Introduction

The German Society for Corrosion Protection (GfKORR e.V.) has set itself the aim of minimising the occurrence of corrosion damage in Germany through education. For this purpose, Korrosionum events are held annually and this one focusses on minimising corrosion and corrosion damage to electronic assemblies. Drawing on a broad, interdisciplinary knowledge the subject presented have been collected specifically for electronic assembly manufacturers.

The lecture programme will provide information on the application limits of the individual materials used in electronics and on the expected impacts of the environment. Corrosion failures in electronics are not exclusively limited to clearly detectable materials deteriorations but are primarily caused by electrical malfunctions based on the electronic conductivity of the corrosion products.

The aim of this Korrosionum is to inform attendees about corrosion problems that may be encountered and to provide guidance on how to solve them.

Target groups

Electronic manufacturers: quality assurance, process technology, environmental testing laboratory, analytics, production technology

Electronic users: automotive electronics, industrial electronics, renewable energies, aerospace and railway technology

About GfKORR and SMTA

The GfKORR – Gesellschaft für Korrosionsschutz e.V. (German Society for Corrosion Protection) is an interdisciplinary association of experts from industry and R&D, aiming at reducing corrosion and consequential damages in all areas of life and technology. The GfKORR dedicates itself to comprehensive route cause analysis and supports efficient knowledge transfer in all areas of corrosion to improve integrity of assets, safer livings and environmental protection.

Materials damages due to corrosion cost billions of Euros annually in Germany alone, affecting almost all branches of industry and economic sectors. Including secondary costs caused by loss of production or product performance, the overall economic damage amounts to more than 4% of the gross national product.

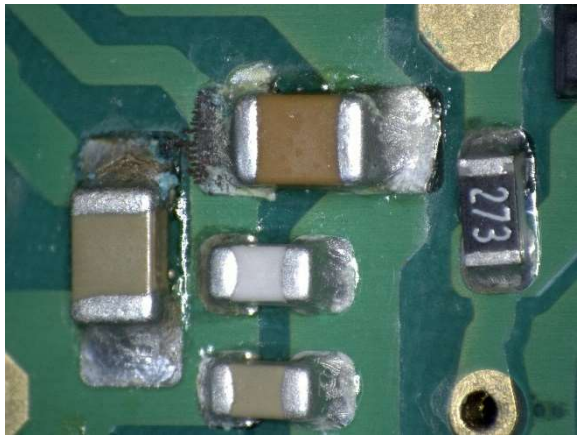
In order to enable effective corrosion prevention the GfKORR is dedicated to promoting sound basic research and efficient knowledge transfer in all fields of corrosion and materials protection. Remember: There is no technology without materials and there is no materials application without integrity evaluation.

SMTA is an international association for electronics engineering and manufacturing professionals seeking to improve processes through best practices and real-world solutions. SMTA offers exclusive access to local, regional, domestic and global communities of experts, as well as accumulated research and training materials from thousands of companies dedicated to advancing the electronics industry.

The greatest benefits come from the SMTA's mission of the sharing of knowledge and best processes by bringing educational content and a global network to local regions.

GfKORR – Gesellschaft für Korrosionsschutz e.V.

Korrosionum
Basics for Electronics



4 June 2024

Online Event

in cooperation with

SMTA

ZESTRON ACADEMY

Programme – 4 June 2024

08:45 Welcome, introduction of participants and their specific focus
Dr.-Ing. Helmut Schweigart
Dr. O.K. Wack Chemie GmbH, Ingolstadt

09:15 Introduction to the topic
Dr.-Ing. Helmut Schweigart
Dr. O.K. Wack Chemie GmbH, Ingolstadt

09:30 Copper alloys
Corrosion mechanisms, protection/ coatability
Prof. Dr.-Ing. Ralf Feser
FH Südwestfalen - Hochschule für Technik und Wirtschaft, Iserlohn

10:30 Break

11:00 Tin materials
Mechanism, protection options
Dr.-Ing. Michael Schneider
Fraunhofer IKTS, Dresden

11:40 Break

12:45 Aluminium materials
Corrosion types and mechanisms, corrosion resistance and protection/ corrosion resistant design and coatability
Dr.-Ing. Dietrich Wieser
Bonn

14:00 Break

Programme – 4 June 2024

14:30 Nickel materials
Electrochemical characteristics of nickel and nickel coatings (galvanic, electroless), resistance in aqueous and organic media, performance in clean and contaminated gas atmospheres, feature of failures
Prof. Dr. habil. Günter Schmitt
IFINKOR Institut für Instandhaltung und Korrosionsschutztechnik gGmbH, Iserlohn

15:15 Break

15:30 Silver metallization
Electrochemical characterization, resistance in aqueous environments, protection options and damage images
M. Sc. Elisabeth Kolbinger
Fraunhofer Institut für Zuverlässigkeit und Mikrointegration, Berlin

16:00 Summary of the day
Dr.-Ing. Helmut Schweigart
Dr. O.K. Wack Chemie GmbH, Ingolstadt

16:15 End of seminar

Unforeseen programme changes are reserved.

Host: GfKORR e.V.
In cooperation with the Zestron Academy (https://www.zestron.com/en/academy) and SMTA (https://smta.org)

Organisation

Registration

For organizational reasons, please register by **27 May 2024** by using the following link:

https://gfkorr.de/Korrosionum2024en

Information

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Participation fees *)

Members of GfKORR	680,- €
Non-Members	720,- €
Pensioners	200,- €
Students (under 30 years)	80,- €

*) no VAT requested according to § 4.22 UStG

The registration fees include the presentation slides.

Conditions of participation

Following receipt of the registration, a confirmation and the invoice on the amount due will be sent to the course participant.
Registered participants can cancel in writing free of charge no later than **27 May 2024**. 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. A replacement of a participant is always possible.