

■ The Freiberg Collagen Symposium was first initiated in 1996. It was supposed to build a platform for knowledge transfer in the research field "Collagen - Extraction, Preparation and Application of collageneous raw materials" and to enhance the networking of the institute's scientists with partners and experts of the industry and other research institutions.

Since then the symposium, taking place every 4 years, has evolved into an established, international meeting point for experts and professionals of different disciplines and industries

The fields of application of collagen are versatile. Collagen is utilised recently more intensively for medical products and devices, as additive in cosmetic and pharmaceutical products, but also for tensides and fertilisers, as packaging and coating material and for food products.

Again, the 6th Freiberg Collagen Symposium deals with incidence, extraction and preparation of collageneous raw materials for industrial utilisation und processing to products.

The papers will cover issues relevant to the collagen industry and focus on new findings with regard to collagen structure and the binding mechanism within influencing processing parameters and material properties.

#### ■ VENUE

Alte Mensa Freiberg Petersstr. 5, 09599 Freiberg, Germany

### ORGANISER

Forschungsinstitut für Leder und Kunststoffbahnen (FILK) gGmbH, Meißner Ring 1-5, 09599 Freiberg, Germany

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### ■ PARTICIPATION FEES

Participation fee 410 ∈ Members of FILK Association 310 ∈ Members of Universities 190 ∈ Students 190 ∈ (Prices incl. proceedings, refreshments, social programme and

# ■ REGISTRATION / CANCELLATION

Please, use the registration form of our website at www.filkfreiberg.de. Deadline is August 31, 2016. If registration is cancelled before August 31, 2016, we will refund the participation fee deducting a 50 € handling fee. For cancellations after this date, no refund will be made.

### ACCOMMODATION

common dinner)

A limited number of rooms you can book under the keyword ,Kollagensymposium in the following hotels:

Hotel Alekto, Am Bahnhof 3, 09599 Freiberg (+49 3731 794-0, info@alekto.de)

Hotel Altstadt, Donatsgasse 3, 09599 Freiberg (+49 3731 207030, info@hotel-freiberg.de)

Hotel Freiberger Brauhof, Körnerstr. 2, 09599 Freiberg (+49 3731 35300, info@freiberger-brauhof.de)

Hotel Mauck'sches Gut, Hornstr. 20, 09599 Freiberg (+49 3731 33978, hotel@hotel-maucksches-gut.de)

Hotel Regenbogenhaus, Brückenstr. 5, 09599 Freiberg (+49 3731 79850, hotel-Regenbogenhaus@t-online.de)

Hotel Silberhof, Silberhofstr. 1, 09599 Freiberg (+49 3731 2688-0, rezeption@hotel-silberhof.com)

# ■ CONFERENCE LANGUAGES

German, English - simultaneous interpretation will be provided

# **PROGRAMME**

6th Freiberg Collagen Symposium September, 14 & 15, 2016, Freiberg







# LECTURE PROGRAMME | WEDNESDAY, 14.09.2016

08.30 Doors open & registration
09.30 Opening, greetings

Prof. Dr. Michael Stoll, Director, FILK (DE)
Dr. Michael Meyer, Head of Department Leather / Collagen
/ Biopolymers, FILK (DE)

09.50 Extrusion-based additive manufacturing with collagen and its derivatives for biomedical applications Michael Gelinsky, Centre for Translational Bone, Joint and Soft Tissue Research, Technische Universität Dresden (DE)

10.30 Laser structuring and biological testing of gelatin scaffolds for tissue engineering applications Nicole Hauptmann, Institute for Bioprocessing and Analytical Measurement Techniques e.V. (DE)

10.55 Adaptation of collagen properties for 3D printing Ina Prade, FILK (DE)

11.20 Coffee break

11.40 Preparation and characterisation of pre-vascularized collagen scaffolds

Matthias Wiele, FILK (DE)

University of Ireland (IE)

12.05 Collagen-based supramolecular structures in tissue engineering and regenerative medicine – New tricks for the old protein
Dimitrios Zeugolis, Biosciences Research Building, National

12.30 Lunch break

13.30 Structure, mechanical properties and hydration effects in tendon collagen
Peter Fratzl, Max Planck Institute of Colloids and Interfaces (DE)

14.10 Collagen based materials - small angle x-ray scattering studies of structure related to strength Richard Haverkamp, School of Engineering & Advanced Technology, Massey University (NZ)

14.35 Micro-structural analysis of leather based on 3D image data
 Katja Schladitz, Fraunhofer Institute for Industrial Mathematics ITWM (DE)

15.00 Modifications of collagens during mumification - the case of mummy of Cangrande I della Scala, Lord of Verona, Italy (1291-1329 AD)

Ivan Mikšík, Institute of Physiology, The Czech Academy of Sciences (CZ)

15.25 Poster session with coffee

16.00 End of lecture programme

# SOCIAL PROGRAMME | WEDNESDAY, 14.09.2016

~16.15 Start social programme (according your choice)

\*Tour 1 - Guided city tour

\*Tour 2 - Visit of the mine 'Reiche Zeche' and guided tour underground

\*Tour 3 - Visit of the 'Historicum'

19.00 Common dinner at 'Freiberger Brauhof'



## LECTURE PROGRAMME | THURSDAY, 15.09.2016

09.00 Cattle: history, breeds and breeding for collagen
Johannes A. Lenstra, Utrecht University (NL)

09.40 Collagen hydrolysate from solid waste of leather industry as a film-forming material for Brassica napus seed coating Justa Sirvaityte, Kaunas University of Technology (LT)

10.05 More efficient use of collagen derivatives from tannery and fish waste

Maksym Koliada, Kviv National University of Technologies &

Maksym Koliada, Kyiv National University of Technologies & Design (UA)

10.30 Coffee break

# 10.50 Structure, rheology and novel applications of self-assembled collagen matrices for cancer cell research

Ben Fabry, Universität Erlangen-Nürnberg (DE)

11.30 New protocol for the stabilization of collagen in the presence of dendrimers and EDC/NHS or DMTMM as crosslinking agents

Valentina Beghetto, Università Ca' Foscari Venezia (IT)

11.55 New developments to synthetic tissue adhesives Jörg Bohrisch, Fraunhofer Institute for Applied Polymer Research IAP (DE)

12.20 Lunch break

13.20 Artificial extracellular matrices based on collagen and glycosaminoglycan derivatives – promising candidates for the design of functional biomaterials

Vera Hintze, Max Bergmann Center of Biomaterials, Technische Universität Dresden (DE)

14.00 Functional und structural insights into TIMP-3-glycosaminoglycan interactions - implications for the design of functional biomaterials for chronic wound healing Sandra Rother, Max Bergmann Center of Biomaterials, Technische Universität Dresden (DE)

14.25 Coffee break

14.55 Scaffolene: Centrifugal spinning, a technology for fiber and nonwoven production
Dirk Grafahrend, Freudenberg New Technologies Se & Co
KG (DE)

15.20 Shrinkage of collagen scaffolds using calcium chloride to alter mechanical properties Luuk Versteegden, Radboud Institute for Molecular Life Sciences, Radboud University Medical Center (NL)

15.45 End of 6th Freiberg Collagen Symposium with coffee





