:00 *Lunch break*
- 13:00 *Industrial production of Li-ion battery cells*
Dr. André Mecklenburg (Litarion)
- 14:00 *Challenges and limitations in industrial coating and drying of battery electrodes*
Prof. Dr.-Ing. Dr. h. c. Wilhelm Schabel (KIT)
- 14:30 *Drying of Li-ion battery electrodes*
Dipl.-Ing. Stefan Jaiser (KIT)
- 15:00 *Coffee break*
- 15:30 *Digital Direct Printing*
Prof. Fritz Bircher (iPrint, CH)
- 16:30 *Vista Digital Coating for Industry 4.0*
Dr. Peter Brown (TTP, UK)
- 17:00 *Functional Inkjet Printing for Industry 4.0*
Dr. ir. Wouter J.M. Brok (PiXDRO Meyer Burger, NL)