

10th Swiss Corrosion Science Day 2026

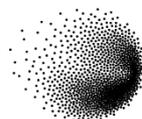
24 April 2026, 10:00 – 16:30

at the Paul Scherrer Institute PSI, Villigen, Switzerland

Organized by



Hosted by



PSI Center for Nuclear Engineering and Sciences

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Event No. 539

Endorsed by



Schweizerische Gesellschaft
für Oberflächentechnik
Société Suisse de Traitement
de Surface

On the occasion of the World Corrosion Awareness Day

Preliminary programme (as of 10 March 2026)

09:30 **Arrival & coffee/tea/gipfeli**

10:00 **Welcome & introduction of PSI NES**

Ueli Angst, *ETH Zurich, Institute for Building Materials, Zürich, CH*

Hans-Peter Seifert, *PSI Center for Nuclear Engineering & Sciences, Villigen, CH*

Morning session

Moderator: Stefan Ritter, *PSI Center for Nuclear Engineering & Sciences, Villigen, CH*

10:20 **Influence of oxygen transients on stress corrosion cracking behaviour of 316L stainless steel in PWR environment**

Tomáš Babinský, Philippe Spätig, Hans-Peter Seifert

PSI Center for Nuclear Engineering & Sciences, Villigen, CH

10:45 **In situ quantification of β -phase dissolution in Ti-6Al-4V implant material under harsh oxidative conditions**

Philip Marmet¹, Yasser Safa¹, Michel Prestat², Flavien Vucko², Roland Logé³, Haoran Yu⁴, Oumaima Gharbi⁴, Mireille Turmine⁴, Vincent Vivier⁴, Lorenz Holzer¹

1) *ZHAW Zurich University of Applied Sciences, Institute of Computational Physics, Winterthur, CH*;

2) *French Corrosion Institute, Brest, FR*; 3) *EPFL École Polytechnique Fédérale de Lausanne, CH*;

4) *Sorbonne Université CNRS, Laboratoire de Réactivité de Surface, Paris, FR*

11:10 **High-performance corrosion protection with a lower environmental footprint: The zinc flake advantage**

Guy Decelles

The Metal Powder Company, Madurai, IN

11:35 **Low temperature heat treatment processes to improve wear resistance of stainless steel components**

Shankar Venkataraman

Bodycote Specialist Technologies GmbH, Düsseldorf, DE

- 12:00 **Smart microcapsules for copper protection: An innovative approach for corrosion resistance**
Mohammed Lasri, Noureddine Idlahoussaine, Abdelhadi Louroubi, Aziz Ait-Karra, Othmane Zakir, Rachid Idouhli, Mohy Eddine Khadiri, Abdesselam Abouelfida
Cadi Ayyad University, Marrakech, MO
- 12:25 **Lunch break & poster session**
- Afternoon session**
Moderator: Anna Igual-Munoz, *EPFL École Polytechnique Fédérale de Lausanne, Tribology & Interfacial Chemistry Group, Lausanne, CH*
- 14:00 **From sensors to decisions: Are we ready for digital corrosion assessment?**
Sylvia Keßler, Martin Köhncke, Francesca Marsili
Helmut-Schmidt-University, University of the Federal Armed Forces Hamburg, DE
- 14:25 **Towards performance-oriented corrosion assessment: Improving service-life modelling of chloride-exposed reinforced-concrete structures**
Deniz Yilmaz
ETH Zürich, Institute for Building Materials, Zürich, CH
- 14:50 **On stress corrosion cracking of pipelines**
Markus Büchler
SGK Swiss Society for Corrosion Protection, Zürich, CH
- 15:15 **Effect of hydrogen on the native oxide of steel**
Chiara Menegus, Jan P. Kollender, Andreas Borgschulte, Lars P.H. Jeurgens, Claudia Cancellieri
EMPA, Dübendorf, CH
- 15:40 **Mechanistic understanding of iron corrosion in bentonite systems through a multi-technique framework: In-situ electrochemistry, operando radiography and field studies**
Pranav Vivek Kulkarni¹, Camille Le Guenic¹, Fabiana Mangano¹, Seren Azad², Anna Igual-Munoz¹, Jean-Michel Sallese³, Stefano Mischler¹
1) EPFL École Polytechnique Fédérale de Lausanne, Tribology & Interfacial Chemistry Group, Lausanne, CH; 2) PSI Centre for Neutron and Muon Sciences, Villigen, CH; 3) EPFL École Polytechnique Fédérale de Lausanne, STI GR-SCI-IEL, Lausanne, CH
- 16:05 **Coffee/tea/cookies/fruits**
- 16:30 **End**
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- 16:20 **General assembly meeting of the Swiss Corrosion Network**
(only for members of the Swiss Corrosion Network, upon invitation to be distributed)

Poster presentations (13:00 – 14:00)

Mechanisms of corrosion protection of aluminum alloys by polyetherimide coatings and nanocomposites

Joseph Cantrell¹, Sarbajit Banerjee¹, Peter Johnson², Tiffany Sill³, Victor Balcorta⁴, Sujata Singh⁴, Matt Pharr⁴, Victor Ponce⁴, Homero Castaneda⁴, Rachel Davidson⁵

1) *PSI & ETH Zurich, CH*; 2) *SABIC, Mount Vernon, IN, USA*; 3) *Dow Chemical Company Lake Jackson, TX, USA*; 4) *Texas A&M University, Tamu, TX, USA*; 5) *University of Delaware, Newark, DE, USA*

Corrosion susceptibility of heterogeneous TiO₂ surfaces

Yanik Streit, Umut Taylan, Claudia Cancellieri, Patrik Schmutz, Patrik Hoffmann, Martina Cihova
EMPA, Dübendorf, CH

Green solutions against metals corrosion

Edith Joseph

Haute Ecole Arc Conservation-Restoration, Neuchâtel, CH

Time evolution of oxide protectiveness and electrochemical behaviour of cavitation-peened Alloy 182 under LWR conditions

Annesha Das, Tomáš Babinský, Stefan Ritter, Hans-Peter Seifert

PSI Center for Nuclear Engineering & Sciences, Villigen, CH

Effect of zinc water chemistry on oxide film properties of 316L stainless steel in boiling water reactor environment

Ting Wang, Adrianna Mackiewicz, Hans-Peter Seifert, Stefan Ritter

PSI Center for Nuclear Engineering & Sciences, Villigen, CH

Toward a mechanistic understanding of trace-element influence on corrosion at the magnesium-biology interface

Maxence Hannard¹, M. Cihova¹, A. Wichser², D. Bleiner², P. Schmutz¹

1) *Laboratory for Joining Technologies and Corrosion, EMPA, Dübendorf, CH*; 2) *Laboratory for Advanced Analytical Technologies, EMPA, Dübendorf, CH*

Electrodeposition of Zn – zinc phosphate composite coatings

Mohammad Alinezhadfar^{1,2}, Patrik Schmutz³, Ueli Angst², Rowena Crockett¹

1) *EMPA, Laboratory for Surface Science and Coating Technologies, Dübendorf, CH*; 2) *ETH Zürich, Durability of Engineering Materials, Institute for Building Materials, Zürich, CH*; 3) *EMPA, Laboratory for Joining Technologies and Corrosion, Dübendorf, CH*

Venue & directions

The event will be held at Park Innovaare, close to PSI (Parkstr. 1, 5234 Villigen, in room Curie 1&2, 1st floor (<https://www.parkinnovaare.ch/en/contact>, <https://maps.app.goo.gl/6dT89mo8NZhZyZP8>).

How to find us:

BY CAR: **Via Brugg:** In Brugg, follow the signs for Koblenz-Zurzach. After the Lauffohr settlement, turn left towards Remigen/Villigen and after about 500 metres turn right towards Villigen. PSI-West and PARK INNOVAARE are about 1 km after leaving the village of Villigen on the right. Parking spaces are available (for a fee).

Via Baden: In Baden, follow the signs for Koblenz-Zurzach. Drive through Nussbaumen, Untersiggenthal and Siggenthal station. Approximately 1.5 km after the roundabout, turn left following the signs to PSI and you will reach PSI-Ost. You can reach PSI-West and PARK INNOVAARE via the Aare bridge. Parking spaces are available (for a fee).

BY PUBLIC TRANSPORT: Brugg is on the SBB railway line (Zurich-Basel, Zurich-Berne). From Brugg railway station you can use the public PostBus services. The Brugg-PSI-Böttstein-Döttingen line (376) will take you to PSI-West or PARK INNOVAARE in about 20 min.

FROM THE AIRPORT: There is an SBB railway station at Zurich-Kloten International Airport. Take the train to Brugg and from Brugg station take the post bus to Villigen PSI-West or PARK INNOVAARE.

