

# Eurocorr 2024, 1-5 September 2024, Paris

## Announcement of session on “Corrosion reliability of Electronics”

Working party 23 under European Federation of Corrosion (EFC) focus on “Corrosion reliability of Electronics”. Being a multidisciplinary topic involving Materials, Corrosion, Electronics, and Electrical aspects, goal of WP23 is to bring people from different areas to a common forum to discuss and find solutions for corrosion issues in Electronics and resulting functional problems. Today Power Electronics (PE) is the heart of all sustainable technologies, and key for energy transition and e-mobility. One of the most important issues influencing its performance is the functional issues caused by corrosion failure modes due to their exposure to harsh environmental conditions. Interaction of humidity with internal parts of the device such as Printed Circuit Board Assembly (PCBA), IGBTs, and other components result in several corrosion failure modes. Problems are compounded by the fact that electronic systems are built by multi-material combinations and presence of additional accelerating factors such as corrosion causing process related residues, bias voltage, and unpredictable user environment. This WP session aims to bring all actors together to a common forum for discussion.

WP23 session for Eurocorr 2024, Paris will focus on following topics, but not limited to:

- Corrosion failure modes and mechanisms in electronics: Low power and high power
- Effect of high voltage and high power on failure modes and mechanisms
- Synergistic effects of humidity and gases on power electronics failure
- Corrosion issues of power electronics components such as IGBTs
- Corrosion of power electronics in sectors such Wind Energy, Solar Energy, E-mobility.
- Process cleanliness and PCBA design aspects in relation to humidity effects
- Corrosion mitigation using conformal coating and proper packaging
- Specific corrosion issues related to materials in electronics and components
- De-gassing from polymers used in electronics and corrosion issues
- Corrosion reliability of electrical contacts and fretting corrosion
- Modelling of humidity effects on electronics

Please submit your abstract through Eurocorr website.

Please note that for this session, all presenters may also submit (optional) a full paper to a special issue of the Corrosion Engineering, Science, and Technology journal until November 1, 2024. The paper will undergo a regular peer review process of the journal and published based review outcome.

This session is organized by EFC working party 23 on “Corrosion Reliability of Electronics”. For more information please go to <https://efcweb.org/WP23.html>

We looking forward to your contribution and participation in EUROCORR 2024