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(from 169,00 EUR/code: SKZ026)

**Hotel Rebstock****
Neubaustraße 7
97070 Würzburg
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(from 167,00 EUR/code: SKZ)

**GHOTEL hotel & living***
Schweinfurter Straße 1-3
97080 Würzburg
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F +49 931 35962-2222
(from 85,00 EUR/code: SKZ)

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**FSKZ e.V.**
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T +49 931 4104-123 · F +49 931 4104-227
anmeldung@skz.de · www.skz-bildung.de/tagungen

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**Meet speakers from renowned companies and institutions:**

- Dr. Yann Bourgeois
  - Martinswerk GmbH, Bergheim, Germany
- Hans Jürgen Eichler
  - BASF Polyurethanes, Germany
- Dr. Jürgen Troitzsch
  - Fire and Environment Protection Service FEPS, Germany
- Serge Bourbigot
  - CERFIA, France
- Holger Bräuer
  - Brandhaus Rhein-Main GmbH & Co. KG, Frankfurt am Main, Germany
- Dr. Rolf W. Albach
  - Covestro Deutschland AG, Leverkusen, Germany
- Dr. Yann Bourgeois
  - Wesel, Germany
- Manfred Döring
  - Fraunhofer LBF, Darmstadt, Germany
- Peter Gohl
  - Farrel Corporation, Leingarten, Germany
- Dr. habil. Bernhard Schartel
  - Bernhard Schartel, Finland
- Prof. Dr. Dr. Rolf W. Albach
  - Allensbach, Germany
- Susanne Fehrer
  - Organizer
- Eva Engelmann
  - Product manager

**Media partners:**

- Akademische Hochschule Würzburg
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- Farrel POMIN
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- HESSE/FIRE INNOVATION
- Hochschule Mannheim
- TEXAS A&M UNIVERSITY
- UMET

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**International Conference**

**Trends in Fire Safety and Innovative Flame Retardants for Plastics**

27 to 28 October 2020
Festung Marienberg, Würzburg, Germany

**Dr. Jürgen Troitzsch**
Fire and Environment Protection Service FEPS, Ascona, Switzerland
Trends in Fire Safety
and Innovative Flame Retardants for Plastics

This 17th international conference on fire safety and innovative flame retardants for plastics focuses on the latest developments in fire safety regulations and tests in building and transport, as well as on new and advanced flame retardant systems and their use in polymers.

This time, special emphasis will be placed on innovations from academia in Europe and the USA and their potential for industrial applications discussed. The topics range from synergy mechanisms, 3D printing for textiles, new developments in organo-phosphorus compounds, halogen-free flame retardants in foams and wood as well as their weathering resistance, and advances in the chemical analysis of flame retardants. In parallel, the latest commercial developments for novel flame retardants and synergists, smoke suppressants and polymers will be presented. Flame retardant systems in e-mobility, recycling of flame retardant polyurethanes, new flame retardant TPU compounds, the beneficial use of smoke suppressants, synergistic formulations and processing of highly filled flame retardant cable compounds will provide further answers to questions on the fire safety of plastics.

CONFERENCE
www.skz.de

YOUR CONFERENCE AT A GLANCE

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Venue
Tagungszentrum Festung Marienberg
Oberer Burgweg, 97082 Würzburg
www.skz-bildung.de/anneise

Your speakers at this conference

Dr. Rolf W. Albach
Covestro Deutschland AG,
Leverkusen, Germany

Edith Antonatus
Altenbach, Germany

Prof. Dr. Serge Bourbigot
UMET, Villeneuve d’Ascq Cedex, France

Dr. Yann Bourgeois
Abo Akademi University,
Tampere, Finland

Holger Bräuer
Brandhaus Rhein-Main GmbH & Co. KG,
Frankfurt am Main, Germany

Prof. Dr. Manfred Döring
Fraunhofer LBF,
Darmstadt, Germany

Prof. Dr. Sebastian Eibl
WWEB, Erding, Germany

Hans Jürgen Eichler
BAM, Berlin, Germany

Prof. Dr. Sabine Fuchs
University of Applied Sciences, Hamm,
Germany

Peter Gohl
Farrel Corporation,
Leingarten, Germany

Prof. Dr. Jaime C. Grunlan
Texas A&M University,
Tamu, USA

Dr. Oliver Henze
BASF Polyurethanes GmbH,
Lemfoerde, Germany

Dr. Sebastian Hörsold
Clariant Plastics & Coatings
(Deutschland) GmbH,
Gersthofen, Germany

Dr. habl. Bernhard Schartel
BAM, Berlin, Germany

Prof. Dr. Carl-Eric Wilen
Abo Akademi University,
Finland

Statistische Versuchsplanung in der Spritzgießverarbeitung

30. April 2020
Würzburg

Wareneingangskontrolle und Werkstoffdatenblätter

12. bis 13. Mai 2020
Würzburg

Compoundieren von Kunststoffen in Theorie und Praxis

9. bis 13. November 2020
Würzburg

Your speakers at this conference

Dr. Rolf W. Albach
Covestro Deutschland AG,
Leverkusen, Germany

Edith Antonatus
Altenbach, Germany

Prof. Dr. Serge Bourbigot
UMET, Villeneuve d’Ascq Cedex, France

Dr. Yann Bourgeois
Abo Akademi University,
Tampere, Finland

Holger Bräuer
Brandhaus Rhein-Main GmbH & Co. KG,
Frankfurt am Main, Germany

Prof. Dr. Manfred Döring
Fraunhofer LBF,
Darmstadt, Germany

Prof. Dr. Sebastian Eibl
WWEB, Erding, Germany

Hans Jürgen Eichler
BAM, Berlin, Germany

Prof. Dr. Sabine Fuchs
University of Applied Sciences, Hamm,
Germany

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Farrel Corporation,
Leingarten, Germany

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Gersthofen, Germany

Dr. habl. Bernhard Schartel
BAM, Berlin, Germany

Prof. Dr. Carl-Eric Wilen
Abo Akademi University,
Finland
Tuesday, 27 October 2020

09:00 Welcome address
Dr. Jürgen Trotzsch, Fire and Environment Protection Service FEPS, Ascona, Switzerland

Trends in Fire Safety Regulations and Testing

09:15 Plastic products for facades of buildings
- Consequences of the Grenfell Tower fire
- European project for a harmonized full-scale test for façades
- Research project showing the role of insulation products in rainscreen façades
Edith Antonatus, Consultant, Alkenbach, Germany

09:50 Fire protection on rail vehicles to EN 45545
- Requirements and tests
- Compliance to EN 45545-2
- Future developments
Holger Bräuer, Managing Director, Brandhaus Rhein-Main GmbH & Co. KG, Frankfurt am Main, Germany

10:25 Coffee break

Recycling

10:55 Recycling of polyurethane foams
- State of the art
- Current Projects
- Possible effects of flame retardants
Dr. Rolf W. Albach, Product Research, Covestro Deutschland AG, Leverkusen, Germany

Innovative Flame Retardant Systems: Mechanisms and Applications

11:30 Forbidden planet: exploring the synergy in fire-retardant systems
- Creating synergistic effects in fire retardancy
- Revealing the mechanism
Prof. Dr. Serge Bourbigot, Group leader „Engineering of polymeric systems“, University of Lille – ENSL Unité Matériaux et Transformations (UMET), Villeneuve d’Ascq Cedex, France

12:05 Flame retardant textiles and 3D printing filament using polyelectrolyte complexes
- Nylon/cotton and polyester/cotton blends with polyelectrolyte complex (PEC) coating
- Self-extinguishing filament from PEC powders extruded with PLA
- Phosphate and nitrogen rich PEC coatings and powders
Prof. Dr. Jaime C. Grunlan, Department of Mechanical Engineering, Texas A&M University, Tamu, USA

12:40 Lunch

Flame retardant application based on DOPO Compounds
- Flame retardant action of DOPO and its compounds
- Atom efficient synthesis strategies
- Current sample application
Prof. Dr. Manfred Döring, Head of the Department Polymer Synthesis, Fraunhofer Institute for Structural Durability and System Reliability IFF, Darmstadt, Germany

Weathering resistance of halogen-free flame retardancy in thermoplastics
- Durability of fire retardancy
- Impact of different exposure condition
- Degradation with respect to different fire tests
Dr. habil. B. Scharlet, X. Lin, Y. Tan, V. Wachendorf, P. Klack, R. Schoch, M. Lang” Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin, Germany | SKZ, Würzburg, Germany

14:15 Fire retardancy of styrenic polymers and polystyrene foams: Towards the development of novel halogenfree FR solutions
- HBCD and/or Br-SBS versus organo-phosphorous FRs + synergist in PS foams
- Phosphazene FRs for use in HIPS
- Novel Styrene-copolymer
Prof. Dr. Sabine Fuchs, Chemistry and Materials Science, University of Applied Sciences, Hamm, Germany

14:35 Coffee break

Chemical Analysis

16:15 Chemical analysis of flame retardants
- Modern analysis methods
- Aspects of ageing and hazardous substances
- Damage investigations
Prof. Dr. Sebastian Eibl, Wehrwissenschaftliches Institut für Werk- und Betriebsstoffe (WIfB), Erding, Germany

16:50 Additional participant from the same company want a viable alternative to halogen and phosphorus-based flame retardants
- High durability of reaction to fire after artificial weathering
- Non-toxic fire retardant (Passes fire class B-s1, d0 and M1 classification)
Prof. Dr. Carl-Eric Wilen, Head of Laboratory of Polymer Technology, Abo Akademi University, Finland

17:30 Wine tasting in the Juliiusspital wine cellar with a typical Franconian winter plate
Meeting point at the historical figure fountain in the park of the Juliiusspital
Wednesday, 28 October 2020

09:00  E-mobility – Opportunities and challenges for flame retardants
   • Expected growth potential for e-vehicles
   • Fire risks and requirements in e-vehicles
   • Solutions in polyamides and polyesters
   Dr. Sebastian Hörlold, Head of Technical Service Thermoplastics & Market Manager Flame Retardants,
   Clariant Plastics & Coatings (Deutschland) GmbH, Gersfeld, Germany

09:35  How can smoke suppressants improve fire performance
   in the context of potential new regulations?
   • Smoke emission in fires and regulations in building and transport
   • Mode of action of smoke suppressants and their benefits in different plastics
   • Molybdenum, zinc and metal hydrate-based compounds in PVC, polyamides, and epoxies
   Dr. Yann Bourgeois, Product Manager, Martinwerk GmbH, Bergheim, Germany

10:10  Coffee break

10:40  Flame retardant thermoplastic polyurethane (TPU):
   Cable sheathings and other applications
   • Tailor-made TPU materials
   • Bench-scale evaluation of flame retardancy
   • Applications for cable sheathings to ISO 6722 class D and DIN EN 13501-6
   • Applications in railways to DIN EN 45545 and in construction
   Dr. Oliver Henze, Material Development, BASF Polyurethanes GmbH, Lemförde, Germany

11:15  High aspect ratio clays as synergists in halogenfree flame retardant compounds
   • Clay applications in thermoplastics
   • Flame retardancy mode of action
   • Synergistic effect in formulations with metal hydroxides
   Hans Jürgen Eichler, BYK-Chemie GmbH, Wesel, Germany

11:50  Processing of HFR compounds for the cable industry
   • Compact processor technology
   • Processing ATH and MDH grades
   • Test results and opportunities
   Peter Gohl, Marketing Engineer, Farrel Corporation, Leingarten, Germany

12:25  Final Remarks and end of conference

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Please mail to anmeldung@skz.de
Or register online: www.skz-bildung.de/121

Registration to:

Trends in Fire Safety and Innovative Flame Retardants for Plastics
27 to 28 October 2020, Würzburg

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