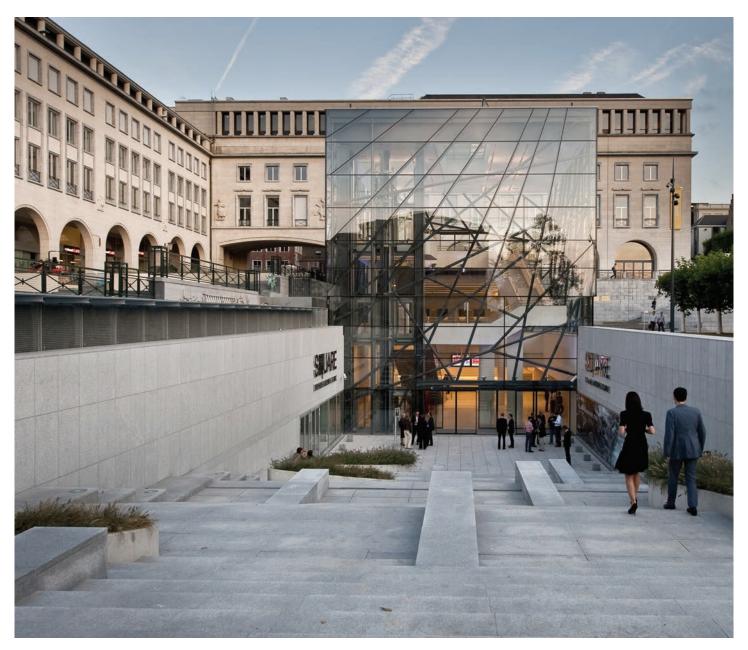


EFC Newsletter

FÉDÉRATION EUROPÉENNE DE LA CORROSION • EUROPEAN FEDERATION OF CORROSION • EUROPÄISCHE FÖDERATION KORROSION



Focus on EFC Membership p.12
Recent EFC sponsored events p.24

EUROCORR 2020 BRUSSELS, BELGIUM 6 - 10 SEPTEMBER 2020



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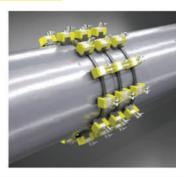


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A few words from the EFC President

Dear colleagues and friends,

It is a great pleasure and honour to write to you as President of the EFC, a thriving and professional organisation which is making a major international impact on reducing the economic and societal impact of corrosion. The



Arjan Mol 12th EFC President (2019-2020)

increasing number and geographical diversity of new organisations joining the EFC demonstrates the global respect and prestige of this organisation. Hence, the EFC aims to grow and expand its technical-scientific leadership in Europe and beyond. For example, the EFC is co-organizing the First International Conference on Corrosion Protection and Application ICCPA - EFC China 2019 in Chongqing China during 9-12 October 2019. It will be a great pleasure to collaborate with the Chinese corrosion community in assessing, discussing and facing a time of larger global corrosion challenges such as the application of metals to more extreme conditions, stricter health and safety legislation and energy transition, to name but a few. The world of corrosion science and engineering is an exciting arena and we are committed to continue to bring together inspired people in forums like this, to ensure our corrosion communities remain connected and at the cutting edge on a global scale.

The EFC flagship event, the EUROCORR congress, has been continuously growing and presently attracts well over a thousand delegates from more than sixty countries. EUROCORR is undoubtedly the highlight of the yearly agenda of corrosion and corrosion related events so please save the dates of **September 6-10, 2020** during which **EUROCORR 2020** will take place in the beating heart of Europe, **Brussels, Belgium**.

The EFC also aims at attracting more young people, representing our future corrosion community, to the EFC activities. With this in mind, the EFC strongly supports the activities initiated by the "Young EFC" network - a team of young, dynamic and motivated professionals that will strengthen the knowledge-based junior community within the EFC. Further, the EFC has implemented the EUROCORR Young Scientist Grant that contributes to the strengthening of their research careers internationally. I encourage young researchers to use EUROCORR 2019 as a networking event to find complementary partners, to establish joint research activities and to present their collaborative research results. As President of the EFC, I wish to express my gratitude to all the Member Societies and Affiliate Members for contributing to our activities and for strengthening the EFC as a reference in the corrosion field. Thank you for your support! The EFC can also support you to a large extent.

I cannot finish this letter without addressing the extraordinary support of all those that have the EFC at heart and provide their precious time and constructive ideas to build and strengthen the EFC. These include the past EFC President Damien Féron and the current Vice-President Joerg Vogelsang, the members of the Science and Technology Advisory Committee (STAC), particularly the STAC Chairman Wolfram Fürbeth, and the Board of Administrators for their commitment in strengthening the scientific and strategic EFC activities. I also want to give a word of deep appreciation to the high-level professional people at the EFC secretariats in Paris, London and Frankfurt am Main, who handle the EFC daily issues.

All in all, I am looking forward to some great, fruitful and successful years ahead for the EFC and I am honoured to have this opportunity to serve as your President. Thank you very much.

Sincerely yours,

Arjan Mol, EFC President







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EUROCORR 2020 6 - 10 SEPTEMBER 2020

EFC Newsletter N°27 - September 2019



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3

Brussels will become the capital of corrosion in 2020, with the EFC's annual congress EUROCORR, Europe's most renowned corrosion event.

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

EUROCORR 2020 BRUSSELS, BELGIUM 6-10 September 2020

he organisers, VOM asbl in collaboration with the University of Mons (UMONS), the Vrije Universiteit Brussel (VUB), Materia Nova and DECHEMA, are pleased to invite you the EUROCORR 2020 congress.

The academic world is rather specialized in studying degradation mechanisms with highly advanced tools, whereas industry is looking for support and solutions for corrosion and materials degradation problems. The congress will aim at reducing the gap between the academic world and industry, especially in the field of corrosion predictions by advanced measuring, modelling and monitoring. Also in 2020, EUROCORR will focus on the new generation of corrosion scientists and engineers. Indeed, the young scientists will have the floor throughout the congress.

Brussels is glad to welcome EUROCORR's delegates. Close to the Grand-Place, the historic heart of Brussels, EUROCORR will give you the opportunity to discover the charming historical city centre surrounded by Gothic Art, Modern Art and Art-nouveau architecture that colours the city.

With more than 1000 delegates expected, the aim of the congress is to provide opportunities to create contacts from all countries, to facilitate networking and to exchange knowledge and the latest findings between scientists, academics, researchers, students and industry related to corrosion.



















Topics

- Corrosion and Scale Inhibition (WP1)
- Corrosion by Hot Gases and Combustion Products (WP3)
- Nuclear Corrosion (WP4)
- Environment Sensitive Fracture (WP5)
- Corrosion Mechanisms, Electrochemical Methods in Corrosion Research and Modelling of Corrosion Processes (WP6 & WP8)
- Corrosion Education (WP7)
- Marine Corrosion (WP9)
- Microbial Corrosion (WP10)
- Corrosion of Steel in Concrete (WP11)
- Corrosion in Oil and Gas Production (WP13)
- Coatings (WP14)
- Corrosion in Refinery and Petrochemistry (WP15)
- Cathodic Protection (WP16)
- Automotive Corrosion (WP17)
- Tribo-Corrosion (WP18)
- Corrosion of Polymer Materials (WP19)
- Corrosion and Corrosion Protection of Drinking Water Systems (WP20)
- Corrosion of Archaeological and Historical Artefacts (WP21)
- Corrosion Control in Aerospace (WP22)
- Corrosion Reliability of Electronics (WP23)
- CO₂ Corrosion in CCS Applications (TF CO₂)
- Atmospheric Corrosion (TF)
- Advances in New Corrosion Protection Methods
- EUROCORR Young Scientist Session
- Corrosion in Additive Manufacturing

IMPORTANT DATES

Call for abstracts – on-line forms opening: **OCTOBER 2019**

Registration on-line opening: **OCTOBER 2019**

Abstract Submission: 15 JANUARY 2020

Notification of acceptance to authors: **30 APRIL 2020**

Submission of full papers: **17 JUNE 2020**

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EFC AWARDS



EUROPEAN CORROSION MEDALLIST PROFESSOR FÁTIMA MONTEMOR

aria de Fátima Grilo da Costa Montemor graduated in Chemical Engineering at the school of engineering (Instituto Superior Técnico, IST) of the Technical University of Lisbon in 1989 and obtained her Ph.D. from the same university in 1995. She remained at this institution to work as a postdoctoral fellow in the Chemical Engineering Department (1996 – 2000),

subsequently becoming a researcher (2000 – 2011), Assistant Professor (2011 – 2015) and Associate Professor (2015 – 2017). She is now Full Professor.

Her research is focused on new surface functionalization strategies and the development of novel coatings for corrosion protection of metallic parts for application in the transportation sector, construction and energy production systems. She has contributed widely to the development of new coatings for corrosion protection of different metallic substrates. Her works are often cited as references for the development of new technologies in the field of sol-gel coatings, self-healing and multifunctional coatings and inhibitor mechanisms. She and her colleagues have widely contributed to the understanding of corrosion mechanisms by the use of the electrochemical techniques such as EIS and combined localized techniques (SVET/SIET).

From 2009-2016, Fátima was deputy director for International Affairs of Instituto Superior Técnico. She has been Chair of the Board of Administrators of Innoenergy Iberia s.a. (2015 – 17), Vice President of the European Federation of Corrosion (EFC, 2014 – 15) and President of the EFC (2015 -16). Fátima has been a major proponent of the EFC, including organising two highly successful EUROCORRS in Lisbon (2005) and in Estoril, Portugal (2013).

Prof Fátima Montemor is co-founder of the spin-off company "Charge2C-NewCap" which develops new solutions for energy storage in the field of asymmetric super-capacitors. She has been involved in the creation of the Portuguese Cluster VG Energy Storage in collaboration with top national partners.

She is now the Vice President for Academic Affairs of Instituto Superior Técnico. She works as evaluator for the European Commission and is a permanent member of TGS5 "Research Fund for Coal and Steel".

The European Corrosion Medal award ceremony will take place during the Opening Session of EUROCORR 2019 in Seville, Spain, on 9th September 2019.

HONORARY FELLOWSHIPS 2019 HONORARY FELLOW OF THE EFC DR ULF KIVISÄKK



If Kivisäkk studied for an M.Sc in Materials Engineering from the Royal Institute of Technology (KTH) from 1988 to 1994, Teknologie Licentiat in Corrosion Science from 2002 to 2003 and received his PhD in Corrosion Science from the same institution in 2010. He has worked as a Researcher at the Swedish Corrosion Institute (1994 – 1998) and in various positions at AB Sandvik Materials Technology since 1998. He is presently Senior Expert on Corrosion Resistant Alloys.

His research activities are focused on corrosion prevention and control of stainless steels in various environments including seawaters, natural environments and industrial environments for various applications, e.g. energy production (including oil and gas), storage and transport facilities and corrosion monitoring systems. Dr Kivisäkk is a recognized expert in his field and has been involved for more than 30 years in corrosion of stainless steels at international levels, leading research programs, applications of stainless, steels and corrosion failure analyses. During his career and after, he has been committed to the dissemination of knowledge and good practices for stainless steels to ensure corrosion control, durability and safety of the equipment. He was recipient of the 2017 Paul McIntyre Award from the Institute of Corrosion, UK.

Dr Ulf Kivisäkk has been the chairman of the EFC Working Party on Marine Corrosion (WP9) for 13 years (2004 – 2017), during which time he significantly promoted the Working Party by editing EFC «green» books, by increasing attendance levels at the EUROCORR Marine Corrosion sessions and by proposing joint sessions between several WPs.

His key positions in the development of ISO standards have also increased the international influence of EFC. He has occupied positions such as project leader, nominated Swedish expert, secretary, chair, vice chair and member, in the following committees: ISO 15156 Maintenance Panel, ISO TC 67 WG 7, ISO 15156 and ISO TC 67 WG 8. He has also provided a link between the EFC and NACE (TG 299).

Dr Ulf Kivisäkk has clearly made outstanding accomplishments in the areas of corrosion science and engineering along with outstanding commitments to the EFC in support of its mission and activities.

The Honorary Fellow award ceremony will take place during the Opening Session of EUROCORR 2019 in Seville, Spain, on 9th September 2019.



HONORARY FELLOW OF THE EFC MARCEL ROCHE

arcel Roche has received degrees in Chemical Engineering (INSA-Lyon, 1967) and Refining and Chemical Engineering (ENSPM, 1968). He worked as a corrosion engineer at Technip Engineering and then at the Société Nationale Elf Aquitaine (SNEA(P)) for a total of 17 years before becoming Head of Inspection at the Corrosion-Treatments Department of Elf Gabon, Port-Gentil in 1987. He has since been Head of the Corrosion Department at Elf Aquitaine Group and in the Technology Division of Total, where he functioned as Corrosion Expert until his retirement in July 2008.

Marcel has been a founding member of the Conseil Français de la Protection Cathodique within the French corrosion society CEFRACOR (Centre Français de l'Anticorrosion). He is past Chairman of the Cathodic Protection and Associated Coatings Committee of CEFRACOR and organiser of the CEFRACOR Aix-en-Provence Seminars in 1999, 2003, 2006 and 2011. He was also Chairman of A05L, the Cathodic Protection Standardization Committee of AFNOR (Association Française de Normalisation) until 2013 and subsequently coordinator of the Cathodic Protection topics in the new Standardization Committee A05G - Corrosion and protection of metallic materials – Metallic and inorganic coatings.

He has been involved in the EFC from the beginning as the first chair of Working Party 16 on Cathodic Protection. He is a Member of the Board of Administrators of the EFC, and on the board of CEFRACOR since 2016.

Marcel Roche also played a key role in the development of the European standard on the competence levels and certification of cathodic protection personnel (EN 15257). He is a member of NACE International, ISO TC156 WG10, CEN TC219 WG1 for Land applications and WG3 for Marine applications, ISO TC67 SC2 WG11 for Pipelines. He was Project Leader of the standardization working group for pipeline field joint coatings (ISO TC67 SC2 WG14-3) from its inauguration in 2002 until 2015. He was convenor of CEN TC WG3 "Cathodic Protection of metallic structures in sea water" until 2015.

During his career and after, Marcel Roche has been committed to the dissemination of knowledge and good practice in the field of cathodic protection to ensure corrosion control, durability of the structures and the safety of users. He has been involved in numerous corrosion training courses, has organised and presented at a large number of conferences and meetings in his field. He has been dedicated to cathodic protection, taking many initiatives to develop new projects involving the best experts in the field, while including the younger generations.

The Honory Fellow award ceremony will take place during the Opening Session of EUROCORR 2019 in Seville, Spain, on 9th September 2019.

HONORARY FELLOW OF THE EFC DR LIANE MARGARET SMITH

iane Smith received her MA in Physical Sciences from the University of Cambridge in 1981 and her PhD in Laser Welding from the University of Sheffield in 1984. Her research interests and activities include materials selection for use in oil and gas production systems; high-strength materials performance in aggressive environments; integrity management (especially in oil and gas production wells); the design and execution of a digital expert system for materials selection and corrosion performance. She has also been active in facilitating knowledge transfer from university-based research into both small enterprises and major engineering projects.



After working with the Shell Petroleum Corporation in the UK and the Netherlands (1981 – 91), Liane founded Intetech Ltd., a small UK-based materials and corrosion consultancy which grew from one employee in 2004 to 28 employees in 2013. When Intetech Ltd. was acquired by Wood Group in May 2013, she became responsible for the management and development of the international Wood Group activities in the fields of well integrity management, materials and corrosion engineering, asset integrity engineering software products and risk engineering. In 2018, she founded a consultancy, innovation support and litigation company for digital transformation in corrosion and materials engineering design and operations.

Dr Liane Smith also has a long history of active participation in the technical activities of the EFC, the Institute of Materials, Minerals and Mining (UK) and NACE (USA). She was founding Chair of the EFC Working Party 13 on Corrosion in oil and gas production, quickly establishing four working groups addressing sour service limitations of CRAs, SSC of carbon and low alloy steels, stepwise cracking of carbon and low alloy steels, and MIC in oil and gas production. A fifth working group on Inhibition of CO_2 corrosion followed shortly afterwards and WP 13 rapidly grew to become the largest in the EFC with over 200 members. Liane's technical insight and management acumen quaranteed the continuing international standing and success of WP 13.

She has previously been made an Honorary Life Fellow of the Institute of Corrosion (2001); Fellow of the Welding Institute (2005); Fellow of the Institute of Materials, Minerals and Mining (2009); Fellow of NACE (2009) and Fellow of the Royal Academy of Engineering, UK (2011). In 2012 she received the Queens Award for Innovation.

The Honorary Fellow award ceremony will take place during the Opening Session of EUROCORR 2019 in Seville, Spain, on 9th September 2019.

EUROCORR 2019 YOUNG SCIENTIST GRANT WINNERS

Further information on the EUROCORR Young Scientist Grant can be found on the EFC website under the pages "EFC Awards", including the Rules of the grant (flash QR code for direct access or follow the link.

http://efcweb.org/YSG



THE EUROCORR YOUNG SCIENTIST GRANT WILL BE AWARDED FOR THE FOURTH TIME AT EUROCORR 2019 IN SEVILLE.

The objective of this grant, introduced by the EFC in 2016, is to stimulate interaction and collaboration within the international corrosion community, by providing financial support to junior corrosion scientists/engineers to enable them to visit and interact with other corrosion specialists at their home institute abroad.

Each year a maximum of three EUROCORR Young Scientist Grants, up to a maximum of $\[\in \]$ 1,500 each, are awarded. This year, in the frame of the partnership between EFC and the Chinese Society for Corrosion and Protection (CSCP), a donation from CSCP allows an additional grant of $\[\in \]$ 1,500 to be awarded; further, CSCP will grant a direct support of $\[\in \]$ 3,000 to Mr Di Mei whose collaboration includes travelling between China and Europe.

This year the grant will enable:

- ▶ Mrs Leila Es Sebar, Politecnico di Torino (Italy) to visit Prof Philippe Marcus, CNRS-Chimie ParisTech-PSL University (France) to work on "Investigation of surface reactivity and corrosion mechanisms of Cu based alloys".
- Mrs Yue Guo, University of Manchester (UK) to visit Dr Marta Mohedano, Complutense University of Madrid (Spain) to work on "Multifunctional layered double hydroxide (LDH) plasma electrolytic oxidation (PEO) coatings on magnesium alloys for biomedical applications".
- ▶ Mr Di Mei, Helmholtz Zentrum Geesthacht/ Univeristy of Kiel (Germany) to visit Prof Tao Zhang, Northeastern University (China) to work on "Eco-friendly Conversion Coating on Magnesium Alloy and Its Combination with Corrosion Inhibitors".
- Mrs Anke Silvia, Ulrich, DECHEMA-Forschungsinstitut (Germany) to visit Dr Alexander Knowles, University of Birmingham (UK) to work on "Transmission electron microscopy (TEM) investigations of oxide scales formed on Cr-rich high temperature alloys".

These recipients will be presented with their awards at EUROCORR 2019

EUROCORR 2018 YOUNG SCIENTIST GRANT REPORT

Assessment of microbial corrosion in marine and hypersaline environment

EUROCORR 2018 Young Scientist Grant - Abstract for EFC Newsletter

Work carried out by **Leonardo lannucci** and hosted by Dr. Régine Basséguy at LGC, Université de Toulouse-CNRS (Toulouse, France) between mid-September 2017 and mid-April 2018

Numerous salts in marine and hypersaline environments lead to complex corrosion mechanisms. In this study, AISI 304 and AISI 316 stainless steels were tested by open circuit potential, electrochemical impedance spectroscopy and cyclic voltammetry in a hypersaline mix of chloride phosphates and sulphates inoculated with salt marsh sediments to simulate a real environment. Solution absorbance, pH and dissolved oxygen measurements indicated that microorganisms could completely consume the dissolved oxygen to generate less aggressive, fully anaerobic conditions that preserve the passive layers. Metastable pitting was observed by electrochemical measurements and scanning electron microscopy (SEM). An imaging algorithm was developed to examine the effects of microbial corrosion and provide information on biofilm coverage and dimensional surface distribution of bacterial aggregates. These data, coupled with the electrochemical measurements, could provide a deeper insight into the microbial corrosion behaviour of metals and alloys.







Materials Science Department The specialist in multi-purpose coatings and sensors

56, rue de l'Epargne - B-7000 Mons, Belgium Tel.: +32 (0)65 37 44 31 marjorie.olivier@umons.ac.be



The Materials Science Department, which is a mixed Unit of the Faculty of Engineering of the University of Mons (UMONS) and the Materia Nova Research Centre, employs around forty staff and takes part in thirty or so financed projects.

Every year, the Materials Science Department publishes over 15 articles referenced in peerreviewed papers, makes over 20 presentations at international conferences, and supervises 13 doctoral theses.

The Materials Science Department structures its research work based on 4 themes: surface treatment and electrochemical characterisation of multi-purpose coatings, the design and development of sensors, the synthesis and characterisation of functional ceramics and, lastly, dye-sensitised solar cells. Over 10 years, the Materials Science Department has acquired recognised skills in corrosion science, the synthesis of materials and of sol-gel surface coatings for replacing hexavalent chromium-based coatings, particularly in the aerospace sector. Having become an expert in selecting corrosion inhibitors and using electrochemical techniques, the Materials Science Department has developed new conversion treatments, anodizing layers as well as adhesion promoters that are environmentally friendly. It has also specialised in the development of coatings that protect, are self-healing, anti-bacterial, do not leave finger marks, and are durable. Moreover, the Materials Science Department has made a name for itself in the development of chemical sensors using semi-conductor materials or based on fibre optics featuring sensitive layers that are reactive to the environment. These sensors enable detection of the pH, analytes present in the solutions, polluting atmospheric gases and gases to be found in homes, gas leaks, releases of smoke indicative of fires, etc.

The Materials Science Department is active at the European level with five research projects. It also works with numerous companies.

Being careful to promote its works, the Materials Science Department strives to develop increasingly "green" technologies, coatings that have ever greater functionalities, and sensors that are increasingly miniaturised and sensitive within very low concentration ranges and that are hyper-selective in terms of their detection mode. These are all promising avenues for the future!

FOCUS ON EFC MEMBERSHIP

During my years of service as Managing Officer EFC, I have noticed an increasing wish for more information on the different categories of membership offered by the EFC. In this article, I hope to clarify the EFC membership as well as the benefits provided to member organisations and to individuals belonging to these organisations.

MEMBER SOCIETIES AND AFFILIATE MEMBERS

The EFC is a federation of national non-profit organisations in Europe and beyond with interests in corrosion. Those organisations, joining the EFC as Member Societies, are supporting the aims of the federation which are to advance the science of corrosion and protection of materials by promoting cooperation in Europe and collaboration internationally.

The one and only distinction between European (meaning located in a country member of the Council of Europe) and International Member Societies is that only European Member Societies can host EUROCORR.

In 2009, the EFC has created an additional category of membership, called Affiliate Membership. Affiliate Membership is available to companies, universities and research organisations supporting the aims of the EFC. Its aim is to better involve those organisations into the activities of EFC, and to provide them with services tailored to their needs.

BENEFITS OF EFC MEMBERSHIPS

Joining the EFC means joining a network of more than 25000 engineers and scientists with corrosion interests, in Europe and worldwide. EFC is highly regarded for its high technical and scientific competences, and one of the most significant services provided by the EFC to the corrosion community worldwide is the platform of collaboration formed by the 21 EFC Working Parties, devoted to various aspects of corrosion and its prevention. The EFC accomplishes its most important activities through its working parties, including the organisation of technical sessions at EUROCORR, courses, events, collaborative research, as well as various publications such as guidelines, draft standards, and the highly regarded EFC series of "green books".

Other aspects of the benefits of EFC membership are related to increased international visibility for Members' events and activities, opportunities of business networking for its corporate Members, and of course, discounts on EFC events and publications available to individuals.

Young corrosionists also have their dedicated network, whose aim is to support their academic or industrial career. All of these benefits and some more are detailed in the 2 tables below: one listing the advantages available to member organisations (Member Societies and Affiliate Members), and the other listing advantages available to individual members of these organisations.

Table 1 - Advantages available to Member organisations

	Member Society	Affiliate Member
Eligibility to host EUROCORR (only in Europe)	Х	
Appointment of members to EFC Working Parties	Х	
Nomination of candidates for Administrative Bodies and Awards	Х	
Free membership of Word Corrosion Organisation (WCO)	X ¹	
Discount on booth at EUROCORR Exhibition	Х	Х
Priority for choosing booth location at EUROCORR Exhibition		Х
Events included in EFC Calendar	Х	Х
Publication of events and case-studies in EFC Newsletter	Х	X ¹
Reduced rates on advertising in EFC Newsletter		Х
Logo and link on EFC website and in EFC Newsletter	Х	Х
Courses and events with EFC endorsement and logo	x ¹	x ¹

¹ Subject to approval

Table 2 - Advantages available to individuals belonging to Member organisations

	Member Society	Affiliate Member
Access to EFC Working Parties for free is guaranteed	Х	Х
Access to past EUROCORR Procededings	Х	X
Eligibility for EFC Administrative Bodies and Awards	х	
Eligibility for EFC Administrative Bodies	х	
Reduced registration fees at EUROCORR	Х	Х
Priority for choosing booth location at EUROCORR Exhibition	Х	
Events included in EFC Calendar	Х	
Publication of events and case-studies in EFC Newsletter	Х	Х

HOW TO JOIN THE EFC?

Non-profit organisations (typically associations) representing corrosion interests at a national level can join the family of EFC Member Societies, of which there are now about 30 in Europe and beyond.

Individuals and organisations wanting to join the EFC can do so by becoming member of the EFC Member Society in their country. Although the practicalities and conditions for membership vary among Member Societies, the vast majority of them offer membership to both individuals and organisations.

Anybody belonging to one of the EFC Member Societies, either as an individual or as representative of an organisation, is also a member of the EFC and benefits from the advantages listed in the column "Member Society" of Table 2 above.

In case there is no EFC Member Society yet in the country in question, there are still possibilities to join the EFC – you are welcome to contact me for more information.

Companies and research laboratories or universities needing additional targeted benefits or wishing to sponsor the EFC, can also apply for Affiliate Membership. The additional benefits included in the Affiliate Membership are related especially to international visibility (discount and priority access at EUROCORR Exhibition, possibility to publish in EFC Newsletter etc.).



More information and the application forms are available on the EFC website **www.efcweb.org**. Anyone with further questions is welcome to contact Mrs. Pascale Bridou-Buffet or myself at the EFC booth during EUROCORR, or the EFC Offices via email at **offices@efcweb.org**.

Hélène Illaire, EFC Managing Officer

SPECIAL OFFER TO EXHIBITORS AT EUROCORR 2020: PACKAGE EXHIBITION BOOTH & EFC AFFILIATE MEMBERSHIP

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

or the first time at EUROCORR 2020, exhibitors are offered a package including EFC Affiliate Membership an Exhibition Booths at a discounted price:

- 25% on the booth (for a standard booth of 6m²: €2,100 instead of €2,800)
- 16% on the Affiliate Membership (for companies: €1,300 instead of €1,550 (excl. VAT); research laboratories and universities: €865 instead of €1030 (excl. VAT))

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

Priority for choosing exhibition booth location at EUROCORR (in the frame of the Loyalty Programme); Events included in the EFC Calendar; Write-ups of events and case studies in the EFC Newsletter (subject to EFC approval); Discount on advertisement in the EFC Newsletter; Logo and link on the EFC website and in the EFC Newsletter; Courses and 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 a discount on EUROCORR registration fee and on EFC publications (including the 'Green books' series), as well as guaranteed free access to the EFC Working Parties.

You can read more about EFC Affiliate Membership and the related benefits in the article "Focus on EFC Membership".

Register now!

Further information and the application form are available:

- during EUROCORR 2019, at the EFC booth or the EUROCORR 2020 booth;
- by contacting Dr. Hélène Illaire by email at **managing.officer@efcweb.org** or Veerle Fincken (local organiser for EUROCORR 2020) at **v.fincken@vom.be**.

You will also find practical information and the registration form on the EFC website at https://efcweb.org/SpecialOffer.html or through the website https://eurocorr.org/.

THE LOYALTY PROGRAMME: EFC REWARDS ITS EXHIBITORS

The EUROCORR Exhibition is successfully attracting a growing number of companies, resulting in a significant in crease in its size in recent years. The EFC, parent organiser of EUROCORR, is striving to continuously improve the exhibition with the help of local organisers hosting the event – watch for innovations to be brought to the exhibition at EUROCORR 2020 in Brussels!

The feedback from EUROCORR exhibitors over the past two years indicates that their experience promotes their sense of loyalty towards, and involvement with, the EFC. Indeed, some exhibitors are supporting EUROCORR and the EFC through sponsorship or Affiliate Membership, and some have been continuously participating in EUROCORR for the past 10 years or more!

The EFC has now set up the Loyalty Programme, a reward system granting priority in choosing the booth location to its most committed exhibitors. The Loyalty Programme aims to achieve a fair reward system for all exhibitors, and is governed by the following priority rules:

- Exhibitors booking one year in advance at the preceding EUROCORR,
- Main EUROCORR sponsors,
- Affiliate Members (see article "Focus on EFC Membership")
- Long-time returning exhibitors, according to a score calculated on the basis of participation to past EUROCORRs.

The Loyalty Programme has been pre-tested for EUROCORR 2019, and will be implemented again for EUROCORR 2020. To enter the Loyalty Programme, exhibitors should register before **24 April 2020**.

Register now!

More detailed information on the priority rules and the organisation of the Loyalty Programme are available on the EFC website at **www.efcweb.org/LoyaltyProgramme.html** or through https://**eurocorr.org/**.

Anybody wishing further information is also welcome to visit the EFC booth during EUROCORR 2019 or contact Hélène Illaire at h.illaire@cefracor.org.

To register for the EUROCORR 2020 Exhibition, visit the booth of EUROCORR 2020 or contact Veerle Fincken at v.fincken@vom.be.

MEMBER SOCIETY AND AFFILIATE MEMBERS NEWS AND UPCOMING EVENTS

WE WELCOME THREE NEW AFFILIATE MEMBERSWHO HAVE JOINED THE FEDERATION SINCE THE BEGINNING OF 2019:





▶ Helmut Fischer GmbH - Institut für Elektronik und Messtechnik, Sindelfingen, Germany

Measurement and analysis instrumentation from FISCHER is presently used around the world in various sectors. FISCHER determine how to provide their customers with the best quality possible via competent and expert consultation, starting with the very first contact and continuing through to the creation of individual service concepts. These close collaborations, combined with the drive to innovate, frequently form the basis for new metrological solutions.

Website: www.helmut-fischer.de/en/germany/



Chongging Wujiu Periodicals Press, Chongging, PR China

The activities of Chongqing Wujiu Periodicals Press include the publication of the journal Surface Technology. At the forefront of reporting research and development relating to surface treatment technology, Surface Technology (ISSN 1001-3660) disseminates the cutting edge of surface technology in China and has earned an excellent reputation in the field of surface treatment.

Website: http://bmjs.ijournals.cn/bmjsen/ch/index.aspx



surface engineering

CIDETEC Surface Engineering, Donostia-San Sebastián, Spain

CIDETEC Surface Engineering is a research centre which provides solutions for protection against corrosion and for corrosion control, evaluation and diagnosis. By affiliating to EFC, CIDETEC Surface Engineering expects to contribute to and promote the EFC while increasing its own international presence and networking in the field of corrosion and protection of materials.

Website: www.cidetec.es



NEWS FROM THE AUSTRALASIAN CORROSION ASSOCIATION (ACA)

Melbourne to host Corrosion and Prevention 2019

On the 24th – 27th November 2019, the ACA will host the industry-leading annual conference Corrosion and Prevention (C&P) in Melbourne, Australia, bringing together leading researchers and practitioners in a wide range of industries who combat corrosion on a daily basis. The exhibition will showcase the latest products and services relating to corrosion mitigation, while the technical sessions will cover topics such as concrete corrosion and repair, steel corrosion, water infrastructure, cathodic protection of pipelines, asset management, high-temperature corrosion, non-ferrous metal corrosion and microbiologically influenced corrosion.

C&P 2019 will appeal to a wide range of industries including; building and construction, cultural and historical materials preservation, defence, education and research, food processing, government, marine transportation and infrastructure, mining and resources, oil and gas, power generation and energy systems and water and wastewater treatment.

The ACA's premier lecture, dedicated to Percival Faraday Thompson, will be delivered by Willie Mandeno (Principal Engineer Materials, WSP Opus), an expert in the specification of engineering materials and protective coatings.

Delegates will also find the opportunity to network with colleagues and peers during various social functions, including the Welcome Function and Exhibition, a «Women in Corrosion» breakfast, ACA Awards Dinner and Farewell Function.

For further information, please visit: https://conference.corrosion.com.au/

ABOUT THE AUSTRALASIAN CORROSION ASSOCIATION

The Australasian Corrosion Association Incorporated (ACA) is a not-for-profit membership association that disseminates information on corrosion and its prevention through the provision of training courses, seminars, conferences, publications and other activities.

The vision of the ACA is that corrosion is managed sustainably and cost-effectively to ensure the health and safety of the community and protection of the environment.

For further information, please visit the web site: http://www.corrosion.com.au;

www.membership.corrosion.com.au



NEWS FROM CEFRACOR

7th Days on Cathodic Protection and Associated Coatings Theory and Applications, On-Land, Seaw





and Applications, On-Land, Seawater, Concrete and Inner surfaces

Palais des Congrès, Antibes Juan-les-Pins, France, 9-11 June 2020 (EFC Event No. 455)

The Days on Cathodic Protection and Associated Coatings event brings together a range of interested specialists including end users, designers, suppliers, service companies, administrations, laboratories, universities and research centres.



Abstracts for oral or poster presentation are invited on the following provisional topics:

- General all structures: basics, limits of use, CP design and modelling, protection criteria, regulations, standardisation and recommendations, certifications for CP and associated coatings;
- Coatings associated with CP (pipelines, tanks, marine structures, etc.);
- On-land structures (buried pipelines and storage tanks, bottoms of above ground tanks, etc.);
- Marine structures (harbour and offshore installations, ships, etc.);
- Reinforced concrete structures (aerial, buried or submerged);
- Inner surfaces of equipment.

Although the event language is French, full texts, **oral presentations and posters may use English**. Abstracts (1/2 to 1 page) must be submitted in French and English on the dedicated web page **before December 21**, **2019**.

Registration fee is 680 € (VAT included) until April 30, 2020 (770 € after this date) and 150 € for students, with a possible discount of 10% for members of CEFRACOR and other Member Societies of the European Federation of Corrosion (EFC). Registration includes access to all conferences, exhibition, daily lunches and coffee breaks. Registrations are made on the dedicated web page of the event.

An **exhibition** is organised in the heart of the Palais des Congrès. **Sponsoring** is welcome in various forms.

A complete flyer and application forms for the exhibition or sponsorship can be downloaded from the web site at www.cefracor.org/fr/manifestations

CEFRACOR, 28 rue Saint-Dominique, 75007 Paris, France - Tél. 33 (0)1 47 05 39 26, PCRA2020@cefracor.org

The 2019 winner of the CEFRACOR and Grand Medal



The 2019 winner of the CEFRACOR and Grand Medal is Professor Gerald Frankel, Department of Materials Science and Engineering, The Ohio State University, Columbus, OH, USA, and Director of the Fontana Corrosion Center.

The Grand Medal is the highest award from CEFRACOR, the French Corrosion Society, awarded to a scientist in recognition to his/her outstanding work in corrosion science and engineering with a strong influence in the area of material durability.





Gerald S. Frankel is Distinguished Professor of Engineering in the Department of Materials Science and Engineering and Director of the Fontana Corrosion Center at the Ohio State University. He earned the BSc degree in Materials Science Engineering from Brown University and the DSc. degree in Materials Science and Engineering from MIT. Prior to joining OSU in 1995, he was a post-doctoral researcher at the Swiss Federal Technical Institute in Zurich and then a Research Staff Member at the IBM Watson Research Center in Yorktown Heights, NY. His primary research interests are in the passivation and localized corrosion of metals and alloys, corrosion inhibition, protective coatings and atmospheric corrosion. He is a member of the editorial board of The Journal of the Electrochemical Society and Corrosion and a fellow of NACE International, The Electrochemical Society, and ASM International. He received the W.R. Whitney Award from NACE International in 2015, the U.R. Evans Award from the UK Institute of Corrosion in 2011, OSU Distinguished Scholar Award in 2010, the 2010 ECS Corrosion Division H.H. Uhlig Award, and the Alexander von Humboldt Foundation Research Award for Senior US Scientists in 2004. From 2012-2016, he served as a member of the Nuclear Waste Technical Review Board after being appointed by President Obama. In 2016, he became the director of a DOE-funded Engineering Frontier Research Center focused on the performance of nuclear waste forms.

Recognition of this honor and presentation of the medal to Prof. Frankel will take place during EUROCORR 2019 in Sevilla, immediately before Professor Frankel Keynote Lecture scheduled in the session on Mechanisms, Methods and Modeling, on Tuesday, September 10th, 2019 at 11:30.

SEVENTH INTERNATIONAL CONFERENCE: "ADVANCES IN CORROSION PROTECTION BY ORGANIC COATINGS - ACPOC 2020" CHRIST'S COLLEGE, CAMBRIDGE, 20TH TO 24TH JULY 2020 EFC EVENT NUMBER: 451



dvances in Corrosion Protection by Organic Coatings" (ACPOC) was first organised in 1989 at Christ's College, Cambridge University, by the late David Scantlebury of UMIST. Since then it has been held regularly about every 5 years (quinquennially). The next conference, co-organised by the Universities of Manchester (Corrosion@Manchester), and Swansea (Materials Research Centre) with the UK Institute of Corrosion, will take place at Christ's College, Cambridge, between the 20th and 24th July 2020.

The conference will continue to reflect the state-of-the-art in all matters relating to corrosion protective organic coatings, including: sustainable coatings and formulations, pigments and inhibitors, smart and functional coatings, mechanisms of protection, film formation and degradation, adhesion and its enhancement, under-film corrosion, surface preparation, conversion layers, test methods and other related areas.



The single-session format and unique setting deliberately mirrors a Gordon-style conference and provides an unrivalled environment for academic discourse. Delegates can discuss the latest state-of-the-art while reflecting on the college where Darwin studied, or in the evenings over a glass or two of college port at the end of fine meal, or while being punted along the river Cam.

Oral presentations (around 30 minutes) are solicited from senior, mid-career, junior and student researchers alike. Poster presentations are welcome; however, authors will be required to provide a 5-minute talk about their work. There will be an opportunity to publish papers in a special issue of "Progress in Organic Coatings" subject to the journal's normal peer review process.

Further information and an expression of interest form can be obtained by contacting:

Stuart Lyon: stuart.lyon@manchester.ac.uk
Geraint Williams: geraint.williams@swansea.ac.uk
Ruth Bingham: djmillspa@gmail.com

EFC MEMBER SOCIETIES AND AFFILIATE MEMBERS

EUROPEAN MEMBER SOCIETIES

AUSTRIA

The Austrian Society of Metallurgy and Materials (ASMET) E-mail: asmet@asmet.at Website: www.asmet.at

BELGIUM

VOM vzw - Belgian Association for Surface

Treatment

E-mail: v.fincken@vom.be Website: www.vom.be

CROATIA

Hrvatsko društvo za zaštitu materijala (HDZAMA) - Croatian Society for Materials Protection

E-mail: hdzama@fsb.hr

Website: www.fsb.unizg.hr/hdzama/

CZECH REPUBLIC

Asociace koroznich inzenyru (AKI) Czech Association of Corrosion Engineers

E-mail: aki@vscht.cz Website: www.aki-koroze.eu

DENMARK

ATV-SEMAPP

E-mail: semapp@atv-semapp.dk Website: www.atv-semapp.dk

FRANCE

Centre Francais de l'Anticorrosion (CEFACOR) -French Corrosion Society

E-mail:info@cefracor.org Website: www.cefracor.org

GERMANY

DECHEMA e.V. - Society for Chemical Engineering and Biotechnology

E-mail: info@dechema.de Website: www.dechema.de

fkks-Fachverband Kathodischer Korrosionsschutz e.V. - Technical-scientific Association

for Cathodic Protection E-mail: koepf@fkks.de Website: www.fkks.de

Gesellschaft für Korrosionsschutz e.V. (GfKORR)

- Society for Corrosion Protection E-mail: gfkorr@dechema.de Website: www.gfkorr.de

HUNGARY

Magyar Korróziós Szövetség (HUNKOR) - Hungarian Corrosion Society

E-mail: laszlo.ostorhazi@bevonattechnika.hu Website: www.hunkor.hu

ΙΤΔΙ Υ

Associazione Italiana di Metallurgia (AIM) - Italian Association of Metallurgy

E-mail: aim@aimnet.it Website: www.aimnet.it

Associazione per la Protezione dalle Corrosioni Elettrolitiche (APCE) - Association for Protection

against Electrolytic Corrosion E-mail: info@apce.it

Website: www.apce.it

NETHERLANDS

Bond voor Materialenkennis E-mail: guido.verhoeven@sim-flanders.be Website: www.materialenkennis.nl

NORWAY

Norsk Korrosjonsteknisk Forening (NKF) -Norwegian Corrosion Society E-mail: torfinn.havn@ztrong.no Website: www.nkfstavanger.org

POLAND

Polskie Stowarzyszenie Korozyjne (PSK) - Polish Corrosion Society

E-mail: akrolikowska@ibdim.edu.pl

Website: www.psk.org.pl

PORTUGAL

Sociedade Portuguesa de Materiais (SPM) - Portuguese Society for Materials

E-mail: paula.vilarinho@ua.pt Website: www.spmateriais.pt

RUSSI/

ANTIKOR - International Scientific & Educational Corrosion Centre

E-mail: muradov@gubkin.ru or antikor@gubkin.ru

SI OVENIA

Inštitut za kovinske materiale in tehnologije (IMT) - Institute of Metals and Technologies p.o.

E-mail: Matjaz.Godec@imt.si Website: www.imt.si

SPAIN

Sociedad Espanola de Materiales (SOCIEMAT) E-mail: sociemat1996@gmail.com Website:www.sociemat.es

SWEDEN

Swerea KIMAB AB

E-mail: johan.tidblad@swerea.se Website: www.swereakimab.se

SWITZERLAND

Swiss Society for Surface Technology SGO/SST

E-mail: admin@sgo-sst.ch Website: www.sgo-sst.ch

TURKEY

Korozyon Dernegi - The Corrosion Association in

Turkey

Website: www.korozyondernegi.org.tr

UNITED KINGDOM

The Institute of Corrosion (ICorr)
E-mail: admin@icorr.org

Website: www.icorr.org

The Institute of Materials, Minerals and Mining (IOM3) E-mail: julija.bugajeva@iom3.org

Website: www.iom3.org

INTERNATIONAL MEMBER SOCIETIES

AUSTRALIA

The Australasian Corrosion Association Inc.

E-mail: aca@corrosion.com.au Website: www.corrosion.com.au

CHINA

Chinese Society for Corrosion and Protection

(CSCP)

Website: www.cscp.org.cn/en/about.htm

EUROPE/USA

NACE International (European Area)

E-mail: amir@sce.ac.il Website: www.nace.org

AFFILIATE MEMBERS

Universities and Research Organisations

National Institute for Nuclear Science and Technology (INSTN) - Centre d'Etudes de Saclay (CEA) Website: www-instn.cea.fr

Department of Electrochemistry, Corrosion and Materials Engineering Technical University of Gdansk

Companies

Chongqing Wujiu Periodicals Press

Oerlikon Metco Europe GmbH Website: www.oerlikon.com/metco

Helmut Fischer GmbH - Institut für Elektronik

und Messtechnik

Website: www.helmut-fischer.com

Seal For Life Industries Anodeflex-STOPAQ Polyken-Covalence-Powercrete

Website: www.sealforlife.com

Water Technologies Laboratory Ltd. Website: www.wtlspb.com

Polyguard

Website: www.polyguardproducts.com/

international-division/

represented by ExParTech, Belgium

A full listing of our European and International EFC Member Societies and Affiliate Members can be found on the EFC website at:

Member Societies: http://www.efcweb.org/Who we are/Member Societies



Affiliate Members: http://www.efcweb.org/Whowe are/Affiliate Members

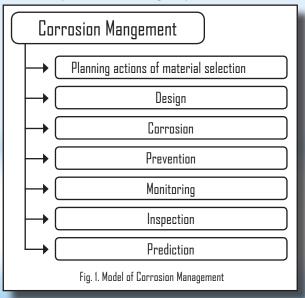


DIN CERTCO

ESTABLISHMENT OF AN INTERNATIONAL GUIDE STANDARD FOR CORROSION MANAGEMENT IN INDUSTRY

Why an ISO guide standard for corrosion management could be the solution for the industry? To have a guide standard for quite all sectors of industry to educate the staff depends on its responsibility on one quality level is the main idea. To manage their knowledge and by continuous education to keep their quality of wok still up-to-date and on high level. On the other hand, the ISO guide standard could become the role of main standard for all institutions being involved in the corrosion protection and monitoring from production until end of life of

steel objects in locations of their destinations. To develop the ISO standard for corrosion management seems to be the right way to control the corrosion progression and to protect constructions in the best available way. To put the existing experience of lot of experts working since years successfully in this field together with the industry of many of sectors in this document is the goal now. Depends on how to protect against corrosion there are methods could be very different. The right design means to construct an object in right way that a possibility that corrosion appears would be minimalized. The ISO standard for corrosion management would focus especially planning actions of selection, design, corrosion mitigation, prevention, monitoring, inspection and prediction. All these steps need support by standardization to increase the level of monitoring and in the end of correct corrosion protection. From other point of view, it could be important that the ISO standard become a status of a mandatory standard supported by governments. A correct handling in field of corrosion monitoring has a main role for environment as well both human and animal beings too. The important role of the ISO standard is to manage corrosion protection and monitoring well-thought-out for enterprises because of costs they invest in. The ISO guide standard for corrosion management could be indeed welcome solution for industry and environment. This is also one of main fields of study of Dr. Alec Groysman from Technion the Israel Institute of Technology in Haifa, whom interesting presentation about Corrosion Management I had the opportunity to follow during the EFC Conference 2018 in Cracow, Poland. He focused some essential steps of corrosion management as below. In his opinion, the ISO standard for corrosion management should be obliged for all industries and enterprises as well ministries. Disregard to this standard should be punished by penalties. His thought deserves closer attention.



Autor: Dipl.-Ing. Agatha SWIERCZYNSKI, DIN CERTCO GmbH in Berlin, Germany

About DIN CERTCO: DIN CERTCO, the German Certification Body, founded in 1972 by DIN e.V. by the German Institute of Standardization for the awarding of DIN certification marks offers from the beginning certification of products, persons, services and others on basis of the DIN standards and some technical specifications like for example the DIN SPEC. Learn more under: www.dincertco.de



THAT WILL TAKE PLACE IN BRUSSELS, BELGIUM, FROM SEPTEMBER 6THTO 10TH

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FOR ENGLISH CONTACT PLEASE CALL: Mss FARGEON YAEL BY @ +33 6 16 28 25 83 or +1 74 55 52 92 or by email: yael.coach@gmail.com

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NEWS FROM EFC WORKING PARTIES AND TASK FORCES

NEWS FROM THE WORKING PARTY 4 ON NUCLEAR CORROSION



As one of its main tasks, the Working Party 4 on Nuclear Corrosion has organised a major nuclear corrosion session for EUROCORR 2019. As many as 46 talks and 17 posters are scheduled to be presented in Seville with prizes being available to the best young presenter and the best poster. The start of the session on Tuesday morning is dedicated to one of our long-term members, Lola Gómez-Briceño from CIEMAT (Spain), who will enter into her well-deserved retirement end at the and of this year. During the lunch break, we will raise our glasses and celebrate with her. Please also don't miss our Working Party Fall Business Meeting immediately following the nuclear corrosion session on the Thursday.

Every year, the WP4 members nominate candidates who have made (or still make) outstanding contributions to corrosion science and engineering in the nuclear field. This year the five-person jury selected Hans-Peter Seifert (Paul Scherrer Institute, Switzerland) as the winner of the 2019 Honorary Medal of the WP4 ('Henry Coriou Award'). The medal will be presented at the beginning of the WP4 Fall Business Meeting during EUROCORR 2019.

Nuclear Corrosion Summer School - NuCoSS-19

ast July, in a beautiful alpine resort in Slovenia, the second edition of the Nuclear Corrosion Summer School NuCoSS-19 (the first one being held in 2015) was organised by the WP4 in co-operation with a Horizon 2020 EU project (MEACTOS, www.meactos.eu). It was a great success, with 38 attendees (25 students and 13 scientists or engineers) and 13 lecturers from 16 countries, even from outside Europe (Brazil, Canada, South Korea and USA). A more detailed report can be found on the website of the WP4 (www.efcweb.org/WP4). For this school the EFC has sponsored three student grants covering the accommodation and registration fee. A Review Committee has awarded those grants to Mr. David Kumar (University of Bristol, UK), Ms. Kamila Wilczynska (CEA, France) and Ms. Lindsay Braithwaite (Western University, Canada).





Int. Workshop on Long-Term Prediction of Corrosion Damage in Nuclear Waste Systems (LTC 2019) Working Party website:

www.efcweb.org/WP4.html

The 7th International Workshop on Long-Term Prediction of Corrosion Damage in Nuclear Waste Systems (LTC 2019), co-organized by WP4 together with CEA, ANDRA and CEFRACOR, will be held in Nancy, France, from November 19 until 21, 2019. More information is available on the web: https://www.cefracor.org/fr/manifestations/7th-international-workshop-long-term-prediction-corrosion-damage-nuclear-waste.

REPORT FROM THE WORKING PARTY ON CORROSION IN THE REFINERY AND PETROCHEMISTRY INDUSTRY

The annual spring meeting of the Working Party 15 "Corrosion in the Refinery and Petrochemistry Industry" took place on 10th April 2019 and was kindly hosted by Rina-CSM in Roma (Italy). The meeting was attended by 50 participants from Europe, the Middle East and Japan. Exchange of information and discussions took place on corrosion management and monitoring of sour gas amine treatments. Failure cases on crude unit, HDS units and catalyst regeneration circuits were discussed. Topics also concerned new sensors to detect corrosion under insulation and flow induced damages. Management of units that can be affected by high temperature hydrogen attack was debated. Discussions also took place on the sensitivity to sulphide stress corrosion cracking of duplex stainless steels and on the activities of the joint WP13-WP15 task forces that work on the update of the "Amine unit Corrosion in Refineries", EFC publication 46 and on the update of the "Corrosion under insulation", EFC publication 55.

The next WP 15 Corrosion in the Refinery Industry meeting will be held during the EUROCORR 2019 in Seville, Spain on the 11th of September 2019 and will cover the "so-called" hot topics affecting corrosion in the refinery and petrochemistry industry.

EFC WP 15 Corrosion in the Refinery and Petrochemistry Industry would like to express its thanks to Rina CSM for hosting the spring meeting, with special thanks to Elisabetta Amici and Antonio Lucci for their excellent organization of the meeting.

If you wish to have more information on the activities of the group (including all the minutes and presentations of the last meetings) please visit our homepage:

http://efcweb.org/WP15.html

RECENT EFC SPONSORED EVENTS

XXVII POLISH NATIONAL SCIENTIFIC AND TECHNICAL CONFERENCE ANTICORROSION. SYSTEMS-MATERIALS-COATINGS (EFC EVENT NO. 450)



The 27th Polish National Scientific and Technical Conference dealing with anticorrosion systems, materials and coatings took place at JAWOR Holiday House, Ustroń, Poland on 20th – 22nd March 2019.

The event was organised by the Gliwice Branch of the Polish Association of Chemical Industry Engineers and Technicians, the Corrosion Section at the Main Board of the Association of Chemical Industry Engineers and Technicians, the Federation of Scientific and Technical Associations of The Main Technical Organization - City Council in Gliwice. This scientific and technical programme focused on corrosion issues such as causes, mechanisms and effects of corrosion, corrosion protection systems, cathodic protection, protective coatings, applied materials.

The event attracted 62 participants from 25 institutions, including 11 universities, 2 institutions of the Polish Academy of Sciences, 3 research institutes, 8 industrial plants, the N.O.T. Innovation Centre Patent Services Office and the editorial team of the monthly journal "Ochrona przed Korozją" ("Corrosion Protection"). A total of 25 papers and 15 posters were presented. In addition, 13 abstracts (including 6 in English) relating to papers and posters were printed, which were presented at the conference and the full content of which will be published in later issues of the "Ochrona przed Korozją" journal.

The 25 papers were delivered during four conference sessions, with each presentation being followed by a discussion. The remaining research results were presented in the poster session and were entered into the best poster competition. According to the regulations, regardless of the appointed 5-person jury, the posters were evaluated by all participants of the conference by means of a questionnaire prepared by the organizers. The winners received awards - bronze owl statuette casts (the bird of wisdom on the book of wisdom) and commemorative diplomas.

The winners were:

1st **prize**: Influence of the gas environment in laser processes of surface layer modification on corrosion resistance of AISI 304 steel. **Authors**: Katarzyna Łęcka, Arkadiusz Antończak, Anna Mazur-Nowacka, Bogdan Szczgieł.

2nd **prize**: The influence of the abrasive blasting on the thickness and the microstructure of zinc coating formed on the steel surface after flame-cutting. **Authors**: Sylwia Węgrzynkiewicz, Maria Sozańska, Mateusz Pawełek.

The special prize was given to prof. Henryk Bala, for many years of his participation in the Conference and contribution to the substantive value of the meetings.

During the conference, on Thursday, March 21, a meeting of the "Ochrona przed Korozją" Scientific Council was held, during which the activity of the journal was analyzed. In the concluding discussion, the conference received very positive evaluations from its participants.

Integration of the corrosion protection community, networking and exchange of experiences was also encouraged by two accompanying events, namely: an integration meeting with a performance by Ewa Kopczyńska, an artist from the Zagłębie Theatre, and a gala dinner at which prizes and diplomas were awarded to the winners of the competitions.

11TH INTERNATIONAL WORKSHOP "APPLICATION OF ELECTROCHEMICAL TECHNIQUES TO ORGANIC COATINGS" (AETOC) VALENCIA, SPAIN, 2ND-5TH APRIL 2019 (EFC EVENT NO. 444)



The 11th edition of this international AETOC event took place in the delightful seaside location of Canet De Berenguer about thirty kilometres North of Valencia (Spain). The purpose of this workshop is to gather participants in an interesting and isolated place to create conditions for a "brainstorming" session and to provide a platform for intense discussion of the latest results in coatings research obtained with mainly electrochemical methods.

After initiation in Schliffkopf (Germany) in 1999, this workshop has taken place every two years, the most recent, prior to this one, being held in Billerbeck (also in Germany). This 11th edition was organised by Julio Suay (PIMA group, from Universidad Jaume I) and around forty experts attended, both from companies and Universities.

The arrival point for the participants was the the City of Arts and Sciences, in Valencia, where the there was a visit to the main collection of the museum. The conference hotel was a short transfer away, in Canet de Berenguer beach. Before the first congress dinner a jazz concert took place in the hotel.

The workshop convened on the following morning. Twenty-two talks were given, spread over three days. Ten presentations took place on the first day. These were about the advances in Inhibitor release and smart coatings, anodizing, electrocoating, and pre-treatments and organic/inorganic hybrid coatings. Eight talks about accelerated and field testing, and scanning techniques were presented on the morning of the second day. The afternoon was given over to social activities including a delightful visit to the caves St Joseph (one of the most spectacular navigable cave systems in Spain), and a hike up a local mountain providing spectacular views. The congress dinner in the evening was rounded off by a marvellous concert by a flamenco group. The third and last day held five topics related with EIS and modelling, reviewing both theoretical and practical issues.

All in all, it was a very successful meeting. The presentations were well received, and very good discussions were held on them. Flavio De Florian has kindly offered to hold the next conference in April or May 2021 in the area close to Trento, Italy. Watch this space for further details!





PREVIEW: EUROCORR 2021 & 2022

EUROCORR 2021 19-23 SEPTEMBER 2021, BUDAPEST, HUNGARY

EUROCORR 2021 IS HOSTED BY THE HUNGARIAN CORROSION SOCIETY – HUNKOR





With each passing year the Hungarian capital Budapest is attracting ever more foreign visitors from all parts of the world. In 2021 the city will host the influential yearly conference of the European Federation of Corrosion EUROCORR, an event that is of interest to corrosion professionals and others who deal with corrosion phenomena and seek suitable measures against its harmful effects. In this context materials science and the technical design, development, testing and application of highly advanced corrosion preventive materials are as important as the invention of novel techniques or the improvement of established technologies for more efficient and environmentally-friendly application.

These thoughts are expressed in the motto of the EUROCORR 2021 Conference and Exhibition: **Materials science** and advanced technologies for better corrosion protection.

As a highlight of EUROCORR 2021 it is also planned that, in addition to the corrosion related applied materials science issues, special emphasis will be given to novel energy generation, electrical energy storage and energy utilizing systems such as the significant corrosion issues of the transportation industries and the numerous metal parts used in the automotive industries.













Potential partners from the government, universities, research institutes and scientific and engineering societies

Ongoing preparations between the professional conference organizers of Diamond Congress Ltd. and DECHEMA







MAGYAR MÉRNÖKI KAMARA







EUROCORR 2022 SEPTEMBER 2022, BERLIN, GERMANY

UROCORR 2022 will be hosted by the two German EFC Member Societies DECHEMA e.V. and GfKORR – the German Society for Corrosion Protection.



















WORLD CORROSION **AWARENESS DAY**

ast April, the Institut National des Sciences Appliquées de Lyon (INSA) organised a Master Class in Corrosion to coincide with the World Corrosion Awareness Day. This event was the opportunity for an exchange between four speakers, namely: Prof Damien Féron (President of the World Corrosion Organization), Dr Sophia Necib (Engineer at Andra), Dr Marion Parise (Engineer at EDF Hydro) and Patrice Castagna (Engineer at Bureau Veritas) and 150 students from the Department of Science and Engineering of Materials and Mechanical Engineering of INSA. The presentations allowed students to learn about academic and industrial practices in corrosion cost, good design practices for corrosion prevention, case studies, and corrosion inspection. Brief reminders on the basics of electrochemical corrosion were presented by the event organiser, Dr Bernard Normand (Professor of Corrosion at INSA).







3) Patrice Castagna



4) Prof Damien Feron



The debate, chaired by Dr Benoit Ter Ovanessian and Dr Sabrina Marcelin, was an opportunity to answer students' questions about the effects of corrosion upon safety, environmental and economic issues, and to encourage them to consider the degradation of systems at the earliest stages of design, choice and development of materials. This event was supported by the World Corrosion Organization (WCO), the European Federation of Corrosion (EFC), the French Anticorrosion Centre (CEFRACOR) and the Federation of Engineering from CNRS - IngéLySE.





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EFC WORKING PARTY INDEX

The EFC currently has twenty-one active Working Parties (WPs) and two Task Forces, listed below, each concerned with a different aspect of the corrosion of metals, alloys and polymer materials. Activities of the EFC Working Parties/Task Forces include: collaborative research and testing programmes; organisation of workshops, seminars and conferences; preparation of state-of-the-art reports, guidelines and proceedings for publication as volumes in the EFC Series and the organisation of sessions at EUROCORR.

Membership to the EFC Working Parties is available as a right to all EFC members belonging to both European and International EFC Member Societies or to EFC Affiliate Members, including companies or universities/research centres. Anyone wishing to join one of the Working Parties listed below should apply to the appropriate Working Party Chairs. Please refer to the EFC website at http://www.efcweb.org/wp for full details on Working Party activities or contact EFC Scientific Secretary, Roman Bender (e-mail: roman.bender@dechema.de).

EFC WORKING PARTY 1: CORROSION AND SCALE INHIBITION

► Chair: Prof. Günter SCHMITT, IFINKOR (Institute for Maintenance and Corrosion Protection Technologies nfpLtd.), Iserlohn, Germany; E-mail: guenter.schmitt@ifinkor.de

EFC WORKING PARTY 3: CORROSION BY HOT GASES AND COMBUSTION PRODUCTS

▶ Chair: PD Dr. Mathias GALETZ, DECHEMA-Forschungsinstitut, Frankfurt am Main, Germany;

E-mail: mathias.galetz@dechema.de

EFC WORKING PARTY 4: NUCLEAR CORROSION

▶ Chair: Dr. Stefan RITTER, Paul Scherrer Institut, Nuclear Energy and Safety Research Department, Villigen PSI, Switzerland; E-mail: stefan.ritter@psi.ch

EFC WORKING PARTY 5: ENVIRONMENT SENSITIVE FRACTURE

Chair: Dr. Krzysztof WOLSKI, Centre SMS - UMR CNRS 5146,

École des Mines de Saint-Etienne, Saint-Etienne, France; E-mail: wolski@emse.fr

EFC WORKING PARTY 6: SURFACE SCIENCE AND MECHANISMS OF CORROSION AND PROTECTION

▶ Chair: Prof. Philippe MARCUS, École Nationale Supérieure de Chimie de Paris, Paris, France;

E-mail: philippe-marcus@chimie-paristech.fr

EFC WORKING PARTY 7: CORROSION EDUCATION

▶ Chair: Prof. Daniela ZANDER, Gießerei-Institut, RWTH Aachen, Aachen, Germany;

E-mail: D.Zander@gi.rwth-aachen.de

EFC WORKING PARTY 8: PHYSICAL-CHEMICAL METHODS OF CORROSION TESTING

► Chair: Prof. J.M.C. Arjan MOL, Delft University of Technology, Department of Materials Science and Engineering, Delft, The Netherlands; E-mail: j.m.c.mol@tudelft.nl

EFC WORKING PARTY 9: MARINE CORROSION

▶ Chair: Prof. Philippe REFAIT, Laboratory of Engineering Sciences for Environment (LaSIE), University of La Rochelle, France; E-mail: prefait@univ-lr.fr

EFC WORKING PARTY 10: MICROBIAL CORROSION

► Chair: Dr. Pierangela CRISTIANI, RSE - Ricerca sul Sistema Energetico S.p.A., Milano, Italy; E-mail: pierangela.cristiani@rse-web.it

EFC WORKING PARTY 11: CORROSION OF STEEL IN CONCRETE

► Chair: Prof. Michael RAUPACH, RWTH Aachen, Institute for Building Materials Research, Aachen, Germany; E-mail: raupach@ibac.rwth-aachen.de

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EFC WORKING PARTY 13: CORROSION IN OIL AND GAS PRODUCTION

► Chair: Mr. Marc WILMS, Shell Projects & Technology, Mechanical, Material & Integrity (MMI), Amsterdam, Netherlands; E-mail: marc.wilms@shell.com

EFC WORKING PARTY 14: COATINGS

► Chair: PD Dr.-Ing. Wolfram FÜRBETH, DECHEMA-Forschungsinstitut, Frankfurt am Main, Germany; E-mail: wolfram.fuerbeth@dechema.de

EFC WORKING PARTY 15: CORROSION IN THE REFINERY AND PETROCHEMISTRY INDUSTRY

▶ Chair: Dr. François ROPITAL, IFP Energies nouvelles, Direction Chimie et Physico Chimie Appliquées, Département Electrochimie et Matériaux, Solaize, France; E-mail: françois.ropital@ifpen.fr

EFC WORKING PARTY 16: CATHODIC PROTECTION

► Chair: Mr. Jérôme CROUZILLAC, BAC Corrosion Control, Voisins-le-Bretonneux, France; E-mail: j.crouzillac@bacfrance.com

EFC WORKING PARTY 17: AUTOMOTIVE CORROSION

► Chair: Ms. Elizabeth SZALA, R & D - Innovation Centre Duffel, ALERIS ALUMINUM DUFFEL BVBA, Duffel, Belgium; E-mail: elizabeth.szala@aleris.com

EFC WORKING PARTY 18: TRIBOCORROSION

▶ Chair: Dr. Stefano MISCHLER, École Polytechnique Fédérale de Lausanne (EPFL), Tribology and Interface Chemistry Group, Lausanne, Switzerland; E-mail: stefano.mischler@epfl.ch

EFC WORKING PARTY 19: CORROSION OF POLYMER MATERIALS

► Chair: Dr.-Ing. Jürgen HEINEMANN, DIN CERTCO Gesellschaft für Konformitätsbewertung mbH, 12103 Berlin, Germany; E-mail: juergen.heinemann@dincertco.de

EFC WORKING PARTY 20: CORROSION AND CORROSION PROTECTION OF DRINKING WATER SYSTEMS

► Chair: Dr. Johann Wilhelm ERNING, Bundesanstalt für Materialforschung und –prüfung, Berlin, Germany; E-mail: wilhelm.erning@bam.de

EFC WORKING PARTY 21: CORROSION OF ARCHAEOLOGICAL AND HISTORICAL ARTEFACTS

► Chair: Dr. Delphine NEFF, Archaeomaterials and Alteration Prediction Laboratory, SIS2M/LAPA CEA/CNRS, CEA Saclay, Gif-sur-Yvette, France; E-mail: delphine.neff@cea.fr

EFC WORKING PARTY 22: CORROSION CONTROL IN AEROSPACE

▶ Chair: Mr. Theo HACK, EADS Innovation Works, Munich, Germany; E-mail: theo.hack@eads.net

EFC WORKING PARTY 23: CORROSION RELIABILITY OF ELECTRONICS

► Chair: Prof. Rajan AMBAT, Technical University of Denmark (DTU), Materials and Surface Engineering, Lyngby, Denmark; E-mail: ram@mek.dtu.dk

In addition:

EFC TASK FORCE ON CO₃-CORROSION IN CCS-APPLICATIONS

► Chair: Dr. Ralph BASSLER, Bundesanstalt für Materialforschung und –prüfung, Berlin, Germany; E-mail: ralph.baessler@bam.de

EFC TASK FORCE ON ATMOSPHERIC CORROSION

▶ Chair: Dr. Tomáš PROSEK, University of Chemistry and Technology Prague, Department of Metallic Construction Materials, Kralupy nad Vltavou, Czech Republic; E-mail: tomas.prosek@vscht.cz

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EFC CALENDAROF FORTHCOMING EVENTS AND COURSES (AS OF JUNE 2019)

2019						
DATE/VENUE	CONFERENCE / COURSE	CONTACT				
09-13 September Seville, Spain	EUROCORR 2019 EFC Event No. 445	Local Organiser: SOCIEMAT -El Escorial, Madrid, Spain - E-mail: sociemat1996@gmail.com Website: http://eurocorr2019.org/				
		Scientific Secretariat: DECHEMA e.VE-mail: eurocorr@dechema.de Website: https://eurocorr.org/EUROCORR+2019.html				
30 September 2 October 2019 Vienna, Austria	ESSC & DUPLEX Conference 2019 10th European Stainless Steel Conference - Science and Market & 6th European Duplex Stainless Steel Conference & Exhibition	Website: http://www.stainlesssteel2019.org				
9-12 October 2019 Porec, Croatia	2nd International Conference on Materials MTECH 2019 EFC Event No. 448	Website: http://mtech.com.hr/				
9-12 October 2019 Chongqing, China	EFC-China 1st International Conference on Corrosion Protection and Application (ICCPA) EFC Event No. 452	Website: http://iccpa.medmeeting.org/8823?lang=en				
19-21 November 2019 Nancy, France	LTC 2019 7th Int. Workshop on Long-Term Prediction of Corrosion Damage in Nuclear Waste Systems EFC Event No. 443	Organised by D. Féron (CEA), D. Crusset (ANDRA) and CEFRACOR Website (Flyer): https://www.cefracor.org/doc/LTC2019-flyer.pdf				
		2020				
15-19 March 2020 Houston, TX, USA	CORROSION 2020 / NACE Conference and Exhibition	Lesley Martinez - NACE International Headquarters - Houston, Texas 77084, USA E-mail: lesley.martinez@nace.org - Website: http://www.nace.org/				
21-24 April 2020 Karlsruhe, Germany	PaintExpo	Website: http://www.paintexpo.de/				
9-11 June 2020 Antibes Juan-les-Pins, France	7èmes Journées Protection Cathodique et Revêtements Associés	Website: http://www.cefracor.org/				
21-25 June 2020 Vienna, Austria	GALVATECH 2020 12 th International Conference on Zinc & Zinc Alloy Coated Steel Sheet	Website: https://www.galvatech2020.org/				
19-24 July 2020 Cambridge, United Kingdom	Advances in Corrosion Protection by Organic Coatings Including topics on pretreatments and inhibitors EFC Event No. 451	Website: http://www.acpoc-conference.org/				
30 August 4 September 2020 Belgrade, Serbia		International Society of Electrochemistry Lausanne, Switzerland E-mail: events@ise-online.org Website: http://www.ise-online.org/ise-conferences/next_ISE-meetings.php				
6-10 September 2020 Brussels, Belgium	EUROCORR 2020 EFC Event	Local organiser: University of Mons, Prof. Marjorie Olivier, marjorie.olivier@umons.ac.be VOM, Ir Veerle Fincken, v.fincken@vom.be Vrije Universiteit Brussel, Prof. Herman Terryn, herman.terryn@vub.be Materia Nova, Dr Mireille Poelman, mireille.poelman@materianova.be Scientific Secretariat: DECHEMA e.V. E-mail: eurocorr@dechema.de - Website: http://eurocorr.org/				
		2021				
18-22 April 2021 Salt Lake City, UT, USA	CORROSION 2021 / NACE Conference and Exhibition	Lesley Martinez - NACE International Headquarters - Houston, Texas 77084, USA E-mail: lesley.martinez@nace.org - Website: http://www.nace.org/				
13-18 June 2021 Atlanta, USA	ICF 15 15 th International Conference on Fracture	Website: https://sf2m.fr/events/icf15-15th-international-conference-on-fracture/				
29 August 3 September 2021 Jeju Island, Korea	ISE Annual Meeting 2021 72st Annual Meeting of the International Society of Electrochemistry	International Society of Electrochemistry - Lausanne, Switzerland E-mail: events@ise-online.org Website: http://www.ise-online.org/ise-conferences/next_ISE-meetings.php				







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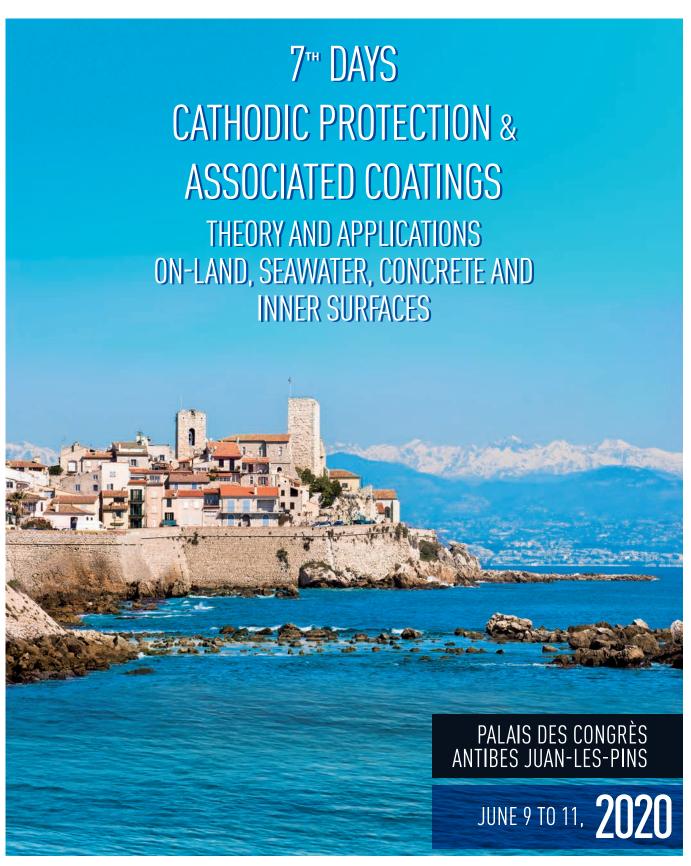
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