

Issue December 2021

<https://www.efcweb.org>

Dear Readers,

This somewhat briefer than usual but still interesting edition of the newsletter highlights the upcoming EUROCORR and we all hope and pray, omicron variant notwithstanding, that we will be able to meet and greet one another in person once more in Berlin at the end of August.

There are also information for young corrosionists (sadly your newsletter editor, although young in heart is no longer eligible!) about two sets of grants; one is the well established grant to enable young corrosion scientists to study at another establishment for a period. The other (new grant) is to enable young people with limited financial resources to attend and present a paper at EUROCORR. The deadlines for these two grants are the same viz. 15th February 2022. Finally a note about the EFC publication series which continues in the background doing a very important part of what the EFC is all about viz gathering information together on key topic areas in book form. Your editor likes hard copies much better than virtual copies and it is good to see this 70th book in the series about tribology and corrosion being published.

At the end you will find yuletide greetings. So all I will add here, betraying my Scottish ancestry is “Ha’ a Guid New Year!”.

Douglas Mills

EFC Newsletter Editor

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A FEW WORDS FROM THE EFC PRESIDENT

To all the members of the European Federation of Corrosion

Dear colleagues and friends,

For the second year in a row, the EUROCORR had to be conducted online. The again very successful conference had numerous highlights to offer, a more detailed conference report can be found below.

We all now hope to meet again safe and sound in Berlin for EUROCORR 2022 to discuss live posters and talks, to meet friends, to expand our networks and also to explore the exciting capital Berlin. Preparations are in full swing, detailed information can be found in this newsletter.

The first travel grant for young corrosionists is presented in this issue.



In addition to the activities of the YEFC, the seventieth Green Book is presented and the two prize winners of WP4 Nuclear Corrosion are introduced.

Finally, upcoming EFC events are reported. This compact newsletter will bring you up to date on the activities of the EFC.

I take this opportunity to wish you a relaxing and healthy holiday season and I anticipate seeing you all again in what I hope will be a positive, peaceful and prosperous New Year.

Jörg Vogelsang, EFC President



BRIEF REPORT ON VIRTUAL EUROCORR 2021

ONLINE, 20-25 SEPTEMBER 2021

The 2021 EUROCORR was, as last year, a virtual event and took place from Monday 20th to Friday 24th of September. The event was co-organised by the Hungarian Corrosion Association (HUNKOR), DECHEMA and EuFed GmbH. It followed very much the same format that had been used so successfully for the first virtual EUROCORR conference held the previous year, with lectures occupying the 10am-12pm and 2pm-4pm slots and other activities like the Poster party, working party meetings etc. being fitted in at other times.

Things ran smoothly and hence congratulations must go to the organising team for the relatively glitch-free running. The conference attracted 613 participants from 48 countries with France, Germany and UK providing the greatest number of delegates. But there were also significant numbers from Spain, Netherlands, Italy, Denmark, Hungary, Switzerland and Austria. 440 lectures were delivered in 9-10 parallel zoom sessions. There were additionally 54 posters. There were six sponsors and 7 further exhibitors. The abstracts from all the papers are still available in the EUROCORR archive. As usual the 24 EFC working parties and one Task Force ran most of the sessions. But there were some special sessions and joint sessions an example of the latter being a combined session between Marine and Archaeology and Heritage Artefacts and an example of the former being Corrosion in Additive Manufacturing.

There were five plenaries which commenced each day's talks.

The European Corrosion Medal lecture was delivered in the opening session on the Monday by its recipient, Prof. Dr. Dominique Thierry from French Corrosion Institute, Brest, France and was entitled "Application of Advanced Electrochemical and Spectroscopical Techniques to study the Atmospheric Corrosion of Metals". On Tuesday the plenary was "Humidity Induced Failures and Corrosion Reliability Problems in the Electronics Industry" given by Prof Rajan Ambat from Technical University of Denmark, Lyngby, Denmark. On Wednesday Dr. Jan-Olov Nilsson from Hydro Extruded Solutions, Finspång Sweden gave "Trace Element influence of Surface Treatment and Corrosion Properties in Recycled 6xxx Aluminium Alloys". On Thursday it was the turn of Young ICorr with Dr. Maryna G. Taryba from IST, Lisbon, Portugal who delivering the young EFC proposal on "Microscale Corrosion Studies: "With Great Power comes Great Responsibility". And finally, on Friday, the Kurt Schwabe Prize lecture was delivered by its recipient Dr. Richard James Barker from University of Leeds, UK and was entitled "Engineered Corrosion Products – the Next Generation of Corrosion Control in the Energy Sector?"

This is a very brief review of this major conference. A longer write up should be available in the journal Corrosion Engineering Science and Technology in the New Year. In 2022 we are all hoping that EUROCORR 2022 will be able to be held face to face in Berlin (see details on the following pages).



UPCOMING EUROCORR 2022

BERLIN, GERMANY, 28TH AUGUST – 1ST SEPTEMBER 2022

Theme: Corrosion in a Changing World – Energy, Mobility Digitalization

INVITATION AND CALL FOR PAPERS

The EUROCORR local conference organising committee is pleased to invite you to the European Corrosion Congress 2022 which is to be held in Berlin, Germany. EUROCORR 2022 is organised by the German EFC member societies DECHEMA (Society for Chemical Engineering & Biotechnology) and GfKORR

(Society for Corrosion Protection). The flagship event of the European Federation for Corrosion will take place in the heart of Berlin at the Berlin Central District Hotel (managed by Marriott - www.hotelberlincentraldistrict.com).



Brandenburg Gate
(Copyright: visitBerlin, Foto: Wolfgang Scholvien)

EUROCORR attracts over one thousand corrosion experts from all over the world every year. The high level of scientific expertise of the participants has made EUROCORR the leading global scientific conference on corrosion research and is a permanent item on the agenda of experts from universities and industry. For young colleagues the Young EFC provides a platform to exchange ideas with expert colleagues and to become part of a unique network.

We recommend that you note the date and plan your trip to Berlin in late summer 2022.

Conference Programme

The conference programme will include plenary meetings, keynote lectures, oral and poster presentations, supported by the various EFC Working



Exterior of Reichstag building
(Copyright: visitBerlin, Foto: Artfully Media, Sven Christian Schramm)

Parties along with specific workshops. In addition to the traditional Working Party topics, the following joint sessions and workshops are planned to be organised:

Joint Sessions

- [Hydrogen Embrittlement in Atmospheric Exposure Conditions \(WP5, WP17, WP22 & WP25\)](#)
- [Atmospheric Corrosion of Cultural Heritage Artefacts and Monuments \(WP21 & WP25\)](#)
- [Polymers in Organic Coatings \(WP14 & WP19\)](#)
- Microbial Corrosion in Marine Environment (WP9 & WP10)
- Cathodic Protection in Marine Environment (WP9 & WP16)

- [Ancient Metals in Marine Environments: Corrosion Mechanisms and Protective Treatments \(WP9 & WP21\)](#)
- [Modelling Sustainable Active Protective Coatings \(WP 6, 8, 14, 22, VIPCOAT EU project\)](#)
- Corrosion in Concrete and Cathodic Protection (WP11 und WP16)
- Cathodic Protection Mechanisms - History and Stories (fkks, German Member Society)
- Wind Energy (TF + GfKORR)
- Corrosion in Chemical Process Industries (GfKORR)
- [Corrosion Issues of Electric Vehicles and E-Mobility Systems \(WP17 & WP23\)](#)
- [Corrosion and Scale Inhibition in Geothermal Energy Technologies \(WP1 & TF\)](#)
- Digitalisation (Automation, Data Acquisition, Process Control)

Workshops

- [Corrosion of Medical Implants and Devices](#)
- [Corrosion in Green & Low Carbon Energy Technologies \(TF\)](#)

The Call for Papers is open!

Deadline for abstract submission:

14 January 2022

Exhibition and sponsorship

Sponsoring & exhibition is an integral part of EUROCORR 2022 and offers a unique opportunity to promote your technologies, products and services.

Enhance your visibility, introduce new products or services. EUROCORR 2022 provides a various range of sponsorship and exhibition options that can be tailored to your requirements and to suit your budget. Extensive pre-conference publicity will promote your organisation to the widest possible audience.

[EUROCORR 2022 Sponsoring Offers for Download](#)

Gold Sponsor:

VDM Metals

A company of ACERINOX

We are looking forward to your contribution and participation at EUROCORR 2021!

Organiser & contacts

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DECHEMA



EFC LAUNCHES EUROCORR TRAVEL GRANT

The Federation calls for applications for the EUROCORR Travel Grant for 2022

The Grant provides financial support to young corrosionists to facilitate their participation in the EUROCORR conference. It is intended for students from countries or organisations where they encounter difficulties to travel to the venue of EUROCORR because of financial constraints. The Grant selection is made based on brief proposals submitted. The Grant will be presented at the annual EUROCORR conferences and on the EFC website.

The conditions of eligibility to the Grant competition are as follow:

1. the applicant is not older than 30 years on the 1st of September of the year the Grant is awarded,
2. the applicant is a student (including doctoral) and works on a project that is about or related to corrosion science, engineering or awareness,
3. the applicant participates in the EUROCORR conference taking place the year when the Grant is awarded, and
4. the applicant has submitted an abstract for the respective EUROCORR conference.

Submission deadline: **15 February 2022**

For further information, please visit the Grant website at: <https://efcweb.org/TravelGrant.html>

EUROCORR 2022 - INFORMATION FOR EXHIBITORS

SPECIAL OFFER: EXHIBITION BOOTH & EFC AFFILIATE MEMBERSHIP

Take the opportunity to discover the EFC Affiliate Membership benefits and enjoy all advantages related to international visibility!

EUROCORR 2022 exhibitors are offered a package including the EFC Affiliate Membership and the Exhibition Booth at a discounted price:

- 25% on the booth (e.g. for a standard booth of 6m² (*Stand package 1*): €2,320 instead of €2,900)
- 16% on the Affiliate Membership for 2022 (for companies: €1,300 instead of €1,550)

(All prices excl. VAT)

The offer is available until **28 February 2022**.

This is how the EFC Affiliate Membership will benefit you:

The EFC Affiliate Membership is targeted to companies, research laboratories and universities seeking increased international visibility, and includes the following benefits:

- Discount on EFC booth at EUROCORR Exhibition
- Events included in EFC Calendar
- Write-ups of events and case studies in EFC Newsletter (subject to EFC approval)
- Logo and link on EFC website and in EFC Newsletter
- Events with EFC endorsement and logo (subject to EFC approval)

Anybody belonging to an EFC Affiliate Member scheme also benefits from EFC advantages such as:

- discount on EUROCORR registration fee,
- discount on EFC publications (including the 'Green books' series),
- guaranteed free access to the EFC Working Parties.

Register now!

To get more information and the application forms: Contact EFC at offices@efcweb.org, or the local organiser for EUROCORR 2022 at eurocorr@dechema.de.

You will also find practical information and the application form on the EFC website at https://efcweb.org/Special_Offer.html

EFC YOUNG SCIENTIST GRANT 2022 - CALL FOR APPLICATIONS

The Federation is pleased to announce the call for applications for its prestigious Young Scientist Grant which will be presented for the seventh time during EUROCORR 2022. The grant will provide financial support to junior corrosionists to enable them to visit and interact with other corrosionists at their respective institutes and to discuss research issues of mutual concern relevant to the field.

Thanks to a donation of the Chinese Society for Corrosion and Protection (CSCP), the grant will be augmented to 4 grants of up to 1,500€ or 3 grants of up to 2,000€; further, the CSCP will grant direct support to one recipient out of the 3 or 4 awarded, if collaboration includes travelling between China and Europe, if possible.

The Deadline for submission of applications is **15 February 2022**.

Further information and the application form are available on the EFC website at <https://efcweb.org/YSG.html>

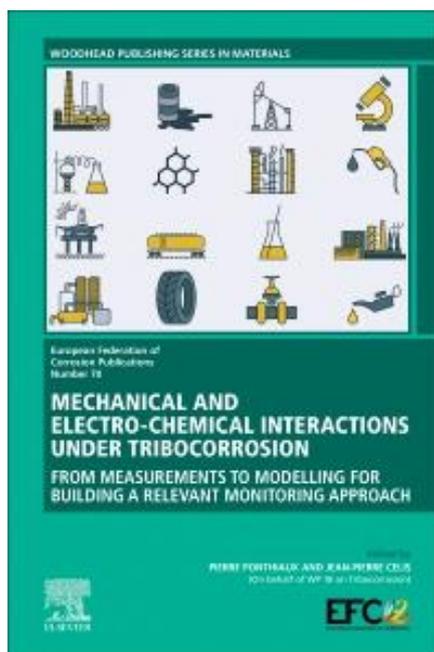
ADDITION TO THE EFC PUBLICATIONS SERIES

The EFC publications series, published for the EFC by Woodhead Publishing on behalf of the Institute of the Materials, Minerals and Mining (IOM3), includes a series of state-of-the-art reviews, covering a wide range of topics, including microbial effects, reinforcement in concrete, automotive engineering and the oil, gas, petrochemical and nuclear industries.

View the complete series at: <https://www.elsevier.com/books/book-series/european-federation-of-corrosion-efc-series>

MECHANICAL AND ELECTRO-CHEMICAL INTERACTIONS UNDER TRIBOCORROSION FROM MEASUREMENTS TO MODELLING FOR BUILDING A RELEVANT MONITORING APPROACH (EFC 70)

Edited by Pierre Ponthiaux and Jean-Pierre Celis



The publication 'Mechanical and Electro-chemical Interactions under Tribocorrosion: From Measurements to Modelling for Building a Relevant Monitoring Approach' looks at progress in the field of tribocorrosion.

Final sections cover strategies to control and/or extend the life of structures in a multi-process coupling situation and an in-depth description of the current state-of-the-art on modelling approaches of tribocorrosion.

Key Features

- Reviews the multidisciplinary basics of tribocorrosion;
- Includes insights into novel experimental approaches;
- Provides insights into advanced modelling techniques of tribocorrosion;
- Looks at the implication of results in the development of the monitoring of tribocorrosion.

Hardcover ISBN: 9780128237656 / eBook ISBN: 9780128237663

278 pp, Woodhead Publishing 2021, 1st Edition - August 22, 2021

For more details or to order online visit: <https://www.elsevier.com/books/mechanical-and-electro-chemical-interactions-under-tribocorrosion/ponthiaux/978-0-12-823765-6>

The work is a result of the efforts of the European tribocorrosion community gathered under the auspices of the European Corrosion Federation (EFC) within WP18 Tribocorrosion.

In addition to the handbook, Testing Tribocorrosion of Passivating Materials Supporting Research and industrial Innovation published in 2012, this release describes the latest scientific approaches recognized and validated experimentally to address tribocorrosion. Sections look at the phenomena of coupling through an understanding of the associated mechanisms and how to identify variables.

NEWS FROM EFC WORKING PARTY 4 “NUCLEAR CORROSION”

Although this year’s EUROCORR had to take place again online (due to the well-known reason), we nevertheless can look back to a very interesting nuclear corrosion session. 25 talks and three posters have been presented during the regular session and most talks were followed by a lively Q&A discussion. The session started with fuel cladding and Generation IV corrosion issues and continued with a number of talks on environmentally-assisted cracking. The focus then switched towards corrosion topics in fuel reprocessing and nuclear waste disposal systems.

WP 4 prizes awarded during EUROCORR 2021

The prize for the best talk of a young presenter during the 2021 nuclear corrosion session has been awarded to **Rachma Azihari**, CEA Saclay, France (see photo, left to right: Laure Martinelli (WP4 Vice-Chair), Rachma Azihari) for the presentation titled ‘Experimental characterization and modelling of intergranular fracture of unirradiated and irradiated pre-oxidized austenitic stainless steels’; co-authors: Jérémy Hure, Benoît Tanguy (both CEA Saclay, France), Marc Legros (CEMES-CNRS, France).



The prize for the best nuclear corrosion-related poster presentation has been awarded to **Adrianna Mackiewicz**, Paul Scherrer Institute, Switzerland (see photo, left to right: Stefan Ritter (WP4 Chair), Adrianna Mackiewicz) for the poster ‘Zinc injection in light water reactors to mitigate stress corrosion cracking of Alloy 182 and cold-worked type 316L stainless steel’; co-authors: Stefan Ritter, Kai Chen, Hans-Peter Seifert (all PSI, Switzerland), Sannakaisa Virtanen (University of Erlangen-Nuremberg, Germany).

CONGRATULATIONS to both winners!

The sponsorship of the prizes (EFC Green Book No.69 ‘Nuclear Corrosion: Research, Progress and Challenges’) by Elsevier is gratefully acknowledged!

Please note that during EUROCORR 2022 both prizes will be awarded again! The prize rules can be found on the EFC WP4 website.



Working Party website: www.efcweb.org/WP4.html



Int. Workshop on Long-Term Prediction of Corrosion Damage in Nuclear Waste Systems (LTC 2022)

Next year, on June 22 to 24, the 8th International Workshop on Long-Term Prediction of Corrosion Damage in Nuclear Waste Systems (LTC 2022) will be held in Baden (Switzerland). This workshop (EFC Event No. 480) is co-organised by WP4 together with the Swiss National Cooperative for the Disposal of Radioactive Waste (Nagra).

Abstract submission is open now! Deadline: 17 January 2022

More information is available on the web: www.ltc2022.ch.

FUTURE EUROCORR – THE EUROPEAN CORROSION CONGRESS



Each year EUROCORR attracts over one thousand corrosion experts from all over the world. The high level of scientific expertise of the participants has made EUROCORR a permanent fixture on the agenda of experts from universities and industry. For young colleagues the Young EFC provides a platform to exchange ideas with expert colleagues and to become part of a unique network.

EUROCORR 2023 27- 31 August 2023, Brussels, Belgium

Topic: Closing the gap between industry and academia in corrosion science and prediction

Brussels will become the Capital of Corrosion in 2023, with the EFC's annual congress EUROCORR, Europe's most renowned corrosion event.
Venue: SQUARE – BRUSSELS MEETING CENTRE

Website: www.eurocorr2023.org



EUROCORR 2024

Paris, France, 1-5 September 2024

EUROCORR 2024 will be organised by CEFRACOR in cooperation with Chimie ParisTech.

Venue: PARIS Congress Center

Organised by:



FORTHCOMING EFC EVENTS 2022



Please check the respective event websites for postponements!

EFC Event No. 466

Frankfurt am Main, Germany, 4-8 April 2022 (NEW DATE!)

ACHEMA 2022

Scope: Future production: modular, connected and smart; Industrial intelligence and sensor-based process control; Plant design and maintenance; Pumps, compressors, valves and fittings: state of the art in fluid handling; Innovative mixing and separation solutions; Bioprocessing: bioreactors, process development and control; Pharma meets production; Renewing the chemical & pharma supply chain; Materials and material processing; Additive manufacturing; Innovative product design in mechanical process engineering; The digital lab: laboratory and analytical techniques; Raw materials; Water technologies; Future energy use in process industries; Product and process security; Safety First!
<https://www.achema.de/>

EFC Event No. 475

Val di Fiemme, Trentino, Italy, 29 March – 1 April 2022

Application of Electrochemical Techniques to Organic Coatings – AETOC 2022

Scope: AETOC workshop is covering all the topics related to recent developments in the application of electrochemical techniques to the study and monitoring organic coatings.
<https://event.unitn.it/aetoc2022/>

EFC Event No. 477

Chengdu, PR China, 27-30 May 2022,

2022 International Conference on Corrosion Protection and Application (ICCPA2022)

Organised by Chongqing Wujiu Periodicals Press, Affiliate membership of EFC

Conference language: English and Chinese (simultaneous translation available)

Scope: 1. Corrosion protection in oil & gas industry; 2. Corrosion protection in marine environments; 3. Corrosion protection in aerospace industry; 4. Corrosion protection in nuclear power generation; 5. Corrosion testing and monitoring

<https://iccpa2022.scimeeting.cn/en/web/index/>

EFC Event No. 480

Baden, Switzerland, 22-24 June 2022

8th International Workshop on Long-Term Prediction of Corrosion Damage in Nuclear Waste Systems (LTC 2022)

Co-organised by EFC WP4 on Nuclear Corrosion together with the Swiss National Cooperative for the Disposal of Radioactive Waste (Nagra).

Scope: Overview on national disposal programmes with emphasis on similarities, common challenges and different approaches, regulatory issues, retrievability, etc. Development of and long term performance assessment of high-level waste disposal containers. Experimentation with candidate materials, including laboratory tests, full-scale demonstration, in-situ testing, methodology. Modelling, monitoring and design.

<https://www.ltc2022.ch>

EFC Event No. 455

Antibes Juan-les-Pins, France, 14-16 June 2022 (NEW DATE!)

7^{èmes} Journées Protection Cathodique et Revêtements Associés

Organised by CEFRACOR.

Scope: This event on cathodic protection and associated coatings is devoted to end users as well as suppliers of equipment, designers, service companies, authorities, laboratories, universities and research centres.

An exhibition will complete this event.
<https://www.cefracor.org/en/7emes-journees-protection-cathodique-et-revetements-associes-reportees-2022>

For full details of these and a complete listing of many other future corrosion events held in Europe and throughout the world, go to the EFC Calendar of Events at: <http://www.efcweb.org/Events.html>



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The statements and opinions expressed in the e-newsletter are those of the contributors; the EFC assumes no responsibility for them.

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