

10:30 Break

11:00 Development of a New Chromium-Free Surface Pretreatment for Coatings on Copper-Containing Aluminum Alloys

Aerospace, sustainability, polymer treatment, filiform corrosion

Dr. Jörg Hübscher

Institut für Korrosionsschutz Dresden GmbH, Dresden/Germany

Dr. Frank Simon und Dr. Ralf Frenzel

Leibniz-Institut für Polymerforschung e.V., Dresden/Germany

11:30 Concept of Active Corrosion Control for Magnesium Alloys: From Structural Towards Biomedical and Energy Applications

Magnesium, corrosion inhibitor, resorbable implant, primary battery

Prof. Mikhail Zheludkevich

Helmholz-Zentrum hereon GmbH, Geesthacht/Germany

12:00 Biodegradable Magnesium: Challenges for the Corrosion Behaviour in Biological Environments

Biodegradation, biocompatibility, simulated body fluids, protein and cell effects, surface modification

Prof. Sannakaisa Virtanen

Friedrich-Alexander-Universität, Erlangen/Germany

12:30 Magnesium Alloy and Process Development for Applications in the Automotive Industry

Magnesium, sheets, alloy design, prototype manufacturing

Dr. David Klaumünzer

Volkswagen AG, Wolfsburg/Germany

13:00 End of the conference

Unforeseen program changes are reserved.

Organisation

Registration

For organisational reasons, please send your registration no later than 16 November 2021 to:

GfKORR - Gesellschaft für Korrosionsschutz e.V.

Theodor-Heuss-Allee 25

60486 Frankfurt

Phone: +49 (0) 69 7564-360 /-436

Fax: +49 (0) 69 7564-391

E-Mail: gfkorr@dechema.de

Web: <https://gfkorr.de/Veranstaltungen>

Participation fees ^{*)}

Members of GfKORR, EFC	395,- €
Non-Members	435,- €
Pensionaries	130,- €
Students (under 30 years)	100,- €

^{*)} no VAT requested according to § 4.22 UStG

The participation fees include the conference proceedings and the list of participants.

Conditions of participation

The receipt of the registration is considered as binding confirmation of the participant. Upon receipt, you will receive confirmation and an invoice for the order due. Registered participants can cancel in writing free of charge until 9 November 2021. After this date 80% of the participation fee will be charged. In case of absence or cancellation of participation, the full participation fee is to be paid. Furthermore, you may nominate a substitute participant.



GfKORR – Gesellschaft für Korrosionsschutz e.V.



ANNUAL CONFERENCE

**Aluminium and Magnesium
The Bridge to a Sustainable Future**



23 and 24 November 2021

Online-Event

Introduction

Aluminium and magnesium, two materials that have only been used on a larger scale for just over 100 years, are now represented in many areas of application and are indispensable, especially in terms of sustainable lightweight construction. In many of the established applications, however, the resistance and protection of materials in corrosive environments plays an essential role, especially in the expansion of the application to new application areas.

The conference "Aluminium and Magnesium – The Bridge to a Sustainable Future" provides insights into new findings and developments on the use of the two materials and on further developed, innovative corrosion protection concepts in applications in aviation, automotive, construction and medical technology.

Programme – 23 November 2021

9:30 26th ordinary general meeting of the GfKORR e.V. (separate invitation required)

GfKORR – Annual Conference 2021

13:00 Welcome

Prof. Ralf Feser
FH Südwestfalen, Iserlohn/Germany
Chairman of the Executive Board of GfKORR

Moderation

Dr.-Ing. Dietrich Wieser
dw-aluminium-consulting, Bonn/Germany
Head of the working group: Aluminium and Magnesium of GfKORR

13:10 Corrosion Behaviour of Aluminium Automotive Materials with Increased Copper Contents

High strength, high formability, corrosion resistance, aluminium alloy
Dr. Diana Koschel, Dr. Gilles Guiglionda
Constellium Technology Center, Voreppe/France

Programme – 23 November 2021

13:40 Influence of Microstructure on Intergranular Corrosion (IGC) in AA-6xxx Series Aluminium Alloys

Al-Mg-Si(-Cu) alloy, intergranular corrosion, transmission electron microscopy
Dr. Calin Marioara, Dr. Otto Lunder
SINTEF Materials and Chemistry,
Trondheim/Norway

14:10 Impact of Pretreatment on Adhesive Bonded Aluminum Used within the Automotive Industry

Pre-treatment, adhesive bonding, aluminium, corrosion testing
Carolina Schneider
RISE Research Institutes of Sweden,
Kista/Sweden

14:40 Break

15:00 Surface Pretreatment of Aluminium Battery Boxes – What is Behind It?

Pretreatment process, application parameters, conversion coating, compatibility with adhesive bonding
Dr. Kathrin Schäuble
Henkel AG & Co. KGaA, Düsseldorf/Germany

15:30 Development of a New Accelerated Corrosion Test for Coil Coated Aluminium Sheet

Prepainted aluminium, accelerated tests, atmospheric corrosion
Dr. Nathalie Le Bozec
Institut de la Corrosion, Brest/France

16:00 Break

16:15 Solutions for the Road to Increased Sustainability – Recycled Metal Content, Scrap Availability and Carbon Footprint?

Road Map 2050, green aluminium, reduction of carbon footprint, increase of recycled metal content, limitation of scrap availability, aluminium's contribution to a sustainable development
What does aluminium offer? What is possible?
Jörg Schäfer
GDA - Gesamtverband der Aluminiumindustrie e.V., Düsseldorf/Germany

Programme – 23 November 2021

16:45 Trace Elements Influence on Filiform Corrosion Resistance in Recycled AA6060 Aluminium Alloys

Aluminium, recycling, trace-elements, corrosion
Dr. Jan-Olov Nilsson
Hydro Extruded Solutions AB, Finspång/Sweden

17:15 End of Day 1

Programme – 24 November 2021

09:00 Anodizing – the Pore Makes the Difference

No pores, nano pores, pore design, filled pores, What are the holes in the cheese doing?
Dr. Michael Schneider
Fraunhofer-Institut für Keramische Technologien und Systeme - IKTS, Dresden/Germany
Prof. Wolfram Fürbeth
DECHEMA-Forschungsinstitut, Frankfurt/Germany

09:30 Progress in the Development of Environmentally Friendly Protection Schemes for Light Alloys Part I

Development of new cyclic corrosion test for aeronautical applications
Progress and introduction of chromate free primer systems
Dr. Martin Beneke
Airbus Operations GmbH, Bremen/Germany

10:00 Progress in the Development of Environmentally Friendly Protection Schemes for Light Alloys Part II

Durability, requirements, conversion coatings, anodizing, gearbox, structure
Dr. Laurent Bortolotto
Airbus Helicopters Deutschland GmbH,
Donauwörth/Germany

Please send registration to:
E-Mail: gfkorr@dechema.de
Fax: +49 - (0) 69 - 7564 391

GfKORR – Gesellschaft für Korrosionsschutz e.V.
Theodor-Heuss-Allee 25
60486 Frankfurt / Main

Registration

Annual Conference 2021
Aluminium and Magnesium - The Bridge to a Sustainable Future
23 - 24 November 2021

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- | | |
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