

## 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 root cause analysis and supports efficient knowledge transfer in all areas of corrosion to improve integrity of assets, safer living 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.

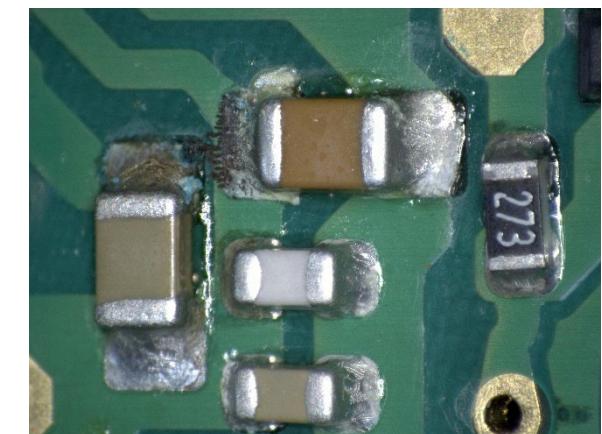
SMTA is an international association for electronics engineering and manufacturing professionals seeking to improve processes through best practices and real-world solutions. SMTA offers exclusive access to local, regional, domestic and global communities of experts, as well as accumulated research and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



**6 February 2025**

**Online Event**

in cooperation with



## Programme – 6 February 2025

### 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 Silver metallization

Electrochemical characterization, resistance in aqueous environments, protection options and damage images  
Dr. Stefan Wagner

Fraunhofer Institut für Zuverlässigkeit und Mikrointegration, Berlin

### 10:30 Break

### 11:00 Tin materials

Mechanism, protection options  
Dr.-Ing. Ulrike Langklotz  
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 – 6 February 2025

### 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 Copper alloys

Corrosion mechanisms, protection/ coatability

Prof. Dr.-Ing. Ralf Feser  
FH Südwestfalen - Hochschule für Technik und Wirtschaft, Iserlohn

### 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 **23 January 2025** by using the following link:

<https://gfkorr.de/Korrosionum2025en>

### Information

GfKORR - Gesellschaft für Korrosionsschutz e.V.  
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Web: <https://gfkorr.de/Veranstaltungen>

### Participation fees \*)

Members of GfKORR	450,- €
Non-Members	490,- €
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 **23 January 2025**. 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.