

PROGRAMME at a GLANCE

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VIRTUAL EUROCORR

Monday, 7 September 2020

Programme Schedule Monday, 07-09-2020								
	Room 1	Room 2	Room 3	Room 4	Room 5	Room 6	Room 7	Room 8
9:00	Welcome + Awards European Corrosion Medal Lecture (Stuart Lyon)	Welcome + Awards European Corrosion Medal Lecture (Stuart Lyon)	Welcome + Awards European Corrosion Medal Lecture (Stuart Lyon)	Welcome + Awards European Corrosion Medal Lecture (Stuart Lyon)	Welcome + Awards European Corrosion Medal Lecture (Stuart Lyon)	Welcome + Awards European Corrosion Medal Lecture (Stuart Lyon)	Welcome + Awards European Corrosion Medal Lecture (Stuart Lyon)	Welcome + Awards European Corrosion Medal Lecture (Stuart Lyon)
10:00	WP6 & WP8: Corrosion Mechanisms, Methods and Modelling (Lb1) Chair: Philippe Marcus	WP14: Coatings - Metallic Coatings (Lb1) Chair: Marjorie Olivier	WP13: Corrosion in Oil & Gas Production (Lb1) Chairs: Marc Wilms, George Winning	WP4: Nuclear Corrosion (Lb1) Chairs: S. Ritter / D. Feron	WP23: Corrosion Reliability of Electronic Materials and Devices (Lb1) Chairs: Rajan Ambat, Morten Jellesen	WP17: Automotive Corrosion (Lb1) Chair: Tomas Prosek, Elizabeth Szala	WP19: Polymers and Advanced Materials Chairs: Jürgen Heinemann	JS WP9 & WP16: Cathodic Protection in Marine Environment Chairs: Jérôme Cruzillac / Philippe Refait
	360431 Ormek	261922 Arrighi	277949 Duparc	271184 Lowden	362001 Pavesi-Corona	362002 Pavesi-Corona	362003 Pavesi-Corona	362004 Pavesi-Corona
11:00	364021 Wetzal 375958 Lynch	289334 Knudsen 266619 Hahn	284252 Trautmann 279775 Garcia 292722 Calleja	253331 Kumar 267114 Talsar	362007 Rajan 362008 Rajan 362189 Rajan	362021 Belaya 364107 Rajan	Break for change of/dial in to virtual session JS WP14 & WP19: Polymers in Organic Coatings (Lb1) Chairs: Jürgen Heinemann / Wolfram Fürbeth	362005 Fraigne 362102 Anand-Lucasano 362006 Weisshaupt
12:00	Lunch Break	Lunch Break	Lunch Break	Lunch Break	Lunch Break	Lunch Break	Lunch Break	Lunch Break
13:00								
14:00	WP6 & WP8: Corrosion Mechanisms, Methods and Modelling (Lb2) Chair: Jinshan Pan	WP14: Coatings - Metallic Coatings (Lb2) Chair: Michele Fedel	WP13: Corrosion in Oil & Gas Production (Lb2) Chairs: George Winning, Marc Wilms	WP4: Nuclear Corrosion (Lb2) Chairs: D. Kumar, B. Muzeau	WP23: Corrosion Reliability of Electronic Materials and Devices (Lb2) Chairs: Rajan Ambat, Morten Jellesen	WP17: Automotive Corrosion (Lb2) Chair: Jan-Olov Nilsson, Elizabeth Szala	JS WP14 & WP19: Polymers in Organic Coatings (Lb2) Chairs: Jürgen Heinemann / Wolfram Fürbeth	WP16: Cathodic Protection (Lb1) Chairs: Jérôme Cruzillac / Marcel Roche
	362976 LaFlenti	376818 Rosau	294372 Lorenzi	292227 Comas	362436 Bannister	362434 Bannister	362435 Bannister	362437 Bannister
15:00	362703 Blanc 366484 Zajac 366102 Sahu	341538 Yonacki	267123 Attar 268445 Bartawi	271250 Cakir-Wutika 248093 Stoullil 268830 Caes	362438 Bannister 362439 Bannister 362440 Bannister	362431 Bannister 362432 Bannister 362433 Bannister	362436 Bannister	362437 Bannister 362438 Bannister
16:00	Exhibition	Exhibition	Exhibition	Exhibition	Exhibition	Exhibition	Exhibition	Exhibition
					362449 Bannister Exhibition			

WP6 & WP8: Corrosion Mechanisms, Methods and Modelling (Lb1)
Chair: Philippe Marcus
Monday, 7 September 2020, 10:00-12:00

Time	Title	Lecturer
10:00	In situ observation of the wetting process on a stainless steel surface in controlled atmosphere brazing	A. Kawano
10:20	Passive film on super duplex stainless steel and its electrochemical stability studied by synchrotron X-ray techniques	J. Pan
10:40	In-Operando Time- and Space-Resolved High-Energy X-ray Diffraction Measurement to Understand Hydrogen Infusion in Duplex Stainless Steel	C. Örnek
11:00	Local corrosion properties of CrMnFeCoNi and CrCoNi high/medium entropy alloys in aqueous environments	A. Wetzel
11:20	Initial oxidation of FeCrNiMo stainless steel model surfaces at small time and length scales	B. Lynch
11:40	withdrawn	

WP6 & WP8: Corrosion Mechanisms, Methods and Modelling (Lb2)

Chair: Jinshan Pan

Monday, 7 September 2020, 14:00-16:00

Time	Title	Lecturer
14:00	Passivation mechanisms and pre-oxidation effects on model surfaces of 304 austenitic stainless steel	V. Maurice
14:20	Mechanism of pitting corrosion on AISI 436 - Correlation between metallurgical defects and statistical analysis of pitting corrosion	C. Boissy
14:40	Combined XPS/TEM studies of the chemistry and structure of the passive film formed on additive manufactured 17-4 PH stainless steel	L. Laffont
15:00	Understanding of the metastable pitting behaviour of power bed laser beam melting 17-4PH stainless steel by studying the passive films properties	C. Blanc
15:20	On the Pitting Mechanism of a High-Strength Austenitic CrMn-Stainless Steel exposed to an alkaline Chloride-containing Solution at Elevated Temperature	B. Zajec
15:40	Pitting Corrosion Behavior of Ni ₃₈ Fe ₂₀ Cr _x (MnCo) _{42-x} High Entropy Alloys	S. Sahu

WP6 & WP8: Corrosion Mechanisms, Methods and Modelling (Lb3)

Chair: Arjan Mol

Tuesday, 8 September 2020, 10:00-12:00

Time	Title	Lecturer
10:00	Influence of environmental and metal temperatures on oxygen diffusion behavior in thin water layer	M. Sakairi
10:20	The effect of Al on the corrosion resistance and film properties of FeCoCrNiAl _x high entropy alloy	Y. Fu
10:40	The role of alloying elements (Cr, Fe) on the passive behaviour and secondary oxidation of Ni based alloys	Z. Zhang
11:00	Corrosion resistance of WC hardmetals with alternative Co and Ni based binders	A. Ferro Rocha
11:20	An approach to verify the water transport model in organic coatings	M. Meeusen
11:40	Understanding graphitic corrosion of cast iron: an investigation of degraded graphite flakes	J. Pimenta-Richardson

WP6 & WP8: Corrosion Mechanisms, Methods and Modelling (Lb4)
Chair: Hamilton Neil McMurray
Tuesday, 8 September 2020, 14:00-16:00

Time	Title	Lecturer
14:00	Analysis of acoustic emission characteristics of the magnesium alloy AZ31 during potentiodynamic polarisation in sodium chloride solution	M. Mandel
14:20	In vitro corrosion behaviour of magnesium in simulated body fluids: what spatially resolved techniques see at the interface	S. Lamaka
14:40	Mg implant biocorrosion: towards improved in vitro characterization methodologies	P. Schmutz
15:00	Clarifying the impact of self-corrosion on utilization efficiency of Mg anodes for primary aqueous batteries	M. Deng
15:20	Study on the effect of sodium carbonate salt as corrosion inhibitor for protection of AZ31 Magnesium alloy	L. Prince
15:40	Fundamentals for Atmospheric Corrosion: Elucidating the Zinc/Water Interface as a Function of Relative Humidity	R. Lindsay

WP6 & WP8: Corrosion Mechanisms, Methods and Modelling (Lb5)

Chair: Vincent Maurice

Wednesday, 9 September 2020, 10:00-12:00

Time	Title	Lecturer
10:00	Deciphering the inhibition mechanism of a green organic inhibitor	J. Soto
10:20	A comprehensive QSAR study of corrosion inhibitor structures for automotive steel	S. Jeschke
10:40	Influence Of Precipitates On Corrosion Resistance Of Cu-4.5%Wt Ti Alloy	D. Hanoz
11:00	Stainless steel passivation: the influence of exposure history on pitting potential	D. Socol
11:20	Corrosion of stainless steels in sulphuric acid environments: influence of chloride content and temperature	E. Huttunen-Saarivirta
11:40	Structural defects in thin anodic Al oxides and their influence on "barrier" properties	C. Cancellieri

WP6 & WP8: Corrosion Mechanisms, Methods and Modelling (Lb6)
Chair: Christine Blanc
Wednesday, 9 September 2020, 14:00-16:00

Time	Title	Lecturer
14:00	Surface composition and electronic properties of native oxide films on aluminium alloy and Al ₂ Cu intermetallic: a DFT Study	P. Cornette
14:20	In situ Atomic Force Microscopy (AFM) studies of deformation and corrosion processes on thin film coated AA2024-T3 aluminium alloy surfaces	O. Ozcan
14:40	Importance of Cathode Surfaces in Corrosion and Corrosion Inhibition Mechanisms in Multi-material Combinations	S. Ofoegbu
15:00	Effect of artificial ageing on the corrosion mechanism of aeronautical Al-Cu-Li 2198 alloy	C. Charalampidou
15:20	Interaction of intermetallic compounds in aluminium alloys with a cerium-based corrosion inhibitor; ex-situ and quasi in-situ TEM studies	A. Kosari
15:40	Acidification of the electrolyte during galvanic corrosion of Aluminum Alloys: Modeling and experimental study	R. Montoya López

WP6 & WP8: Corrosion Mechanisms, Methods and Modelling (Lb7)

Chair: Marie-Georges Olivier

Thursday, 10 September 2020, 10:00-12:00

Time	Title	Lecturer
10:00	Advanced electrochemical characterization to assess localized corrosion susceptibility of Al alloys	N. Ott
10:20	2-mercaptobenzimidazole adsorption and corrosion inhibition mechanisms on copper: a model surface analytical study	P. Marcus
10:40	DFT study of 2-mercaptobenzothiazole and 2-mercaptobenzimidazole as corrosion inhibitors for copper	D. COSTA
11:00	DFT study of 2-mercaptobenzothiazole as corrosion inhibitor of copper	F. Chiter
11:20	Study of the stability of corrosion inhibitors on Cu and CuZn surfaces: AFM analysis	A. Valencia Ramirez
11:40	withdrawn	

WP6 & WP8: Corrosion Mechanisms, Methods and Modelling (Lb8)
Chair: Bernard Normand
Thursday, 10 September 2020, 14:00-16:00

Time	Title	Lecturer
14:00	Combined in situ EC-STM and EBSD investigation of corrosion inhibitor effects on the local reactivity of the emergence of grain boundaries at the nanometric scale	S. Sharma
14:20	Application of localized electrochemical techniques to study the effect of crystallographic orientation on corrosion behavior of IF ferritic steels	Y. Gonzalez-Garcia
14:40	Effect of grain size on passive layer properties formed on pure iron in alkaline environment	A. Yilmaz
15:00	The impact of different organic acids on the stress-corrosion cracking sensitivity of steam turbine steel	T. De Seranno
15:20	Combination of microfluidics and electrochemical corrosion knowledge for the construction of a differential aeration cell without geometric restrictions	C. Yelkarasi
15:40	Corrosion of Corrosion-Resistant Alloys in Mixed Acids and Salts: A Mechanistic Modeling Approach	A. Eslamimanesh

WP6 & WP8: Corrosion Mechanisms, Methods and Modelling (Lb9)

Chair: Sviatlana Lamaka

Friday, 11 September 2020, 10:00-12:00

Time	Title	Lecturer
10:00	Study on the characteristics of inhibitor-induced film-formation on Aluminium alloy, AA2024-T3	C. Samarawickrama
10:20	A Novel Ultrasonic Technique for in situ Quantitative Evaluation of Corrosion Rates	Z. Fangxin
10:40	Exploring the Application of Bipolar Electrochemistry – Novel Insight for Assessing Localised Corrosion in Corrosion Resistant Alloys	Y. Zhou
11:00	The influence of experimental methodology on determining Tafel slopes and exchange current densities	M. van Ede
11:20	Detection limits of the EPR method for ferritic Cr steels	A. Heyn
11:40	Corrosion of stainless steels exposed to H ₂ SO ₄ environment at elevated temperatures: towards new type of corrosion sensor	T. Kosec

WP6 & WP8: Corrosion Mechanisms, Methods and Modelling (Lb10)

Chair: Fatima Montemor

Friday, 11 September 2020, 14:00-16:00

Time	Title	Lecturer
14:00	SVET measurements combined with in-situ scratch approaches	L. Bertolucci Coelho
14:20	The passive properties of TiZrCuPd bulk metallic glasses: role of casting defects and alloying elements	B. Ter-Ovanessian
14:40	Simulation of high-temperature localized corrosion of Al in ethanol	E. Gazenbiller
15:00	Studying Ion Transport in Coatings	Y. Yang
15:20	Development of a Cellular Automata model simulating the release of corrosion inhibitors from primer coatings	F. Siperstein
15:40	Development of a computational corrosion model for cast iron trunk main pipes	T. Marshall

WP14: Coatings - Metallic Coatings (Lb1)
Chair: Marjorie Olivier
Monday, 7 September, 2020, 10:00-12:00

Time	Title	Speaker
10:00	Corrosion behavior of Zinc Iron sacrificial coatings in several environments	Lucas Baissac
10:20	Architected metallic coatings for the protection of stainless steels in nitric acid	Alexandre Michau
10:40	Corrosion behaviour of electrodeposited Zn and Zn-Fe coatings in saline environments	Celine Arrighi
11:00	Durability and maintenance of TSZ duplex coatings	Ole Knudsen
11:20	White Haze or Grey Veil – practical aspects of an early corrosion phenomenon on galvanic Zn and Zn-alloys	Sebastian Hahn
11:40		

WP14: Coatings - Metallic Coatings (Lb2)

Chair: Michele Fidel

Monday, 7 September 2020, 14:00-16:00

Time	Title	Speaker
14:00	Electrodeposition and characterisation of nanostructured ZnO-films on zinc covered surfaces	Ingo Klüppel
14:20	Investigations on corrosion and mechanical properties of nickel-tungsten alloy coatings	Dewis Figuet
14:40	Laboratory Qualification of Thermal Arc Spray Cladding	Abdullatif Abdulhadi
15:00	Electrodeposition of ternary Sn-Cu-Ni alloys as lead-free solders using Deep Eutectic Solvents	Sabrina Rosoiu
15:20	Development and characterization of electroless NiB coatings in a bath free of stabilizing agent	Muslum Yunacti
15:40		

WP14: Coatings – Inorganic Coatings (Lb3)

Chair: Lorenzo Fedrizzi

Tuesday, 8 September 2020, 10:00-12:00

Time	Title	Speaker
10:00	Effect of anodization parameters and post-anodizing heat treatments on the corrosion resistance of Ti6Al4V and Cp-Ti	Bruno Ribeiro
10:20	Cathodic Polarization Behavior of Titanium Nitride, Carbide and Carbonitride in Acidic Solutions and its Contribution to the Galvanic Corrosion of Steel	Burcak Avci
10:40	Optimisation of Electrolytic Plasma Oxidation (PEO) coatings formed on magnesium for biological applications	Yue Guo
11:00	Corrosion study on the surface treatment of the magnesium alloy AZ31 by means of potentiodynamic polarisation and climate chamber test	Robert Hornig
11:20	Molybdate-based conversion coating for aluminum-lithium alloy	Stefano Caporali
11:40		

WP14: Coatings - Pretreatments (Lb4)

Chair: Wolfram Fürbeth

Tuesday, 8 September 2020, 14:00-16:00

Time	Title	Speaker
14:00	Cathodic delamination behaviour of polymer coatings on chromium coatings electrodeposited from trivalent chromium electrolyte	Manoi Prabhakar Jothi Manickam
14:20	Surface modifications induced by pretreatments and corresponding effect on the chemical structure of TCP conversion coating on Al-Cu-Li alloy (AA2050)	Meicheng Li
14:40	Elaboration of superhydrophobic surfaces on AA 6082 by chemical etching for anti-corrosion applications	Amani Khaskhoussi
15:00	Addibond™-based solutions : Effect of polymers on Zr/Ti-based conversion coating composition and performances	Quentin Boyer
15:20	Influence of Alloying Element and Conversion Coating Variations on the Corrosion Properties of Recycled Al-Mg-Si Alloys	Alexander Lutz
15:40		

WP14: Coatings - Self-Healing and Smart Coatings (Lb5)

Chair: Mario Ferreira

Wednesday, 9 September 2020, 10:00-12:00

Time	Title	Speaker
10:00	Incorporation of different corrosion inhibitors into hybrid sol-gel coatings for the protection of mild steel S355	Ana Suarez Vega
10:20	Advanced surface coating layer with self-healing property for corrosion protection of Al alloy - Development of hybrid surface layer formed on Al alloy	Makao Chiba
10:40	Durable lubricant-infused anodic aluminum oxide surfaces with high-aspect-ratio nanochannels	Dequan Wu
11:00	The optimization of the plasmonic property of nano titanium nitride and its application in anticorrosive coatings	Lingwei Ma
11:20		
11:40		

WP14: Coatings - Self-Healing and Smart Coatings (Lb6)

Chair: Marta Mohedano

Wednesday, 9 September 2020, 14:00-16:00

Time	Title	Speaker
14:00	On the relation between phase separation and barrier restoration of self-healing polyurethanes	Vincenzo Montano
14:20	The effect of cross-linking agent and pigments particle size distribution on the leaching behaviour of anti-corrosion species for active corrosion protection on AA2024-T3	Ander Cervellera-Dominguez
14:40	Cellulose microfibers (CMFs) reinforced smart self-healing polymeric composite coatings for corrosion protection of steel	Abdul Shakoor
15:00	Corrosion protective performance of coating based on layered double hydroxide doped with corrosion inhibitor	Isabel Christina Pereira Margarit Mattos
15:20	Eco-friendly PMMA-CeO ₂ hybrid coatings with self-healing property	Andressa Trentin
15:40		

WP14: Coatings - Organic Coatings (Lb7)

Chair: Patrick Keil

Thursday, 10 September 2020, 10:00-12:00

Time	Title	Speaker
10:00	Water uptake assessment in polymer coating from dielectric measurements using local mixing rule coupled with Cole-Cole equation	Lucas Ollivier-Lamarque
10:20	A robust in-situ FTIR/EIS and ex-situ SIMS/XPS combined approach for in-depth investigation of complex polymer/metal oxide interfaces	Vanina Cristaudo
10:40	Graphene, a new asset for anticorrosion applications	Thomas Bottein
11:00	Molecular interaction characterisation of (buried) steel oxide - silane interfaces by ToF-SIMS using argon cluster ions for depth profiling	Kristof Marcoen
11:20		
11:40		

WP14: Coatings - Organic Coatings (Lb8)

Chair: Flavio Deflorian

Thursday, 10 September 2020, 14:00-16:00

Time	Title	Speaker
14:00	<u>Keynote Lecture</u> - On the use of polymer coating in the Chemical Process Industry	Laurent Diguët
14:20	QCQ Assessment of Water and Solvent Based Industrial Coatings on Flat and T-Type Welded Steel Specimen	Ivana Šoić
14:40	Examining the Buried Epoxy - Metal Interphase with AFM-IR	Suzanne Morsch
15:00	Electrospun core-shell nanofibers for protection against corrosion	Carmen Vladu
15:20		
15:40		

WP14: Coatings - Organic Coatings (Lb9)

Chair: Jörg Vogelsang

Friday, 11 September 2020, 10:00-12:00

Time	Title	Speaker
10:00	On the in-situ analysis of hybrid interfacial bonding between organic polymer systems and metal oxides	Tom Hauffman
10:20	Study of the influence of the phase repartition of Zn(Al)Mg alloys on the corrosion behaviour of pre-painted steel	Valerie Carlier
10:40	Electrochemical study of the effects of adding pigments to zinc rich coatings	Isehaq Al-Nafai
11:00	Characterization of composite chitosan - based coatings deposited on magnesium substrate used for orthopedic implants	Halina Krawiec
11:20	Effect of filler-matrix interaction in Nanomer® powder coatings containing anisotropic manganese-hydrogen-phosphate nanoparticles on the corrosion protection ability for mild steel	Carsten Becker-Willinger
11:40	Effect of surface topography on cathodic disbonding	Catalina Hagen

WP14: Coatings - Organic Coatings (Lb10)

Chair: Wolfram Fürbeth

Friday, 11 September 2020, 14:00-16:00

Time	Title	Speaker
14:00	Foil-coating hybrid systems for the protection of offshore wind power structures – mechanical resistance and corrosion protection performance	Michael Irmer
14:20	Factors controlling the performance of protective marine coatings based on zinc	Katarzyna Rzeszutek
14:40	What can an FKP tell us about the condition of a protective coatings?	Eugen Florin Turcu
15:00	Protection of carbon steel by superhydrophobic coating against corrosion in chloride media without and with hydrogen sulfide	Liudmila Tsygankova
15:20	Deviations in cathodic disbonding testing	Ole Knudsen
15:40		

WP13: Corrosion in Oil & Gas Production (Lb1)
Chairs: Marc Wilms, George Winning
Monday, 7 September 2020, 10:00-12:00

Time	Title	
10:00	Extension of use limits and selective dissolution concerning 2507 super duplex	M. Monnot
10:20	Impact of H ₂ S on localised corrosion of 316L stainless steel in oilfield environments	G. Hinds
10:40	Influence of combined environmental parameters on crevice corrosion behavior of 316 stainless steel in produced water systems	M. Duparc
11:00	Hydrogen Embrittlement of low-alloyed Steels and Corrosion Resistant Alloys in high-pressure H ₂ gas and H ₂ S saturated solution	A. Trautmann
11:20	The Effect of temperature on the Sulfide Stress Cracking of Supermartensitic Stainless Steels in Aqueous Solutions under H ₂ S and CO ₂	D. Garcia
11:40	Laser marking on OCTG tubes produced with corrosion resistant alloys	B. Calleja

WP13: Corrosion in Oil & Gas Production (Lb2)

Chairs: George Winning, Marc Wilms

Monday, 7 September 2020, 14:00-16:00

Time	Title	
14:00	Effects of environmental parameters interactions on corrosion of carbon steel and characteristics of FeCO ₃ layers	M. Alsalem
14:20	Effects of Ca ²⁺ in corrosion films: A local environment approach to investigate the protectiveness of the film	A. Matamoros-Veloza
14:40	Corrosion Behavior of Additive Manufactured Alloy 625 in acid environments	S. Lorenzi
15:00	Corrosion Performance of TIG and MIG Wire Arc Additive Manufactured (WAAM) Duplex Stainless Steel	H. Attar
15:20	Impact of oxygen level on the corrosion behavior of carbon steels used in oil and gas industry	E. Bartawi
15:40		

WP13: Corrosion in Oil & Gas Production (Lb3)

Chairs: George Winning, Marc Wilms

Tuesday, 8 September 2020, 10:00-12:00

Time	Title	
10:00	Corrosion and tribocorrosion performance of wear resistant coatings in CO ₂ anoxic environments	M. Rodriguez Ripoll
10:20	SSC performance evaluation and fracture mechanics assessment of X65QS seamless steel at extreme sour service condition for onshore project	F. Thebault
10:40	Comparative Study of Four Different Oilfield Corrosion Inhibitor Chemistries under Sweet and Sour conditions in a Low-Salinity Brine	P. Hellberg
11:00	Risk Based Management of CUI, DNVGL-RP-G109	F. Wiggen
11:20	Effect of microstructure of mild steel on corrosion initiation in sweet conditions	K. Gupta
11:40		

WP13: Corrosion in Oil & Gas Production (Lb4)

Chairs: Marc Wilms, George Winning

Tuesday, 8 September 2020, 14:00-16:00

Time	Title	
14:00	Corrosion Inhibition of carbon steel under sweet conditions: Effect of amine based organic compounds	S. Gupta
14:20	Quantifying the H ₂ S consumption effect on confined space in the annular region of flexible pipes	M. Bandeira
14:40	Direct observation of hydrogen-trapping sites in electrolytically charged high and low Nb model steels	C. Wojnas
15:00	High Temperature High Pressure Stable Corrosion Inhibitor Development for Ultra Deepwater Applications with Extreme Conditions	N. Obeyesekere
15:20	Hydrogen evolution reaction evaluation in aqueous solutions containing H ₂ S at different pressures	O. Mattos
15:20		

WP24: CO₂ Corrosion in Industrial Applications

Chair: Ralph Bäßler

Wednesday, 9 September 2020, 10:00-11:00

Time	Title	
10:00	Metallic and Polymeric Materials for CCS	S. Paul
10:20	Insights in the orientation of CO ₂ adsorption on Cr ₂ O ₃ surfaces: A DFT Approach	A. Kumar
10:40		
11:00		
11:20		
11:40		

WP15: Corrosion in the Refinery and Petrochemistry Industry
Chairs: Francois Ropital / Johan Van Roij
Wednesday, 9 September 2020, 14:00-16:15

Time	Title	
14:00	Chemical Inertness, Reproducibility and Carbon Deposition for coated and non-coated AISI 347 Tubes	M. Presa
14:20	Developments in High-Temperature, Online Ultrasonic Corrosion Monitoring for Refinery Application	D. Lorkin
14:40	Understanding and modelling moisture transport for detecting corrosion under insulation	O. Meyer
15:00	Aerogel Insulation - Proving the Capabilities for CUI Mitigation	J. Chmielarski
15:20	New insights in the corrosion resistance of CrMn and stainless steels in amine environments	M. Monnot
15:40	Field Applied Solutions to address Corrosion Challenges in Amine Systems	C. Bateman
16:00	How chlorine dioxide provides by Purate technology can minimize biofouling and improve performance in a cooling water system in refinery	V. Beucler

**WP13 & WP15 & TF& WCO: Corrosion in Low Carbon
Energy Technologies (Lb1)**

Chairs: François Ropital , Steve Paterson

Thursday, 10 September 2020, 10:00-12:00

Time	Title	
10:00	Keynote: Green Energies and Corrosion	D. Féron
10:20		
10:40	Graphene enhanced flexible current collectors for printed primary batteries	V. Kumar
11:00	Effect of oxygen contamination on the protectiveness of corrosion deposits on carbon steel in aqueous media containing CO ₂	E. Basilico
11:20	Corrosion of welded joints in offshore wind turbine foundations	S. Aghasibayli
11:40		

WP13 & WP15 & TF & WCO: Corrosion in Low Carbon Energy Technologies (Lb2)

Chairs: Gareth Hinds, Damien Feron

Thursday, 10 September 2020, 14:00-16:00.

Time	Title	
14:00	Keynote: Opportunities for corrosion scientist in durability evaluation for photovoltaic applications	P. Volovitch
14:40	Propagation mechanism of wormlike defects in CIGS solar cells.	K. Bakker
15:00	Al ₂ O ₃ barrier film by atomic layer deposition: is it an effective encapsulation layer for flexible Cu(In,Ga)Se ₂ solar cell under realistic operating condition?	S. Zhang
15:20	Degradation of CIGS solar cells due to the migration of alkali-elements	M. Theelen
15:40	Interfaces and Stability in Halide Perovskite Solar Cells	P. Schulz

mCBEEs: Corrosion and corrosion protection from micro- to nano-scale. Towards long-term durability of miniaturized systems (Lb1)

Chairs: Caterina Zanella / Maria Lekka

Friday, 11 September 2020, 10:00-12:00

Time	Title	
10:00	Keynote The application of computed tomography approaches to the study of coatings and corrosion	A. Hughes
10:40	Comparative study on the anodic oxidation behavior of nickel in aqueous KOH solutions and molten KOH	N. Mohamed
11:00	Endurance of electrocatalytic mesoporous Ni-Pt particles supported on three-dimensional C and Ni substrates	K. Eiler
11:20	Localised corrosion on flow plates for PEM fuel cells under varying operating conditions	L. Mølmen
11:40	Study of corrosion phenomena on contact tracks of SD memory cards with ENIG final finishing	M. Mousavi

mCBEEs: Corrosion and corrosion protection from micro- to nano-scale. Towards long-term durability of miniaturized systems (Lb2)

Chairs: Caterina Zanella / Maria Lekka

Friday, 11 September 2020, 14:00-16:00

Time	Title	
14:00	The influence of size and nearest neighbour distance of intermetallic particles in cast Al-Si alloys on the localized deposition of cerium conversion coatings	S. Sainis
14:20	Electrochemistry of NaCl droplet on carbon steel using microcapillary for atmospheric corrosion modelling	K. Bangalore Gangadharacharya
14:40	A comprehensive insight on the degradation of NiCo and NiCo/Au coated micro-robots during immersion in simulated body fluids	E. Rahimi
15:00	Electrochemical monitoring of the corrosion behavior of functional oxide nanoparticles under biological environments	D. Kim
15:20	Protection of biomedical stainless steel and titanium by ALD single and multi-layered thin films made of Al ₂ O ₃ and HfO ₂	I. Spajić
15:40		

WP4: Nuclear Corrosion (Lb1)

Chairs: Stefan Ritter, Damien Feron

Monday, 7 September 2020, 10:00-12:00

Time	Title	Speaker
10:00	SCC testing of an industrial Alloy 182 dissimilar metal weld under PWR conditions	Rik-Wouter Bosch
10:40	Evaluation of Rotary Peening for Mitigating Primary Water Stress Corrosion Cracking in Nickel-Based Alloys	Michael Lowden
11:00	Investigation of the aqueous corrosion of fusion reactor WCLL breeder blanket structural material Eurofer-97 for DEMO	David Kumar
11:20	Long-term corrosion performance of steel T91 in flowing lead-bismuth eutectic with 2E-7 mass% dissolved oxygen at 400 °C	Valentyn Tsisar

WP4: Nuclear Corrosion (Lb2)

Chair(s): David Kumar, Benoist Muzeau

Monday, 7 September 2020, 14:00-16:00

Time	Title	Speaker
14:00	The Oxidation and Carburation Behaviour of Type 316H Austenitic Stainless Steel in a simulated Advanced Gas-cooled Reactor environment, by investigating the combined effects of Stress, Strain and Surface Preparation.	Athansios Gredis
14:20	Anoxic corrosion of carbon steel under gamma irradiation	Stavroula Giannakandropoulou
14:40	Localized corrosion of carbon steel casing foreseen for the High Level Waste geological disposal: monitoring by electrochemical noise and acoustic emission measurements	Chloe Comas
15:00	Electrochemical Investigation of Steel Corrosion in Saline Media	Pelin Cakir-Wuttke
15:20	New approaches in evaluation of canister lifetime in Czech DGR programme	Jan Stouilil
15:40	Influence of the LiNO ₃ corrosion inhibitor and the cement porosity on the anaerobic corrosion rate of aluminium in OPC matrix	Sebastian Caes

WP4: Nuclear Corrosion (Lb3)

Chair(s): Zaiqing Que, Stefan Ritter

Tuesday, 8 September 2020, 10:00-12:00

Time	Title	Speaker
10:00	Tests on Pit-to-Crack Transition in Austenite Stainless Steels for Understanding of Chloride-induced Stress Corrosion Cracking in a Dry Storage Canister	Seunghyun Kim
10:20	Effect of Heat Treatment, Cold Working and Long-term Heating in Air on the Stress Corrosion Cracking Growth Rate in Simulated PWR Primary Water for Commercial TT Alloy 690	Toshio Yonezawa
10:40	Lead-Assisted Stress Corrosion Cracking of Alloy 690TT Exposed to Caustic Solutions	Guilia Mazzei
11:00	Lead and Sulphur induced SCC of alloys 600/690 in a simulated PWR secondary side liquid phase at pH4	Jihane Ben Mohamed
11:20	Influence of the transient conditions on the oxidation and release of corrosion products from alloy 690 steam generator tubes	Lydia Laffont
11:40	Assessing the corrosion behaviour of stainless steels at high pH via electrochemical measurements simulating geological disposal conditions of radioactive waste	Brent Verhoeven

WP4: Nuclear Corrosion (Lb4)

Chair(s): Damien Feron, Alberto Saez-Maderuelo

Tuesday, 8 September 2020, 14:00-16:00

Time	Title	Speaker
14:00	Study of corrosion products growth on MgZr (0.5%) in poral solution of geopolymer cement by combining Auger Electrons Spectroscopy and in situ Raman Spectroscopy	Polina Volovitch
14:20	Study of the corrosion of MgZr alloy embedded in geopolymers using a multiscale approach	Remi Boubon
14:40	Alpha radiolysis impact on magnesium corrosion at magnesium/geopolymer interface in synthetic pore solution	Benoist Muzeau
15:00	Corrosion resistance of a Composite Cu+SiC Cold spray Deposit on Steel substrate for High-Level Radioactive Waste Disposal Containers	Zineb Bensaid
15:20	Reaction Mechanisms Governing Iron-Glass Interaction in HLW Disposal Context	Leila Galai
15:40	Evolution of Copper Corrosion Dynamics as a Function of Solution Parameters	Masoumeh Naghizadeh

WP4: Nuclear Corrosion (Lb5)
Chair(s): Rik-Wouter Bosch, Michael Lowden
Wednesday, 9 September 2020, 10:00-12:00

Time	Title	Speaker
10:00	Characterisation of oxides formed on SS304L exposed to high temperature high pressure water: Effect of surface conditions	Annesha Das
10:20	In situ Glass-Iron-Argillite alteration at the Andra's Underground Research Laboratory (Bure): experiments carried out for 2, 4 and 8 years	Charly Carrière
10:40	Nuclear waste glass/iron/clay interactions: a multi-scale study relying on characterization and geochemical modeling	Alexis Delanoe
11:00	TEM investigation of SCC crack tips in high Si stainless steel tapered specimens	Aaron Penders
11:20	Effect of surface finishing on the corrosion of austenitic stainless steel 304L in simulated BWR and PWR environments	Kathleen Jaffré
11:40	Impact of chloride on the environmentally-assisted crack initiation behaviour of low-alloy steel under boiling water reactor conditions	Stefan Ritter

WP4 & WP5 & WP 22: Environmentally assisted Crack Initiation
Chair(s): *Theo Hack, Krzysztof Wolski, Stefan Ritter*
Wednesday, 9 September 2020, 14:00-16:00

Time	Title	Speaker
14:00	The influence of tensile stress on hydrogen permeation in dual phase steel (DP – 980 steel) by modified electrochemical hydrogen permeation technique	Shekar Kallem
14:20	Combining Galvanic and Mechanical Stress Solutions Using a Risk Mapping Approach to Improve Corrosion Related Damage Assessment	Timothy Froome
14:40	Effects of Surface Finishes on Stress Corrosion Cracking Susceptibility of Alloy 182	Zaiqing Que
15:00	Influence of temperature and surface treatment on the SCC initiation behaviour of Alloy 182 weld metal under simulated BWR conditions	Stefan Ritter
15:20	Effect of metallurgical defects on the susceptibility to IGSCC of Alloy 600 exposed to primary water	Colette Perez
15:40	Intergranular hydrogen embrittlement of different heat-treated nickel-based superalloy 725	Imam Taji

**VUB Corrosion and corrosion protection of additive
manufactured metals (Lb1)**

Chair(s): Iris de Graeve, Reynier Revilla

Thursday, 10 September 2020, 10:00-12:00

Time	Title	Speaker
10:00	Design materials based on simulation results of silicon induced segregation at AlSi10Mg interface fabricated by selective laser melting	Yucheng Ji
10:20	Corrosion behaviour of the as printed surface of 316L stainless steel manufactured by selective laser melting	Francesca Andreatta
10:40	Microstructure and corrosion aspects of LMD single tracks 316L stainless steel on wrought material	Iris De Graeve
11:00	Effect of heat treatment on the corrosion behaviour of SLM fabricated CoCrMo alloys in simulated body fluid	Mahla Seyedi
11:20	Impact of defects on the anodizing behavior of additive manufactured Al-Si alloys	Reynier Revilla

**VUB Corrosion and corrosion protection of additive
manufactured metals (Lb2)**

Chair(s): Iris de Graeve, Reynier Revilla

Thursday, 10 September 2020, 14:00-16:00

Time	Title	Speaker
14:00	Hot-dip galvanizing of steel components produced by the 3D printing process WAAM	Ronny Kuehne
14:20	In situ Atomic Force Microscopy (AFM) analysis of additively manufactured AISI 316L stainless steel under combined corrosive and mechanical load	Ozlem Ozcan
14:40	Corrosion performance of additive manufactured 316L stainless steel	Briony Holmes
15:00	Evaluation of corrosion and tribocorrosion resistance of CoCrW alloy produced by SLM technology.	Alex Lanzutti
15:20	Advanced corrosion protection of additive manufactured light metals by CERANOD® plasma electrolytical oxidation process	Anna Buling
15:40	Corrosion behaviour of printed 1.4404 in Drinking water systems	Wilhelm Erning

WP11: Corrosion of steel in concrete
Chair(s): Michael Raupach, David Bastidas
Friday, 11 September 2020, 10:00-12:00

Time	Title	Speaker
10:00	Dissolution and Repassivation Behavior of Reinforcing Steel Deformed in Simulated Concrete Solution Containing Cl-	Kotaro Doi
10:20	Investigation into use of Electrochemical Noise Measurement to assess Corrosion of Steel Reinforcement in Concrete	Douglas Mills
10:40	Results from field testing with the FKP	Eugen Turcu
11:00	EFFECT OF SULFATES AND SULFIDES IN THE CORROSION OF REBARS IN MORTAR	Carmen Andrade
11:20	Electrochemical Sensors to Monitor the Ingress of Corrosive Species into Concrete	Mario Ferreira
11:40	SMART RELEASE CORROSION INHIBITORS FROM ENVIRONMENTALLY-FRIENDLY MICROCAPSULES FOR STEEL REINFORCED CONCRETE	David Bastidas

WP7: Corrosion Education

Chair(s): Daniela Zander, Yaiza Gonzalez Garcia

Friday, 11 September 2020, 14:00-16:00

Time	Title	Speaker
14:00	Terminology Confusion in Corrosion Science and Engineering	Alec Groysman
14:20	Standards and conformity assessment regarding education and person certification.	Agatha Swierczynski

WP23: Corrosion Reliability of Electronic Materials and Devices (Lb1)

Chairs: Rajan Ambat, Morten Jellesen

Monday, 7 September 2020, 10:00 – 12:00

Time	Title	Presenter	
10:00	A Study on Mixed Corrosion Phenomena and Prevention Research of Wear and Induced Stray-current for Electrification Vehicles	S. AHN	
10:20	Corrosion reliability of different bond wires with sulfur-containing adhesion promoters	M. Sehr	
10:40	Comparative failure analysis of corrosion induced failure modes of hearing aids from Asia, Europe and US market	A. Yadav	
11:00	Electrochemical Investigation and FEM Modeling of Ion- and Water-Transport through Polymer Membranes	L. Varain	
11:20	LA-ICP-MS/LIBS Analysis of Polymer Coatings: Investigation of Degradation and S-Diffusion under Exposure to UV-Radiation, H ₂ S and SO ₂	M. Mayr	
11:40	On the electrochemical migration mechanism of gold in electronics	B. Medgyes	

WP23: Corrosion Reliability of Electronic Materials and Devices (Lb2)

Chairs: Rajan Ambat, Morten Jellesen

Monday, 7 September 2020, 14:00 – 16:20

Time	Title	Presenter
14:00	Corrosion and corrosion inhibition of silver sintered power electronic modules	M. Meier
14:20	Effect of wave and reflow solder flux residue on the corrosion reliability of electronics	F. Li
14:40	Parametric study of regional climates on electronics: Understanding local climate effects on corrosion failure mechanisms	H. Conseil-Gudla
15:00	PCBA Failure Estimation by Analysis of Leakage Current Behavior	S. Bahrebar
15:20	Performance Evaluation of Conformal Coatings for PCBAs under Cyclic Humidity Conditions	I. Mantis
15:20	How to Increase the Reliability of Electronics in Severe Corrosive Environments	P. Dr. Gentschev
16:00	Methods for humidity protection of electronic products – an overview	K. Schmidt

**WP9 & WP21: Ancient metals in marine environments:
corrosion mechanisms and protective treatments**

Chairs: Philippe Refait / Delphine Neff

Tuesday, 8 September 2020, 10:00 – 11:00

Time	Title	Presenter
10:00	Microbial driven stabilization of archaeological iron artifacts	S. James
10:20	Cathodic protection of wrecks: on-site global characterization to a multiscale analysis of corrosion products layers and biodiversity	F. Mercier-Bion
10:40	The impact of pH and temperature on copper corrosion products in subcritical conditions: delivering insight into the treatment of archaeological copper alloys	D. Watkinson

**WP21: Corrosion of Archaeological and Historical Artefacts
(Lb1)**

Chairs: Sabrina Grassini, David Watkinson

Tuesday, 8 September 2020, 11:20 – 12:00

Time	Title	Presenter
11:20	The role of relative humidity in the corrosion rate of copper in the presence of cuprous chloride: a risk-based approach	D. Watkinson
11:40	Atmospheric corrosion of Silicon Bronze for contemporary art	C. Velino

**WP21: Corrosion of Archaeological and Historical
 Artefacts (Lb2)**

Chairs: Sabrina Grassini, David Watkinson

Tuesday, 8 September 2020, 14:00 - 15:40

Time	Title	Presenter
14:00	Corrosion inhibitors or converters? Understanding the role of organic molecules for the protection of copper-based objects in atmospheric conditions	E. Ferrari
14:20	Corrosion protection of copper and bronze statuary by carboxylates-doped sol-gel coatings	S. Lob
14:40	Removal of copper corrosion products from archaeological copper alloys using a Q-switch Nd:YAG 1064 laser: impact on selected corrosion products	D. Watkinson
15:00	The Shwedagon Pagoda , Yangon, Myanmar: studying degradation of the gold plates on the roof	H. Terry
15:20	Approaches to cast-iron object restoration: supplementation of a fragment of a cast-iron railing in the Governor's Summer Residence in Prague using an original technology	J. Ruzicka

WP9: Marine Corrosion (Lb1)

Chairs: Philippe Refait / Shiladitya Paul

Wednesday, 9 September 2020, 10:00 – 12:00

Time	Title	Presenter
10:00	Modeling Dual-rate Data in Corrosion Potential Online Detection of Low Alloy Steels in Marine Environment	L. Chen
10:20	Accelerated corrosion testing of saline resistant weathering steel	K. Van Den Bergh
10:40	Correlation of corrosion rates of unalloyed steel with climatic and microclimatic conditions at the offshore testsite on Heligoland	O. Kranz
11:00	Degradation of intact marine coating during service	Y. Liu
11:20	Influence of Mg ²⁺ ions on the formation of green rust compounds in marine environments	P. Refait
11:40	Holistic corrosion protection concepts for offshore wind	L. Lichtenstein

WP9: Marine Corrosion (Lb2)
Chairs: Philippe Refait / Shiladitya Paul
Wednesday, 9 September 2020, 14:00 – 15:00

Time	Title	Presenter
14:00	Performance and properties of two corrosion-sensing epoxy powder coating systems in marine environments	C. Melton
14:20	Development of multilayer coating systems for mitigating corrosion of offshore wind turbines	A. Loukodimou
14:40	The atmospheric corrosion behaviors of hot dip galvanized and continuously galvanized steels	T. Tuken

WP9 & WP10: Microbial corrosion in marine environment
Chairs: Philippe Refait / Régine Basseguy
Wednesday, 9 September 2020, 15:20 – 16:00

Time	Title	Presenter
15:20	Assessment of Anticorrosion Properties of Biomineralized Induced Coating formed on Al Alloy in Marine Environment. A new Nature-Inspired Approach for Corrosion Protection	M. Marques
15:40	Identification and characterization of marine bacteria inducing CaCO ₃ precipitation from calcareous deposits obtained under cathodic protection	J. Vincent

WP10: Microbial Corrosion (Lb1)

Chairs: Pierangela Cristiani, Régine Basséguy

Thursday, 10 September 2020, 10:00 – 11:20

Time	Title	Presenter
10:00	Testing the corrosion resistance of concrete for wastewater infrastructure	G. Jiang
10:20	Accelerated electron flow and direct electron transfer in corrosion by iron-corrosive methanogen	S. Wakai
10:40	Pyocyanin encoding gene PhzM and phzS regulated the extracellular electron transfer in microbiologically influenced corrosion by <i>Pseudomonas aeruginosa</i>	L. Huang
11:00	Biofouling and Microbial Influenced Corrosion of Carbon Steel in closed Process chilled Water Loop Systems	M. Wiegand

WP10: Microbial Corrosion (Lb2)
Chairs: Pierangela Cristiani, Régine Basseguy
Thursday, 10 September 2020, 14:00 – 15:40

Time	Title	Presenter
14:00	Trained to corrode: Effect of cultivation conditions on the electrochemical activity of metal reducing bacteria (MRB) on stainless steel surfaces	N. Wurzler
14:20	Electrochemical characterization of stainless steels passive layers in hypersaline solution	L. Iannucci
14:40	Inspection of mooring lines	T. Liengen
15:00	Corrosion Of Iron Nanofilm Triggered By Shewanella Oneidensis	M. Lherbette
15:20	Towards a Mathematical Model of the Effect of Acidifying Biofilms on the Microbial Influenced Corrosion of Carbon Steel in Desalinated Seawater	J. Anguita

WP10: Microbial Corrosion (Lb3)

Chairs: Pierangela Cristiani, Régine Basséguy

Friday, 11 September 2020, 10:00 – 11:20

Time	Title	Presenter
10:00	Investigating under-deposit corrosion in the presence of microorganisms using a multi-electrode array sensor	E. Suarez
10:20	Multifunctional Inhibitors for Microbiologically Influenced Corrosion of High Strength Steel in Marine Environments	A. Somers
10:40	Microbiologically influenced corrosion of FeCoCrNiMo0.1 high-entropy alloys by marine <i>Pseudomonas aeruginosa</i>	Y. Lou
11:00	Investigation of Microbial Influenced Corrosion (MIC) of lean duplex stainless steel in waste water conditions	N. Noël

WP10: Microbial Corrosion Course Keynotes (Lb4)

Chair: Pierangela Cristiani

Friday, 11 September 2020, 14:00 – 16:00

Time	Title	Presenter
14:00	Introduction to direct & indirect mechanisms of biocorrosion by microbial consortia	Pierangela Cristiani
14:30	The perspective of Extracellular Electron Transfer: Direct Electron Transfer from Geobacter and Mediated Electron Transfer from Shewanella	Dake Xu
15:00	Mechanisms of mixed pools and the particular case of Geobacter	Régine Basseguy
15:30	Mechanisms of MIC- driven pitting of Cu- Ni alloys and carbon steels	Iwona Beech

WP17: Automotive Corrosion (Lb1)
Chairs: Tomas Prosek, Elizabeth Szala
Monday, 7 September 2020, 10:00-12:00

Time	Title	
10:00	Influence of coating thickness on corrosion behaviour and hydrogen uptake of Zn-Al-Mg alloy coated dual-phase steel in sodium chloride solution	<u>I. Traxler</u>
10:20	Investigation of Hydrogen Desorption Behaviour in Advanced High Strength Steels (AHSS) using Thermal Desorption Spectroscopy (TDS) and Ag decoration Technique	<u>D. Mallick</u>
10:40	Combined GDOES & electrochemical micro-cell measurements to study the influence of hot stamping on the galvanic behaviour of hot-dip Al-Si coatings on 22MnB5 steel	<u>C. Pucci Couto</u>
11:00	Atmospheric corrosion of a new martensitic stainless steel for automotive applications – MaX1.2HY and MaX1.6, two grades for different applications	<u>C. Boissy</u>
11:20	Comparison of deposition behavior of Silane and Zinc phosphate conversion coating on MaX1.2HY, a newly developed group of stainless steel	<u>M. Nabizadeh</u>
11:40		

WP17: Automotive Corrosion (Lb2)
Chairs: Jan-Olov Nilsson, Elizabeth Szala
Monday, 7 September 2020, 14:00-16:00

Time	Title	
14:00	Cyclic Corrosion Testing and Numerical Simulation of an Aluminum–Zinc–Steel Galvanic System designed for an Automotive Chassis	<u>E. Morales Murillo</u>
14:20	Anticorrosion modelling in automotive industry: experimental aspects	<u>W. Jemmal</u>
14:40	Introducing the Corrosion Accelerated Test with Controlled Humidity (CATCH) for testing aluminum materials in automotive applications	<u>S. Fowler</u>
15:00	Zirconium based pretreatments	<u>G. Ciaccio</u>
15:20	Structural adhesive bonding of aluminum: new technologies for surface treatment	<u>M. Labeau</u>
15:40	Effect of anisotropy on corrosion of AlSi10Mg 3D-printed for automotive applications	<u>A. Gullino</u>

WP17: Automotive Corrosion (Lb3)
Chairs: Bernd Normand, Elizabeth Szala
Tuesday, 8 September 2020, 10:00-12:00

Time	Title	
10:00	Reliability corrosion test development for air conditioning condenser	<u>A. BELE-ZATA</u>
10:20	Alkaline Corrosion Behaviour of High Frequency Welded Aluminium Microfin Tubes	<u>R. Ambat</u>
10:40	Corrosion behavior of a series of multiphase steels with extra-ordinary strength and ductility made from medium carbon high Si nominal composition	<u>N. Verma</u>
11:00		
11:20		
11:40		

WP20: Corrosion & Corrosion Protection of Drinking Water Systems

Chair: J. Erning

Tuesday, 8 September 2020, 14:00-16:00

Time	Title	
14:00	Susceptibility to stress corrosion cracking and stress-induced dealloying of leaded and lead-free brasses in simulated drinking water	<u>C. Monticelli</u>
14:20	The effect of silica fume and fly ash admixtures on the durability of prestressed concrete cylinder pipe exposed to external chloride and chloride plus sulfate attacks via the electrochemical impedance spectroscopy method	<u>S. Hassi</u>
14:40	Corrosion behaviour of Lean Duplex Stainless Steel for AOP applications in wastewater treatment plants	<u>M. Nagels</u>
15:00	Corrosion Problems with 1.4521 steel pipes in drinking water	<u>J. Erning</u>
15:20	Corrosion in domestic hot water systems	<u>G. Kawaley</u>
15:40		

WP18: Tribocorrosion (Lb1)

Chairs: Stefano Mischler, Anna Igual Munoz

Wednesday, 9 September 2020, 10:00-12:00

Time	Title	
10:00	New representative Master Curve in tribocorrosion, Applications on trunnion issue, hip joint	<u>J. Geringer</u>
10:20	The effect of counterface material on the tribocorrosion performance of wrought CoCrMo biomedical alloy	<u>A. Mazzonello</u>
10:40	An experimental study of the lubrication effect on the tribocorrosion behavior of a biomedical CoCrMo alloy	<u>S. Mischler</u>
11:00	Unravelling the tribocorrosion performance of low-P electroless nickel multilayers under cathodic protection	<u>E. García-Lecina</u>
11:20		
11:40		

WP18: Tribocorrosion – incl. Tribocorrosion and Coatings
Chairs: Stefano Mischler, Anna Igual Munoz
Wednesday, 9 September 2020, 14:00-16:00

Time	Title	
14:00	Development of wear resistant PEO coatings for titanium alloys in biomedical applications	<u>S. Lederer</u>
14:20	Tribocorrosion of 316L laser claddings reinforced with submicrometer TiC in artificial seawater	<u>M. Rodriguez Ripoll</u>
14:40	Impact of Sliding Wear on the Pitting Behavior of Duplex Stainless Steels	<u>M. Parker</u>
15:00		
15:20		
15:40		

WP22: Corrosion Control in Aerospace (Lb1)
Chairs: Theo Hack, Mikhail Zheludkevich
Thursday, 10 September 2020, 10:00-12:00

Time	Title	
10:00	Keynote Lecture Characterization at the microstructural scale of the growth mechanisms and anticorrosion properties of trivalent chromium conversion coatings on 2024 aluminium alloys	<u>C. Blanc</u>
10:40	Aluminium alloys surface preparation for conversion coatings	<u>C. Trinidad</u>
11:00	In-situ liquid phase and quasi in-situ TEM studies of lithium-based conversion layer formation on aluminum alloys	<u>A. Kosari</u>
11:20	LDH pre-treatment for friction spot joined AA2024-T3/CFRP structures	<u>M. Zheludkevich</u>
11:40	Novel Cr-free electrically conductive coating for aerospace aluminium alloys	<u>I. Ostrovsky</u>

WP22: Corrosion Control in Aerospace (Lb2)
Chairs: Theo Hack, Mikhail Zheludkevich
Thursday, 10 September 2020, 14:00-16:00

Time	Title	
14:00	Effect of stability and instability of cerium oxide layers on the protection of AA2024-T3	<u>P. Denissen</u>
14:20	Lithium-leaching coatings for the Aerospace Industry, Connecting Science with Product Development	<u>V. Peter</u>
14:40	Corrosion protection of aeronautic components by an eco-friendly anaphoretic e-coating	<u>J. Rodríguez</u>
15:00	U-CROSS project: Early detection, by monitoring and prediction of corrosion damage of coated aeronautic Aluminum alloys through the application of calibrated Ultrasonic Corrosion Sensors	<u>A. PROUST</u>
15:20	Evaluation and monitorization of the corrosion protection provided by trivalent chromium based pre-treatments on real components of aircraft	<u>C. Proença</u>
15:40	Corrosion protection of three monocarboxylic acid as hydrophobic sealing of anodized aluminium alloy 2024-T3	<u>N. Vejar</u>

WP22: Corrosion Control in Aerospace (Lb3)
Chairs: Theo Hack, Mikhail Zheludkevich
Friday, 11 September 2020, 10:00-12:00

Time	Title	
10:00	Use of real and mathematical models to predict aircraft corrosion in unpressurised bays	<u>I. Cole</u>
10:20	Oxide layer removal from aluminium alloys	<u>I. Vladu</u>
10:40	Corrosion evolution on aeronautical aluminium alloy 2024 for different artificial ageing conditions	<u>C. Charalampidou</u>
11:00	The Effect of Secondary Ageing Treatment on the Localised Corrosion Behaviour of Precipitation Hardened Stainless Steel	<u>A. Wilson</u>
11:20	Initiation of environmentally assisted cracking in high strength aluminium	<u>T. Burnett</u>
11:40	The role of anodizing parameters in adhesion and corrosion protection performance of Cr(VI)-free primers on AA2024	<u>M. Paz Martinez-viademonte</u>

WP6 & WP8: Corrosion Mechanisms, Methods and Modelling (Lb11)

Chair: Iris De Graeve

Friday, 11 September 2020, 14:00-16:00

Time	Title	
14:00	Sensitivity to pitting corrosion of stainless steels produced by additive manufacturing	<u>A. RACOT</u>
14:20	Effect of homogenization temperature on the microstructure and corrosion behaviour of a twin roll cast Al-Mn-Fe-Si alloy system	<u>D. Verkens</u>
14:40	A New Methodology for Cross Sectional Area Analysis in Scanning Electrochemical Microscopy for the Investigation of Corrosion Processes at Metallic Coated Steels	<u>M. Fernandes</u> <u>Bolsanello</u>
15:00		
15:20		
15:40		

WP19: Polymers and Advanced Materials

Chair: Jürgen Heinemann

Monday, 7 September 2020, 10:00-11:00

Time	Title	
10:00	Influence of the addition of triethylenetetramine on the chemical structure of GPTMS/TEOS hybrid sol-gel coatings applied on carbon steel	<u>F. Perrin</u>
10:20	Compatibility of polymers with aged heating oil containing 10 % and 20 % biodiesel under static conditions	<u>M. Weltschev</u>
10:40	New Generation of Acrylate-Based Hydrogels as Sealing Crack Injections in Reinforced Concrete Structures	<u>M. Haufe</u>

WP14 & WP19: Polymers in Organic Coatings (Lb1)

Chairs: Jürgen Heinemann / Wolfram Fürbeth

Monday, 7 September 2020, 11:20-12:00

Time	Title	
11:20	Corrosion protection by organic coatings: onset of disbonding and delamination at the buried organic-inorganic interface	<u>N. Madelat</u>
11:40	Development of water-based, bio-based paints with high corrosion performance	<u>A. Romano</u>

WP14 & WP19: Polymers in Organic Coatings (Lb1)

Chairs: Jürgen Heinemann / Wolfram Fürbeth

Monday, 7 September 2020, 14:00-16:00

Time	Title	
14:00	Exploring AFM-IR in practical polymer coating characterization	<u>S. Gibbon</u>
14:20	Investigating the role of surfactants on anti-corrosive properties of waterborne acrylic coatings	<u>B. Luigjes</u>
14:40	Electrodeposited nanocomposite coatings for corrosion protection of magnesium alloys	<u>C. Das</u>
15:00	Multilayer coatings for corrosion protection of Mg alloys used in biomedical applications	<u>J. Tedim</u>
15:20	Solvent uptake, plasticisation and carbamation: the effects upon the resistance characteristics of a model epoxy amine coating	<u>L. Traverse</u>

TF: Atmospheric Corrosion (Lb1)

Chairs: Tomas Prosek, Leonardo Iannucci

Tuesday, 8 September 2020, 10:00-12:00

Time	Title	
10:00	<u>Keynote Lecture</u> Data-driven approach to understand and predict atmospheric corrosion	<u>D. Zhang</u>
10:20	Hydrogen Permeation at Scratch Formed on Zn Coated Steel During Long Wet-Dry Corrosion Test and Analysis of Corrosion Products	<u>K. Sakata</u>
10:40	Effect of flux dregs on inner surfaces corrosion of circular piping type steel tower	<u>A. Kurokawa</u>
11:00	Characteristics of metal corrosion data and common data processing methods	<u>D. Fu</u>
11:20	Atmospheric corrosion monitoring at various positions inside wind turbines placed in different geographical sites	<u>M. Jellesen</u>
11:40	Corrosion Monitoring Sensor for Hot Dipped Galvanized Steel Applications in Geological Protection Systems	<u>M. Sorg</u>

TF: Atmospheric Corrosion (Lb2)

Chairs: Fabio Maria Bolzoni, Jens Conderaerts

Tuesday, 8 September 2020, 14:00-16:00

Time	Title	
14:00	Effect of steel and zinc coating thickness on cut edge corrosion of coil coated materials	<u>T. Prosek</u>
14:20	A study on leaching and inhibition mechanisms of strontium aluminium polyphosphate inhibitor pigment	<u>R. Emad</u>
14:40	Premature degradation of industrial assets in energy business	<u>J. Wielant</u>
15:00	Detecting early signs of coating degradation on shoreline exposed reference specimens produced during offshore jacketed platform retrofit	<u>S. Martinez</u>
15:20	Measuring the Capacity of Aerospace Coatings to Protect an Aluminum Alloy from Environment Assisted Cracking	<u>F. Friedersdorf</u>

WP17 & WP22 & TF: Corrosion monitoring: Way to predict atmospheric corrosion

Chair: Elizabeth Szala

Wednesday, 9 September 2020, 10:00-12:00

Time	Title	
10:00	Atmospheric Corrosion Evaluation of Steel Structures and Semi-Hermetic Equipment with Wetness and Deposition Concentration Monitorings	<u>T. Tatsuoka</u>
10:20	Evidence fusion-based data mining to atmospheric corrosion	<u>J. Meng</u>
10:40	Corrosion Behavior of Weathering Bolts under Simulated Accelerated Corrosion	<u>N. Lyu</u>
11:00	APPLICATION OF RESISTOMETRIC PROBES FOR DETERMINATION OF CORROSION MECHANISMS AND PROTECTION METHODS' EFFECTIVENESS OF LEAD HISTORICAL ARTIFACTS	<u>K. Popova</u>
11:20	Measurement of Environmental Spectra and Corrosivity for Aircraft Corrosion Management	<u>F. Friedersdorf</u>

TF: Atmospheric Corrosion (Lb3)
Chairs: Fritz Friedersdorf, Matthias Sorg
Wednesday, 9 September 2020, 14:00-16:00

Time	Title	
14:00	A low-cost portable instrument for in-situ EIS measurements	<u>L. Iannucci</u>
14:20	Atmospheric Corrosion Resistance of Stainless Steel Welds after Heat tint removal by several cleaning techniques	<u>J. J. Conderaerts</u>
14:40	Atmospheric corrosion behaviour of zinc and zinc alloys: comparison between natural and accelerated exposure	<u>F. Bolzoni</u>
15:00	Agar-based gels as an electrolyte for corrosion diagnostics	<u>A. Heyn</u>

WP3 & WP14: Coatings for High Temperatures

Chairs: Mathias Galetz, Silvia Ulrich

Thursday, 10 September 2020, 10:00-10:40

Time	Title	
10:00	Ni-NiFe₂ double-layer coating for solid oxide fuel cell steel interconnect application	<u>S. Geng</u>
10:20	Mechanism research on high temperature oxidation of a novel nanocrystalline/YSZ thermal barrier coating	<u>J. Wang</u>

WP3: Corrosion by Hot Gases and Combustion Products (Lb1)

Chairs: Mathias Galetz, Silvia Ulrich

Thursday, 10 September 2020, 11:00-12:00

Time	Title	
11:00	High temperature oxidation behavior of low carbon sulfur free cutting steel	<u>N. Lyu</u>
11:20	High-temperature oxidation behavior of medium manganese light steel	<u>S. Li</u>
11:40	Corrosion Mechanism and Effect of the Microstructure on the Corrosion Properties of Cr3C2-NiCrMoNb Thermally Sprayed Coatings	<u>D. Fantozzi</u>

WP3: Corrosion by Hot Gases and Combustion Products (Lb2)

Chair: Mathias Galetz

Thursday, 10 September 2020, 14:00-16:00

Time	Title	
14:00	Effect of H ₂ S on high temperature corrosion of corrosion resistant alloys in a thermal cracking reactor for anthropogenic resources	<u>M. Nimmervoll</u>
14:20	HIGH TEMPERATURE CORROSION RESISTANCE OF METALLIC MATERIALS IN HARSH CONDITIONS	<u>F. Novello</u>
14:40	Type II hot corrosion behaviour of aluminized Ni based superalloys under sulphate mixtures	<u>Y. Wang</u>
15:00	Molten nitrate corrosion behavior of Fe- and Ni-based alloys and coating development strategies for concentrated solar power applications	<u>C. Oskay</u>
15:20	The influence of aluminum content on the wear behavior of NiAl	<u>C. Grimme</u>
15:40	Influence of Water Vapour on the Cyclic Oxidation Behaviour of Aluminized TiAl Alloys and its Impact on the Mechanical Properties	<u>M. Galetz</u>

WP3: Corrosion by Hot Gases and Combustion Products (Lb3)

Chairs: Juho Lehmusto, Ceyhun Oskay

Friday, 11 September 2020, 10:00-12:00

Time	Title	
10:00	Metal Dusting Resistance of Alloy 699 XA Tubes for Application in Petrochemical Industry	<u>R. Rodríguez</u>
10:20	Catalytic Inhibition of Metal Dusting by Cu – The Difference of Cast and AM Alloys	<u>A. Ulrich</u>
10:40	Effect of different fine-grained microstructures and shot-peening on steamside oxidation behavior of TX 304HB (UNS S30432) austenitic stainless steel	<u>B. Calleja</u>
11:00	Effect of Temperature on the Oxidation Mechanism of Ni-30Cr Alloy	<u>X. Huang</u>

WP9 & WP16: Cathodic Protection in Marine Environment
Chairs: Jérôme Cruzillac / Philippe Refait
Monday, 7 September 2020, 10:00-12:00

Time	Title	
10:00	CATHODIC PROTECTION OF OFFSHORE ENERGY INFRASTRUCTURE	B. Wyatt
10:40	Presentation of New ISO 24696, cathodic protection of offshore wind turbine structures	B. Buhr Jensen
11:00	Can anodes interfere when they are mounted on electrically separate structures?	T. Froome
11:20	Cathodic Protection of Steel Pipelines Carrying Hot Fluids in Subsea Environments	A. Araujo Lascano
11:40	Customized testing of bolted connections for large subsea wind structures	M. Østergaard Hansen

WP16: Cathodic Protection (Lb1)
Chairs: Jérôme Cruzillac / Marcel Roche
Monday, 7 September 2020, 14:00-16:00

Time	Title	
14:00	CP potential measurements on coupons: Enhanced assessment of stray current influences by fast data sampling	C. Dombard
14:20	Efficiency of cathodic protection applied to mounded LPG tanks – The latest developments of the CFBP studies	M. Roche
14:40	Impact of cathodic protection on hydrogen charging and corrosion behaviour of uncharged and pre-charged low carbon steel	A. PERROT
15:00	On the use of ER-probes in corrosion rate measurements	F. Martinelli-orlando
15:20	Cathodic protection modeling of a covered and uncovered steel immersed in seawater: Corrosion characterizations	M. MINOLA

WP16: Cathodic Protection (Lb2)
Chairs: Jérôme Crouzillac / Marco Ormellese
Tuesday, 8 September 2020, 10:00-12:00

Time	Title	
10:00	Evaluation of the reliability of IR-Free probes in the presence of DC stray current or complex structures	A. Perrot
10:20	Investigation of critical parameters in alternating current induced corrosion	M. Markic
10:40	Effect of earth resistivity on evaluating the risks from AC interference to pipelines	K. Lax
11:00	Challenging the European Standard NF EN 50162 regarding the evaluation of corrosion risk by DC stray currents	T. Lutzler
11:20	pH measurement during Cathodic Protection and DC Interference	M. Attarchi

Corrosion and Scale Inhibition (Lb1)

Chairs: G. Schmitt, W. Hater

Tuesday, 8 September 2020, 14:00-16:00

Time	Title	
14:00	A universal scale inhibitor	K. Demadis
14:20	Magnesium Hydroxide Inhibition in Water Bearing Systems	D. Disci-Zayed
14:40	The effect of metal hydroxides on silica scale formation	K. Demadis
15:00	Corrosion protection of carbon steels under geothermal stresses	S. Liakaki-stavropoulou
15:20	Corrosion inhibitor use : from laboratory testing to field application	M. Stroe

WP1: Corrosion and Scale Inhibition (Lb2)

Chairs: G. Schmitt, W. Hater

Wednesday, 9 September 2020, 10:00-12:00

Time	Title	
10:00	The effect of different microstructures on corrosion inhibition of high strength steels	M. Behrouz Vaziri
10:20	Exploring Green Corrosion Inhibitors using Electrochemical Noise Measurements of Corrosion in acidic conditions	D. Mills
10:40	Corrosion Inhibition and Acceleration by Rare Earth Ions in Galvanic Couples	M. Oliveira
11:00	Environmental Friendly Film Forming Technologies	W. Hater
11:20	Electrochemical and Quantum Chemical Studies on the Inhibition of Mild Steel Corrosion by a new Diphenyl imidazole derivative	M. Oubaaqa

WP1: Corrosion and Scale Inhibition (Lb3)

Chairs: G. Schmitt, W. Hater

Wednesday, 9 September 2020, 14:00-16:00

Time	Title	
14:00	From active dissolution to corrosion inhibition - tailoring the corrosion behavior of Cu-Zn alloy using different organic nitrogen compounds	N. Ott
14:20	Guanine as an Efficient Environmentally Friendly Copper Corrosion Inhibitor in HCl Solution – An Investigation by Electrochemical and Surface Enhanced Raman Spectroscopy (SERS) Experiments	M. Bandeira
14:40	Inhibited alkaline electrolyte with quinoline-8-sulfonic acid and CaO complex additives for Al-air battery	D. Zhang
15:00	Green inhibitor for corrosion inhibition of mild steel in saline solution	H. Ames Canchaya
15:20	Chuquiraga spinosa as inhibitor eco-friendly of the mild steel protection in acid solution	K. Tufinio Miranda

Corrosion in Concrete and Cathodic Protection (Lb1)
Chairs: Jérôme Cruzillac / Michael Raupach
Thursday, 10 September 2020, 10:00-11:00

Time	Title	
10:00	Cathodic protection of civil engineering structures	O. Lesieutre
10:20	Corrosion behaviour of carbon steel in innovative binders: fundamentals and outlooks	S. Lorenzi

Corrosion in Concrete and Cathodic Protection (Lb2)
Chairs: Jérôme Crouzillac / Michael Raupach
Thursday, 10 September 2020, 14:00-15:20

Time	Title	
14:00	Corrosion behaviour of Mg-Zr alloy in alkaline solutions and in a Na-geopolymer	B. Muzeau
14:20	Cathodic protection of swimming pools	X. Hallopeau
14:40	Use of carbon fibre as impressed-current anode for the cathodic protection of reinforced concrete reinforcements	X. Hallopeau
15:00	Implementation of cathodic protection on an iconic building of the Modern Movement architecture	X. Hallopeau

Environment Sensitive Fracture (Lb1)
Chairs: Christine Blanc, Krzysztof Wolski
Friday, 11 September 2020, 10:00-11:20

Time	Title	
10:00	X-ray Tomographic Observation of Intergranular Stress Corrosion Cracking in Lean Duplex Stainless Steel	K. Eguchi
10:20	Hydrogen trapping in iron and iron-based materials	G. Mori
10:40	Hydrogen Diffusion and Trapping 42CrMo4 Quenched and Tempered Steel: Influence of Grain Size and Plastic Deformation	A. Zafra

Environment Sensitive Fracture (Lb2)
Chairs: Christine Blanc, Krzysztof Wolski
Friday, 11 September 2020, 14:00-16:00

Time	Title	
14:00	Corrosion resistance of the lean duplex material 2202 for oil & gas applications	S. Le Manchet
14:20	Effect of the presence of a controlled oxide on the hydrogen steel interactions	T. Rubben
14:40	Focus on the role of hydrogen on the susceptibility to environment-assisted cracking of a power bed laser beam melting 17-4 PH martensitic stainless steel	C. Blanc
15:00	The interaction between hydrogen and quench cracks in high carbon martensitic steels revealed by thermal desorption spectroscopy and hot/melt extraction	M. Pinson