

10th Swiss Corrosion Science Day 2026

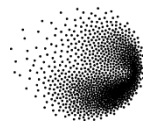
24 April 2026, 10:00 – 16:20

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

Programme

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 **Lunch break & poster session**

Afternoon session

Moderator: Anna Igual-Munoz, *EPFL École Polytechnique Fédérale de Lausanne, Tribology & Interfacial Chemistry Group, Lausanne, CH*

13:45 **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

14:10 **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

14:35 **On stress corrosion cracking of pipelines**

Markus Büchler

SGK Swiss Society for Corrosion Protection, Zürich, CH

15:00 **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

15:25 **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 Guernic¹, 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*

15:50 **Coffee/tea/cookies/fruits**

16:20 **End**

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 – 13:45)

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

Thermal zinc spraying as an anticorrosive coating for outdoor iron heritage

Julien Favre^{1,2}, Anna Igual-Munoz², Laura Brambilla¹

1) Haute Ecole Arc Conservation-Restoration, Neuchâtel, CH; 2) EPFL École Polytechnique Fédérale de Lausanne, Tribology & Interfacial Chemistry Group, Lausanne, 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. PARK INNOVAARE is about 1 km after leaving the village of Villigen on the left. Underground parking spaces are available (for a fee).

Via Baden: In Baden, follow the signs for Koblenz-Zurzach. Drive through Nussbaumen, Untersiggenthal and Siggenthal Station. Approx. 1.5 km after the roundabout, turn left following the signs to PSI and you will reach PSI-Ost. You can reach PARK INNOVAARE via the Aare bridge. Underground 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.

