



Deutsche Gesellschaft für
Fettwissenschaft

PRACTICAL SHORT COURSE

Fats and Oils as Renewable Feedstock for the Chemical Industry



28–29 March 2015 · Karlsruhe · Germany

LECTURERS



Prof. Wolfgang Friedt
University of Giessen, Germany

Wolfgang Friedt, is a professor emeritus in the Institute of Agronomy and Plant Breeding at the Justus-Liebig University of Giessen. He has previously served as a Dean of the Faculty for Agriculture and Environment Preservation. In addition, he has been serving as a member of the advisory boards and consulting committees of various scientific organizations and professional associations in the field of plant breeding, agronomy and agriculture. His main research interests have been focusing on the genetic analysis of major complex traits of crop plants such as cereals and oil crops, incl. oilseed rape and sunflower, aiming at the genetic enhancement of the crop plants to provide better varieties for agriculture and (chemical) industry.

More details: www.plantbreeding-giessen.de



Prof. Martin Mittelbach
University of Graz, Austria

Martin Mittelbach is since 1996 university professor at the Institute of Chemistry of the University of Graz and since 1993 head of the working group "Chemistry and technology of renewable resources".

He is since 2009 dean of the twin faculty for Natural Science from University Graz and University of Technology, Graz (NAWI Graz). His main research interests have been focusing on organic synthesis, characterization and analysis of natural compounds, development of chromatographic methods, gas chromatography, development of 1st and 2nd generation biofuels, value added products from non-food biomass, biorefineries, chemical derivatization of renewable resources, esp. fats and oils, engagement in biodiesel research and development since 1980.



Prof. Mark Rüschen-Klaas
University of Applied Science Emden-Leer, Germany

Mark Rüschen-Klaas is since 2011 Full Professor for Chemistry of Renewable Resources at the University of Applied Sciences Emden-Leer. His main research interests have been focusing on: Applied catalysis and biocatalysis for renewables, monomers and polymers from renewables, catalytic oxidations.

More details: www.hs-emden-leer.de/forschung-transfer/institute/eutec/mitglieder/prof-dr-mark-ruesch-gen-klaas.html

REGISTRATION

Please make use of the online registration available at the webpage www.dgfett.de/meetings/aktuell/karlsruhe2015

REGISTRATION FEES**

	until 6 March 2015	after 6 March 2015
Member Academia and Public Service*	250 €	280 €
Non-Member Academia and Public Service	280 €	310 €
Member Industry*	400 €	430 €
Non-Member Industry	430 €	460 €
Student Member* (proof required)	120 €	150 €
Student Non-Member (proof required)	150 €	180 €

* Members of DGF, GDCh or Abiosus

** Registration fees are not subject to value added tax (tax exemption according §4 Nr. 22a UStG).

The registration fee includes:

- Entry to the scientific programme
- Handouts
- List of participants
- Coffee Break beverages
- Dinner

After registration you will receive an invoice.

PAYING BY BANK TRANSFER

Please transfer the total fees (free of bank commission) to:

Deutsche Gesellschaft für Fettwissenschaft e.V.
Deutsche Bank AG, Frankfurt/ Main
IBAN: DE05 500 700 240 240 1230 00
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Please quote your reference number!

PAYING BY CREDIT CARD

We accept Visa, MasterCard and AMEX

CANCELLATION POLICY

Cancellations received on or **before 6 March 2015** will be refunded minus a 30 € processing fee. There will be no refund for cancellations **after 6 March 2015** or No-Shows. Substitute participants can be named anytime without costs.

If the congress is cancelled for whatever reason, paid fees will be refunded. Further recourse is excluded.

KARLSRUHE

Charles William, Margrave of Baden-Durlach, founded the city on 17 June 1715, after a dispute with the citizens of his previous capital, Durlach. The founding of the city is closely linked to the construction of the palace. Karlsruhe became the capital of Baden-Durlach and in 1771 of the united Baden until 1945.

The city was planned with the palace tower at the center and 32 streets radiating out from it like the spokes of a wheel, or the ribs of a folding fan, so that one nickname for Karlsruhe in German is the „fan city“

Karlsruhe is the seat of the German Federal Constitutional Court (Bundesverfassungsgericht) and the highest Court of Appeals in civil and criminal cases, the Bundesgerichtshof. The courts came to Karlsruhe after World War II, when the provinces of Baden and Württemberg were merged.

VENUE

The event takes place at the

Hotel Renaissance Karlsruhe
Mendelssohnplatz
76131 Karlsruhe, Germany
Phone: +49 (0)721 37170
Fax: +49 (0)721 377156

ACCOMMODATION

A number of rooms are available at the Renaissance Hotel for your convenience:

E-mail: karlsruhe-reservation@renaissancehotels.com

Please quote the allotment: abiosus 2014

Single room: 97 € per night; Double room: 116 € per night

ORGANISER

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SUPPORT

GDCh
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▶ INVITATION

Fats and oils have ever been the most important renewable resources for the chemical industry. The short course will show the state of the art in and introduce in actual developments in oleochemistry. The topics range from plant breeding and oil processing to biochemical and chemical transformations to various groups of products like detergents and polymers. Also included is the utilization of glycerol and the present state and perspectives of biodiesel. Ample time for discussion will be used for the elucidation of future trends, bottlenecks and individual questions and ideas of the participants.

Fats and oils as renewable resources are daily business in many chemical companies and their future potential is even bigger. However, oleochemistry is rarely treated adequately in university courses in chemistry, chemical engineering or biotechnology. Therefore, the short course aims especially at chemists and other scientists who encounter oleochemistry for the first time in their career. It is also well suited for scientists in governmental or research institutions and for post graduates, who want to enhance their knowledge of fats and oils as renewable resources for the chemical industry.

Finally, the short course is the ideal background for first-time participants of the "8th Workshop on Fats and Oils as Renewable Feedstock for the Chemical Industry" which is starting immediately after the short course in Karlsruhe.

Recommended prerequisites: Basic organic chemistry

The scientific and organising committee, DGF division "Oleochemistry and Surfactants":



Jürgen O. Metzger
Oldenburg



Markus Dierker
Düsseldorf



Mark Rüschen gen. Klaas
Emden

▶ PROGRAMME

Saturday, 28 March 2015

- 11:30 **REGISTRATION**
- 12:45 **WELCOME AND OPENING**
- 13:00 **Breeding of Oil Plants for Variable Uses of Oils and Fats**
Wolfgang Friedt, University of Gießen, Gießen, Germany
- 13:50 **Processing of Fats and Oils**
Gunter Börner, B+B Engineering GmbH, Magdeburg, Germany
- 14:40 **COFFEE BREAK**
- 15:10 **Products and Processes in the Oleochemical Industry**
Markus Dierker, BASF, Germany
- 16:00 **Catalytic Transformations of Fatty Compounds**
Arno Behr, University of Dortmund, Germany
- 16:50 **COFFEE BREAK**
- 17:20 **Enzymatic and Microbial Conversions of Oils and Fats**
Uwe Bornscheuer, University of Greifswald, Germany
- 18:10-19:00 **Monomers and Polymers from Fats and Oils – an Overview**
Mark Rüschen, gen. Klaas, University of Applied Sciences, Emden Leer, Germany
- 20:00 **DINNER**

Sunday, 29 March 2015

- 09:00 **From Plants to Polyamides – and more**
Franz-Erich Baumann, Evonik, Marl, Germany
- 09:50 **An Overview of Glycerol Utilization and Upgrading Options**
Franck Dumeignil, University of Lille, France
- 10:40 **COFFEE BREAK**
- 11:10 **Biodiesel, Present State and Perspectives**
Martin Mittelbach, University of Graz
- 12:00 **Fats and Oils as Feedstock for the industrial Synthesis of Surfactants**
Matthias Arndt, Clariant Produkte (D) GmbH, Frankfurt/Main, Germany
- 12:50 **Concluding Discussion**

▶ LECTURERS



Dr. Matthias Arndt

Clariant Produkte GmbH, Germany

Matthias Arndt is since 2012 Scientist in the Competence Center Surfactants of Clariant, Clariant Innovation Center in Frankfurt-Höchst, Germany. He is responsible for a R&D laboratory, which is specialized in the synthesis of surfactants mostly based on sustainable feedstocks, such as vegetable oils, fats and sugar-derivatives.

More details: www.clariant.com



Dr. Franz-Erich Baumann

Evonik Industries AG, Marl, Germany

Franz-Erich Baumann studied chemistry at the University of Würzburg, Germany; PhD 1985; Post-doc with F.G.A. Stone in Bristol, UK 1985-1987. Since May 1987 he is chemist at Hüls AG, now Evonik, Marl. He is head of the polymer group since 2004. He has been working on the synthesis and properties of polyamides, polyamide elastomers and polyamide powders. and since 2004 also on the use of renewables for polyamides and polyesters.

More details: www.evonik.com



Prof. Arno Behr

University of Dortmund, Germany

Arno Behr is since 1996 a Full Professor of Technical Chemistry at the Department of Bio and Chemical Engineering of the Technical University of Dortmund. His main research interests have been focusing on: Homogeneous transition metal catalysis; technical syntheses with petrochemicals and renewables; process development in continuously operated miniplants.

More details: www.tc.bci.tu-dortmund.de



Gunter Börner

B+B Engineering GmbH, Germany

Gunter Börner is since 2012 Director Marketing and Innovation of B+B Engineering GmbH, Magdeburg, Germany. He is responsible for global marketing of technologies in vegetable oils and fats processing and for all research and development activities in oilseed processing and vegetable oil technologies. He has more than 35 years of experience in vegetable oil technology, specially in refining processes and speciality fat production.

More details: www.b-b-engineering.de/index.php/de

▶ LECTURERS



Prof. Uwe Bornscheuer

University of Greifswald, Germany

Uwe Bornscheuer is since Oct. 1999 full professor at the Institute for Chemistry & Biotechnology, Dept. of Technical Chemistry & Biotechnology, University of Greifswald. His main research interests have been focusing on: Identification of new biocatalysts by screening, e.g. from strain collections; in silico discovery of novel enzymes; cloning and functional expression in suitable microbial hosts; creation of tailor-made enzymes using directed (molecular) evolution and rational protein design; commercial enzymes.

More details: <http://biotech.uni-greifswald.de>



Dr. Markus Dierker

BASF, Düsseldorf, Germany

Markus Dierker studied chemistry at the University of Münster, Germany, and had his first contact with the chemistry of fats and oils during his PhD work with Prof. H.J. Schäfer in Münster. Since 2001 he held various positions in R&D and Marketing of Cognis (now BASF Personal Care and Nutrition GmbH) and is currently Head of Oleochemical Research within the Renewable Resources Research Network of BASF.

More details: www.basf.com



Prof. Franck Dumeignil

Lille 1 University, France

Franck Dumeignil is a Full Professor at Lille 1 University, Sciences and Technologies where he piloted several research projects. In January 2010, he was appointed Deputy Director of UCCS, UMR CNRS 8181, which employs more than 200 people. He was also named Junior Member of the Institut Universitaire de France (University Institute of France, IUF) in 2010. The mission of IUF is to promote the development of a high-level academic research and encourage interdisciplinary projects. His main research interests have been focusing on: Biomass, heterogeneous catalysis, biorefineries, platform molecules upgrading, hybrid catalysis.

More details: <http://uccs.univ-lille1.fr/index.php/annuaire/15-fiches-personnels/95-dumeignil-franck>