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The NX Corrosion Analysis Indicator application is a CAD add-on application that runs within the Siemens suite of applications. This tool will analyze the CAD assembly for galvanic corrosion risk based on the materials and coatings assigned to components and their spatial relationship to one another. It will provide color coded results in the graphic area and enable closer inspection of suspected problematic areas. This identifies potential corrosion risks, enables the designer to execute 'what if' scenarios using different materials, identifies components that have no material or coating assigned and identify areas of a design that may need further attention and additional detailed corrosion modeling. Finally it has the ability to generate detailed reports on the galvanic evaluation of the material pair.



Q-Lab Corporation is a global provider of material durability testing products. We design and manufacture weathering, light stability, and corrosion testers, marketed under the QUV, Q-SUN, and Q-FOG brands, as well as Q-PANEL standard test substrates. Q-Lab also offers A2LA accredited contract test services, including accelerated laboratory testing. Our weathering products and services are used by materials scientists, research and development engineering, and quality control personnel in numerous industries, including paints and coatings.

Our modern corporate headquarters, R&D, and manufacturing facilities are located in Westlake, a beautiful suburb of Cleveland, Ohio USA. Q-Lab sales and distribution facilities are located in Manchester, England, Saarbrücken, Germany, and Shanghai, China. Q-Lab's A2LA accredited laboratory and outdoor testing facilities are located in Homestead, Florida and Buckeye, Arizona. We've also operate an accelerated testing lab at our Saarbrücken, Germany location.



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For more information, visit <https://autocorrosion.swri.org>. Submit questions to SwRI Automotive Corrosion or call +1 210 522 5458 for more information.

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Automotive Corrosion Symposium

April 11 to April 12, 2024 • Detroit, MI, United States

Time	Speaker	Title
Thursday, April 11, 2024		
Registration/Breakfast		
7:30		
8:20	Mr. James Dante	Welcoming Remarks
8:30	Ganesh Bhaskaran, Kevin Ryan, Yudie Yuan, Shanshan Wang, John Ho, and Mary Lyn Lim*	Road Exposure Corrosion Evaluation of Aluminum Alloys for Automotive Applications
9:00	Victoria Avance	Real-Time Performance Measurements for Electrocoat Primer and Powder Coatings
Break		
9:30		
9:45	Pedro Atz Dick	The Corrosion of Electrocoated Steel Studied by Accelerated Exposure and Electrochemical Methods
10:15	Jeffrey D. Henderson*, Vahid Dehnavi, Sridhar Ramamurthy, and James Dante	Corrosion Behaviour of an Iron Thermal Spray Coating for an Internal Combustion Engine
10:45	Kate Foster*, Donald Vonk, Stanislas Petrash, Yu-chen Karen Chen-Wiegert, Xiaoyang Liu, Kim Kisslinger, Mingyuan Ge, and Evgeny Nazaretski	Advanced Characterization and In-situ Investigation of Zirconium-Based Pretreatment Coatings by Synchrotron X-ray Spectroscopy Techniques
Lunch		
11:45		
12:30	Heather Eich (Toyota), Omar Lopez-Garrity (Lucid), Ulli Haus (GM), Kimerly Lazarz (Ford)	Panel Discussion
Break		
1:30		
1:45	Joe Desando	Exploring the Possibility of Adding Fire Preventative Capabilities to our Automotive Corrosion Preventative Coatings
2:15	Vahid Dehnavi*, Sridhar Ramamurthy, Jeffrey D. Henderson, Mohammad Norouzi Banis, David W. Shoesmith, and Jamie Noel	Plasma Electrolytic Oxidation Coatings on Light Alloys for Automotive Applications: Properties, Performance, and Prospects
2:45	Sean Fowler	Laboratory Corrosion Tests: Correlating the Delivered Volume of Electrolyte with Corrosivity
Break		
3:15		
3:30	James F. Dante* and Pedro Atz Dick	Effect of RH Cycling on Scribe Creep of Coated Steel Panels

Keynote

Networking

* Presenting Author

4:00	Danyil Kovalov*, Jacob Meisberger, and Niamh Hosking	The Use of Corrosion & Environmental Sensors in Automotive Test Environments
4:30	Victor Ponce, Shaik Merkatur, Hakim Marjuban, Homero Castaneda, Heather Eich*, Allison Mahood, and Rishi Gupta	Development of Accelerated Corrosion Test Methods Using Wet-Dry Cycling of Varying Salt Solutions and the Study of Coating Damage Evolution via Electrochemical Test Methods
5:00	Adjourn	
5:30	Networking Reception	

DAY 2

Time	Speaker	Title
Friday, April 12, 2024		
7:30	Breakfast	
8:20	Mr. James Dante	Welcoming Remarks
8:30	Mark Nichols, Ph.D.	Automotive Coatings: Future Challenges and their Impacts on Corrosion Protection
9:15	Break	
9:30	Aga Franczak	Initiating Corrosion Prevention During the Design Phase: Utilizing Computer Aided Analysis to evaluate Corrosion Risks During Material Selection
10:00	Julio Mendez*, Siva Palani, Alan Rose, and Keith Legg	A Computational Strategy for Corrosion Mitigation and Prevention
10:30	Elliot Smith	Using Virtual Tools in Corrosion Design for High-Performance, Low-Cost Vehicles
11:00	Break	
11:15	Siva Palani, Vinod Upadhyay*, Amber Young, Niamh Hosking, and Ullrich Haus	Developing Digital Tools for Prediction of Galvanic Corrosion in Mixed Materials
11:45	Sridhar Niverty*, Rajib Kalsar, Yucheng Fu, Alasdair Crawford, Vilayanur V Viswanathan, Benjamin J Schuessler, and Vineet V Joshi	Enhancing Corrosion Resistance in Multimaterial Joints for Automotive Lightweighting Applications
12:15	Eric Romanowski	Corrosion Avoidance in Automotive High Voltage Battery Enclosures
12:45	Mr. James Dante	Closing Remarks
1:00	Adjourn	

Keynote

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