Organisational Information

Sign up at: www.ecpe.org/events

Registration Deadline:

17 June 2024

Participation Fee:

€ 600,– *	for industry
€ 470,– *	for universities/institutes
€ 160,– *	for students/PhD student (limited spaces; copy of students ID required)

* plus VAT

- The participation includes dinner, lunches, coffee/soft drinks and digital proceedings. The reduced (PhD) students fee includes all except for dinner (can be booked for an extra fee of € 50,-*)
- Digital proceedings will be provided by download link latest one day before start of the event. A printed handout is available on request (€ 50,-*).
- Upon receipt of registration confirmation via email you are signed-up for the event. The invoice will be sent via email.
- 25 % discount for participants from ECPE member companies.
- 10% discount on university/institute fee for participants from ECPE competence centres.
- Further information (hotel list and maps) will be provided after registration and can be found on the ECPE web page.
- Cancellation policy: Full amount will be refunded in case of cancellation upon to 2 weeks prior to the event. After this date 50 % of the fee is non-refundable (replacement is possible).
- The number of participants is limited to 35 attendees.

11/04/24

Organisational Information

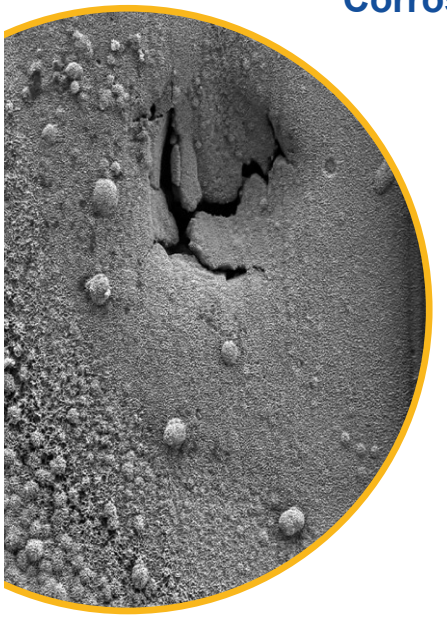
Organiser	ECPE e.V. Ostendstrasse 181 90482 Nuremberg, Germany www.ecpe.org
Technical Chair	Prof. Dr. Rajan Ambat, Technical University of Denmark (DK) Dr. Markus Meier, ZESTRON (DE)
Technical Contact	Thomas Harder, ECPE e.V. +49 911 81 02 88 –11 thomas.harder@ecpe.org
Organisation	Marietta Di Dio, ECPE e.V. +49 911 81 02 88 – 13 marietta.didio@ecpe.org
Venue	Technical University of Denmark Anker Engelunds Vej 1 Building 101A 2800 Kgs. Lyngby Denmark

Source photo: DTU
Source graph front page: ZESTRON

European Center for Power Electronics e.V.

ECPE Tutorial

Corrosion in Power Electronics



24 - 25 June 2024
Lyngby, Denmark

ECPE Tutorial

Corrosion in Power Electronics

24 – 25 June 2024
Lyngby, Denmark

Increasing demands are being placed on the reliability and service life of power electronics. Corrosion caused by moisture and harmful gases is a frequent reason for malfunctions or complete failure of the circuits. Power electronics are particularly susceptible, as the usually high field strengths accelerate the degradation of weak points in coating systems and thus greatly accelerate corrosion processes.

By understanding the interrelationships and influencing factors, effective preventive measures can be planned as early as the development phase of power electronic devices. The course teaches the basics of the most important corrosion mechanisms that typically occur in power electronics and presents effective remedial measures and practical test methods.

The tutorial is a short course on climatic reliability of electronics and prevention strategies. Only problems relevant to power electronic systems are dealt with.

The tutorial is chaired by:

Prof. Dr. Rajan Ambat, DTU Technical University of Denmark (DK)
Dr. Markus Meier, ZESTRON Europe (DE)

All presentations and discussions will be in English.

Programme

Monday, 24 June 2024

11:00 **Start of registration**

11:30 **Lunch**

12:30 **Introduction of the Tutorial on Corrosion in Power Electronics and Review of the Programme**
Rajan Ambat, Thomas Harder

13:00 **Basic Corrosion Principles Relevant to Electronic Corrosion**
Rajan Ambat

14:00 **General View of Corrosion in Electronics: Intrinsic and Extrinsic factors**
Rajan Ambat

15:00 **Coffee Break**

15:30 **Various Corrosion Failure Mechanisms and Factors: Part I**
Rajan Ambat, Markus Meier

16:30 **Summary of the 1st Day and Discussions**

17:15 **Optional: lab tour at DTU**

18:15 **End of 1st Day**

19:30 **Dinner**

Programme

Tuesday, 25 June 2024

09:00 **Start of 2nd Day**

09:00 **Various Corrosion Failure Mechanisms and Factors: Part II**
Rajan Ambat, Markus Meier

10:00 **Protecting Electronics from Corrosion: Intrinsic and Extrinsic Possibilities**
Rajan Ambat

11:00 **Coffee Break**

11:30 **Interactive Discussion on Collection of Corrosion Failure Case Studies**
Rajan Ambat, Markus Meier

12:30 **Lunch**

13:30 **Corrosion Protection Using Conformal Coating, Potting and Molding**
Markus Meier

14:30 **Standard Test Procedures for Corrosion in Electronics and Failure Analysis Methods**
Markus Meier

15:30 **Final Course Summary and Discussions**

16:15 **End of Tutorial**