

PROGRAM ASST 2023, 21-25 MAY 2023

SUNDAY

Registration 16: 30 – 19: 30

Welcome reception 17: 30 – 19: 30

MONDAY		TUESDAY		WEDNESDAY		THURSDAY	
Registration	8: 00 – 8: 45	Registration	8: 00 – 9:00	Registration	8: 00 – 9:00	Registration	8: 00 – 9:00
Opening of the symposium	8: 45 – 9: 00						
Plenary 1 Martin Jarrett	9: 00 – 9: 45	Plenary 3 Asensio Zapata	9: 00 – 9: 45	Plenary 4 Gerald S. Frankel	9: 00 – 9: 45	Plenary 6 Malgorzata C Halseid	9: 00 – 9: 45

Break 9: 45 – 9: 50

Room A	Room B	Room A	Room B	Room A	Room B	Room A	Room B
Surface treatment: Conversion/sealing Mario Ferreira Philippe Marcus	Corrosion: properties /performance Geoff Scamans Herman Terryn	Surface treatment: PEO Arjan Mol Chaofang Dong	Corrosion: Mechanism/testing Maritza Paez Iris de Graeve	Surface treatment Laurent Arurault Lorenzo Fedrizzi	Corrosion: Methods Matthieu Boehm Roland Oltra	Corrosion inhibitors Hiroki Habazaki Kelvin Ogle	Corrosion: MICI Christine Blanc Xiaorong Zhou

9:50–10:10

Lorenzo Fedrizzi	Chaofang Dong/ Yucheng Ji	Aleksey B. Rogov	Kevin Ogle	Mikhail Zheludkevich	Tom Hauffman	Philippe Marcus	Serge Da Silva
Sealing effect of TiO2 films deposited by atomic layer deposition on AA6xxx alloys	Artificial intelligence combined with high-throughput calculations to design corrosion-resistant 7xxx Al alloy	Quasi-capacitive response of memristive-like structure in PEO coating on aluminium under bipolar polarisation	Quantifying the release of intermetallic particles during the etching of aluminium alloys: Kinetic and analytic perspectives.	Insights into mechanism of LDH formation and ion-exchange at Al surfaces	Analyzing interfacial changes between organic coatings and pretreated aluminium substrates in the presence of aqueous electrolytes: a combined EIS-IR approach	Key features of the chemical interaction of organic corrosion inhibitors with Cu and Al surfaces and consequences for inhibition of Al alloys	Towards a new process to offer an eco-friendly protection of aluminium alloys

10:10–10:30

Kevin Ogle	Emad Hasan Bartawi	Iris de Graeve	Huang Zhao	Michele Fedel	Meisam D. Havigh	Lingwei Ma	Maria João Marques
Aluminum alloy etching: New insights by element resolved electrochemical analysis	Effect of aging time on the intergranular corrosion of Al-Mg-Si alloy with trace level content of Cu and Zn	Anodizing of additively manufactured Al-Si alloys	Atomic-scale analysis of hydrogen embrittlement in high-strength Al alloys	Study of the effect of a Layered Double Hydroxides layer developed over anodized AA6082 for surface functionalization	Operando Odd Random Phase Electrochemical Impedance Spectroscopy (ORP-EIS) for in situ monitoring of the aluminum (Al) surface treatments	Enhanced active corrosion protection coatings for aluminum alloys with two corrosion inhibitors co-incorporated in nanocontainers	Impact of microbial activity on the formation of a protective layer on 5083 aluminium alloy in marine environment

10:30–10:50

Wouter Vereycken	Francesco Andreatta	Maciej Sowa	Marti Lopez Freixes	Joao Tedim	Rahul K. Agrawal	Arjan Mol	Regine Basseguy
Zirconium conversion treatment of extruded Al-Mg-Si alloys with increased recycle content	Corrosion behaviour of Al 2139 AM aluminium alloy	Quantifying the influence of electrolyte composition & waveform characteristics on soft sparking behavior during plasma electrolytic oxidation of Al alloys	Near-atomic scale observations of stress-corrosion cracking and hydrogen embrittlement in high-strength 7xxx Al-alloys	Evaluation of anti-corrosion properties of layered double hydroxides used in the treatment of eutrophic waters: moving towards circular economy concepts	Application of electrochemical noise techniques for understanding environmentally assisted cracking of an Al-Zn-Mg alloy	Towards machine-learning-based corrosion inhibitor discovery by consistent, reliable and time-resolved electrochemical analysis	Aluminium alloy in natural seawater: an inspiring source to protect material toward corrosion

10:50-11:10

Malgorzata C Halseid	Masatoshi Sakairi	Marie-Georges Olivier	Jinshan Pan	Marlon Mopon Jr.	Dan Persson	Can Özkan	Christine Blanc
Effect of alloy chemistry and etching pretreatment on corrosion properties of powder coated recycling-friendly aluminium profiles	Effects of metal temperature and immersion duration on electrochemical behavior of aluminum alloys	Improvement of corrosion & mechanical properties of plasma electrolytic oxidation (PEO) layer applied on AA2024 by sealing with different sol-gel coatings	Importance of solvent water in DFT study of adsorption at electrochemical NaCl Al interface	Effect of delayed Ce3+ supply on the local degradation and protection kinetics of IMs in AA2024-T3	Nano scale IR-spectroscopy studies of initial atmospheric corrosion of aluminium alloys	Time-resolved electrochemical studies of AA2024-T3 corrosion inhibition: sodium dichromate vs. high-performing organic inhibitors	Electrochemical impedance spectroscopy study of the microbially-induced surface modifications on a 5083 Al alloy in marine environment

Coffee Break 11:10 - 11:30

Surface treatment: Conversion/sealing Mario Ferreira Philippe Marcus	Corrosion: properties /performance Geoff Scamans Herman Terry	Surface treatment: PEO Arjan Mol Chaofang Dong	Corrosion: Mechanism/testing Maritza Paez Iris de Graeve	Surface treatment Laurent Arurault Lorenzo Fedrizzi	Corrosion: Methods Matthieu Boehm Roland Oltra	Recycling Malgorzata C. Halseid Monica Santamaria	Processing Caterina Zanella Cem Örne
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11:30 - 11:50

Caterina Zanella	Matthieu Boehm/ Coraline Millot	Cem Örne	Dominique Thierry	Mario G.S. Ferrerira	Roland Oltra	Francesca Cavezza	Hiroki Habazaki
Critical role of microstructure and surface preparation on localized conversion coating deposition over cast aluminium alloys	Organophosphate coupling agent for improved bond durability	In-situ SKPFM Volta Potential Measurements for Understanding Localized Corrosion of Aluminium Alloy Microstructures	Development of atmospheric accelerated corrosion tests for aluminum alloys used in the aerospace industry	Atomic layer deposition of nanometric alumina vs corrosion protection on AA2024-T3 alloy	Acoustic emission on damaged painted Al alloys: towards instrumented witness coupons for outdoor corrosion testing	A cross-sectorial effort to reach the full circularity of the aluminium alloys	Fabrication of slippery solid surfaces on anodized aluminum

11:50 - 12:10

Ziyu Li	Hao Tang	Sungmo Moon	Jonah Melegrito	Jan H. Nordlien	Negin Madelat	Alexander Lutz	Christine Blanc
The effect of the duration of aging on the corrosion protective behaviour of a lithium-based conversion layer	Fabrication, Interfacial and Flexural Properties of a Polymer Composite Reinforced by gamma-Al2O3/Al Fibres	Anodizing and dielectric breakdown behaviors of Al alloys	Using standardized reference samples in corrosion testing to improve consistency and comparability of test results between corrosion labs	Improved Corrosion Resistance of Mechanically Expanded Heat Exchangers by Applying Zinc Arc Spray Coating	Investigating the influence of coating/aluminium oxide buried interface on hybrid system's stability	The effects of iron precipitates on the functional properties of recycled 6xxx extrusion alloys	Contribution to the design of aluminium alloys resistant to intergranular corrosion

12:10-12:30

Florian Raffin	Lionel Peguet	Navid Hosseinabadi	Jan T. B. Gundersen	Yinbo Li	Ole Knudsen	Rajan Ambat	Siyu Jin
Role of intermetallic particles distribution in	Mastering stress-corrosion cracking	The plasma electrolytic oxidation of A356-	The influence of test parameter variations on	Effect of Different Surface Treatments on	Design of aluminium - steel joints to avoid	Effect of trace level Zn on intergranular	Improving fatigue properties of aluminum

Al alloys for immersion stability of silicate sealed anodized layers	characterization of 2xxx aluminum alloys	Nb2O5 metal matrix composites in altering power duty cycle	the IGC test results for 6005 alloy	the Friction and Adhesion of 2Al4T6 Alloys	galvanic corrosion in marine and coastal applications	corrosion of Al-Mg-Si alloy	aircraft parts by the high-frequency micro-forging treatment
						12:30-12:50	
						Salil Sainis A methodology for evaluating the corrosion in recycled extrusion 6xxx aluminum alloys	Ahmet Kabil Investigation of Effect of Cast Roll Texture on Surface Evolution During Foil Production
Lunch 12: 40 - 14: 00		Lunch and Poster Session 12: 40 - 14: 30		Lunch 12: 40 - 14: 00		Award/Closing 12: 50 - 13: 10	
Plenary 2 Christine Blanc 14:00 - 14:45		Surface treatment: anodizing Sungmo Moon Kemal Nisancioglu	EV/electronic Dominique Thierry Johan Tidblad	Plenary 5 Iris de Graeve 14:00 - 14:45		Lunch and Departure 13: 10 - 14: 30	
		14:35-14:55					
		Sachiko Ono A new perspective on pore growth in anodic oxide films on Al - Role of electric field strength	Rajan Ambat Microstructure and corrosion investigation of Al-Cu joint bus bars for automotive applications				
Surface treatment Els verboom Rajan Ambat	Corrosion Jan Halvor Nordlien Mikhail Zheludkevich	Modelling Roland Oltra Gerald S. Frankel	Surface treatment Francesco Andreatta Jinshan Pan				
14:50-15:10		14:55-15:15		14:50-15:10			
Kewei Gao Evaluation of pitting corrosion of aluminum alloy based on deep learning	Kemal Nisancioglu Use of effective diffusion coefficient concept for modeling Zn transport near Al alloy surface	Francesco Di Franco Effects of anodizing surface treatment on the mechanical strength of Al alloy 5083 to fiber reinforced composites adhesive joints	Nestor Calabria Gascon Study of the influence of the penetration between an aluminum electrode and a conductive polymer for better solid-state electrolytic capacitors	Sviatlana Lamaka Experimental model validation of coated AA2024: spatially resolved electrochemical activity in a scribe	Celine MIRA New REACH compliant anodized-impregnated-sealed multilayers system for corrosion protection of 2618-T851 Al alloy: A coupled SEM/XPS diagnosis of the inner chemical interactions		
15:10-15:30		15:15-15:35		15:10-15:30			
Ralf Peipmann Removing intermetallics from the surface of AA 7075 using ultrasound during alkaline etching	Zelong Jin The impact of copper on the corrosion behaviour of AA3xxx aluminum alloys	Jiru Qin The mechanism regulating film thickness during porous anodic oxide growth on Al: from homogeneously thick films in soft anodizing to nodule formation in hard	Luciane Sopchenski Corrosion protection of aluminum alloys in cooling systems: from internal combustion engines to electric vehicles	Mats Meesusen FEM to predict corrosion critical conditions in a coating defect on aerospace aluminum alloys	Laurent Arurault Study of material removal during Plasma Electrolytic Polishing of AS7G06 aluminum alloy, resulting from Additive Manufacturing		

		anodizing			
15:30-15:50		15:35-15:55		15:30-15:50	
Kichang Bae/Soomin Lee/Junghoon Lee Surface roughness control of selective laser melted AlSi10Mg alloy by electropolishing	Junjie Wang Ultrafine grained near-surface deformed microstructures formed on extruded Al profiles	Mariana M.-Viademonte The role of anodising parameters on anodic oxide stability and corrosion protection performance of Cr(VI)-free Al corrosion protection systems	Herman Terryn Aluminium bipolar plates in proton exchange membrane fuel cells PEMFES)	Iman Taji Tracking chemical and electrochemical parameters within a filament in filiform corrosion of aluminum: finite element simulation	Reynier I. Revilla Electrochemical conversion of additively manufactured Al-Si alloys
Coffee Break 15:50 - 16:15		15:55-16:15		Coffee Break 15:50 - 16:15	
		Michael Schneider Citric acid anodizing of AA 7075	Ali Davoodi Surface engineering of aluminum improves thermal management of electronic devices		
16:15-16:35		Coffee Break 16:15 - 16:30		16:15-16:35	
Monica Santamaria Enhancing corrosion resistance of anodized AA7075 alloys by electrodeposition of superhydrophobic coating	Giuseppe Abbondanza Pd hydride breathing in nano-porous anodic aluminium oxide templates			Nourhan Abdelrahman A Finite element investigation of corrosion protection of aluminum alloy AA2024 through the use of active coatings	Maritza A. Paez The corrosion behavior of an Al-Cu-Li alloy in the presence of Pseudomonas aeruginosa
16:35-16:55		Panel discussion 16:30-17:15 Herman Terryn and Geoff Scamans		16:35-16:55	
Kichang Bae/Soomin Lee/Junghoon Lee Self-healable silicone oil-impregnated nano-porous anodic oxide with enhanced wear and corrosion resistance	Ulrike Langklotz The impact of mechanical grinding on the native oxide formation on AA 6016			Mats Meesusen FEM to predict water uptake and transport in organic coatings	Marie-Pierre Labeau New insights and innovative technologies for metal surface treatment for aluminium-to-aluminum adhesive bonding
16:55-17:15				16:55-17:15	
Xiaoyi Wu In-situ self-sealing polymer composite incorporated with bifunctional microcapsules	Dihao Chen Correlation between pitting susceptibility and surface acidity, point of zero charge of passive film on aluminium	Eugen Gazenbiller Numerical modelling of alcoholate pitting corrosion of AA1050 in ethanol-blended fuels		Conference Banquet (18:30 - 23:00)	

