

TECHNICAL PROGRAMME

2nd International Conference on Corrosion and Coatings (i3C)

06-07 February 2025

Venue: Hotel Vivanta Jamshedpur, Golmuri

DAY 1: 06 February 2025

INAUGURAL PROGRAM (09:00-09:30 hrs) Venue: Himalaya Hall

Poster Inauguration & High tea (09:30-10:30 hrs) Venue: VIBGYOR Hall

Plenary Session (10:30-12:00 hrs) Venue: Himalaya Hall

Session	Time	Speakers	Affiliation	Lecture Title
Plenary Lecture I	10:30-11:15 hrs	Ravindra Kumar	Director (Operations), NTPC	Corrosion and Coating in Power Plant Equipment
Plenary Lecture II	11:15-12.00 hrs	Atul Srivastava	VP, Welspun Corp. Ltd	Use of Welded Line Pipe Steel for Hydrogen (H ₂) Gas Transportation

TECHNICAL SESSIONS

SESSION –1a: General & localized corrosion, high temperature oxidation (12:00-13:30 hrs) Venue: Himalaya Hall

Abstract ID	Time	Speakers	Affiliation	Paper Title
Keynote I	12:00-12:25 hrs	Tapas Laha	IIT Kharagpur	Optimization of corrosion behavior in thermal sprayed Fe-based metallic glass composite coatings: Effect of amorphicity, porosity and wettability
S1a_04	12:25-12:40 hrs	Dileep Pathote	IISc Bangalore	In Vitro Study of Electrochemical Corrosion Behavior of Hydroxyapatite-Coated Surface-Mechanical-Attrition-Treated Biodegradable metallic (Mg-Zn) Alloys for Implant Applications"
S1a_02	12:40-12:55 hrs	Ravada Seshagiri	CSIR-NML Jamshedpur	Effect of Chromium Addition on Microstructural and Corrosion Behaviour of ADC12 Alloy
S1a_07	12:55-13:10 hrs	Nemai Chandra Gorain	Tata Steel, Jamshedpur	Corrosion-Resistant Ultra-High-Strength Steel: A Novel Alloy Design Inspired by Weathering Steel Principles

S1a_03	13:10-13:25 hrs	Neha Khan	CSIR-NML Jamshedpur	Intermediate Temperature Oxidation Behavior of Ti24Al6Nb Alloys
SESSION -1b: PVD, CVD, Hot dip coating (12:00-13:30 hrs) Venue: Tulip Hall				
Keynote I	12:00 -12:25 hrs	Harish C. Barshilia	CSIR-NAL Bangalore	Recent Advances in Corrosion Protection and Detection Strategies for Aerospace Applications
S1b_01	12:25 -12:40 hrs	Paritosh Dubey	CSIR-NML Jamshedpur	Study of Wear and Corrosion Performance of Iron-Amorphous Alloy Coating
S1b_07	12:40 -12:55 hrs	Sumit Kumar	NIT Jamshedpur	Development of Al ₂ O ₃ -Based Composite Coating on Agricultural Grade Steel
S1b_06	12:55 -13:10 hrs	Mahesh G. Walunj	CSIR-NML Jamshedpur	Mitigation of Galvanizability Issue in Advanced High Strength Steel Sheet and its Corrosion Performance
S1b_10	13:10 -13:25 hrs	Sarbari Ganguly	Tata Steel, Jamshedpur	Silicon Enrichment in 3 wt.% Si Steel by Hot Dipping and Annealing Route Using Hypoeutectic Al-Si Coating
Lunch Break (13:30-14:30 hrs)				
SESSION -2a: Sustainable advancements in corrosion prevention (14:30-16:00 hrs) Venue: Himalaya Hall				
Keynote I	14:30-14:50 hrs	Kallol Mondal	IIT Kanpur	Trash to Treasure: Green Corrosion Inhibitors from Alternative Renewable Resources
Keynote II	14:50-15:10 hrs	Gouranga Charan Raut	Electrotherm (India) Ltd	Advancing Sustainable Infrastructure: The Role of Special Steel Grades and Ductile Iron Pipes in Net-Zero Construction
S2a_04	15:10-15:25 hrs	Rakesh Rapolu	IICT Hyderabad	Biobased Isocyanate Free Poly(Urethane Amicacid) Coatings on Mild Steel and Galvanized Iron for Corrosion Protection
S2a_05	15:25-15:40 hrs	Lopamudra Halder	CSIR-NML Jamshedpur	Waterborne Eco-Sustainable Sol-gel Coatings <i>via</i> Sono-Ormosil Approach for Corrosion Protection of Metallic Surfaces
S2a_06	15:40-15:55 hrs	Saikat Mandal	IIT Kanpur	From Trash to Treasure: Cattle Manure as a Potent Green Corrosion Inhibitor
SESSION -2b: Aqueous and non-aqueous coating processes-I (14:30-16:00 hrs) Venue: Tulip Hall				
Keynote I	14:30 -14:55 hrs	Anindya Basu	NIT Rourkela	Enhancement of Electrodeposited Nickel Coatings Through Ultrasonic Shot Peening: A Study on Microstructural, Mechanical and Corrosion Properties
S2b_01	14:55 -15:10 hrs	Anjali Kumari	IIT Kharagpur	Effects Of Current Density Variations on the Tribological and Electrochemical Characteristics of Zn-Co Coatings Developed from a Non-Aqueous Electrolyte
S2b_02	15:10 -15:25 hrs	Anushri Nag	Tata Steel, Jamshedpur	Corrosion Resistant High-Speed Doped Composite Zinc Plating with Two Functional Particles

S2b_03	15:25 -15:40 hrs	Sushmit Sen	IIT Roorkee	First-Ever Cathodic Electrodeposition of Nitrogen-Doped Carbon Dots with Acrylic Resin for Advanced Anti-Corrosive Coating
S2b_04	15:40 -15:55 hrs	Alka Kumari	CSIR-NML Jamshedpur	Influence of Ultrasound Agitation and Current Waveforms on the Morphology, Structure, and Corrosion Behavior of Zn–Ni–CeO ₂ Composite Coatings
Tea Break (16:00-16:30 hrs)				
SESSION -3a: Corrosion in different industrial sectors (16:30-18:00 hrs) Venue: Himalaya Hall				
Keynote I	16:30-16:55 hrs	Jayanta K Saha	Asianol Biotech Pvt. Ltd.	Ceramix: Transforming Steel Protection with Advanced Magnesium Phosphate Cement-Based Anti-Corrosive Coating Technology
S3a_05	16:55 -17:10 hrs	Lalit Kr. Meena	CSIR-NML Jamshedpur	Effect of microstructural phases on flow accelerated corrosion (FAC) behavior of API 5L X60 grade steel
S3a_03	17:10 -17:25 hrs	Ankit Kumar Maurya	IIT Jodhpur	Performance of Corroded Hollow Steel Rectangular Section Stub Columns
S3a_04	17:25 -17:40 hrs	Krishna Chetnani	Electrotherm (India) Ltd	Corrosion Performance and Durability of FBE-Coated TMT Rebars in Coastal Environments
S3a_08	17:40 -17:55 hrs	Prerna Sonthalia Goradia	Exposome Pvt Ltd.	Fluoride Removal from Steel Industry Effluents Using Regenerable Reactive Molecular Filters
SESSION -3b: Pre-treatment, passivation, organic coatings & functional coatings-I (16:30-18:10 hrs) Venue: Tulip Hall				
Keynote I	16:30-16:50 hrs	Lionel Schlessinger	Monopol AG	Sustainable Corrosion and Color Protection: Meeting ISO 12944 Standards with Fluoropolymer Coatings
Keynote II	16:50-17:10 hrs	Ashis Acharya	Quaker Chemical India Pvt. Ltd.	RoHS Compliant Cr(VI) Free Thin Organic Coating for Coated Steel
S3b_02	17:10-17:25 hrs	Raghavendra Prasad	Evonik India Pvt Ltd	Evonik's Eco-Friendly Silanes: Advanced Corrosion Protection for Metal Surfaces
S3b_03	17:25-17:40 hrs	Tanaji K. Chavan	IIT Dharwad	Eco-Friendly Polylactic Acid/Beeswax Superhydrophobic Self-Clean Coating
S3b_07	17:40-17:55 hrs	Tapan Kumar Dhar	Berger paint, Kolkata	Anticorrosive Coatings with Sustainable Ingredients
S3b_08	17:55 –18:10 hrs	Sachin Joshi	Greenovac Specialty Coatings Pvt. Ltd.	Zero VOC High Performance Protective Coatings for aggressive Corrosion conditions
Cultural Program and Dinner (19:00 hrs onwards) Venue: Himalaya Hall, Vivanta				

DAY 2: 07 February 2025

Plenary Session (09:30-11:00 hrs) Venue: Himalaya Hall				
Session	Time	Invited Speakers	Affiliation	Lecture Title
Plenary Lecture III	09:30-10:15 hrs	Ana Paula Domingos Cardoso	Director of Technology and Market Development at IZA	Advancement in Hot Dip Galvanizing Coating Technology for Second and Third Generation Advanced High-Strength Steel Grades
Plenary Lecture IV	10:15-11:00 hrs	Ivan Cole	RMIT University, La Trobe St, Melbourne Australia	Inhibitor Discovery Combining Molecular Modelling and Machine Learning
POSTER SESSION (11:00-12:00 hrs) Venue: VIBGYOR Hall				

TECHNICAL SESSIONS

SESSION –4a: Corrosion monitoring, auditing, failures analysis and prevention (12:00-13:30 hrs) Venue: Himalaya Hall				
Abstract ID	Time	Speakers	Affiliation	Paper Title
Keynote I	12:00 – 12:20 hrs	Kausik Chattopadhyay	IIT BHU	Comparative study on corrosion behaviour of high carbon nanostructured bainitic steel and pearlitic steel in an aqueous 3.5% NaCl
Keynote II	12:20 – 12:40 hrs	Chittaranjan Kabi	Corrosion Control Cell, Jindal Steel and Power	Eliminating Filiform Corrosion by a New Coating Process with Introduction of Weldable Primer
S4a_01	12:40 – 12:55 hrs	Piyas Palit	Tata Steel, Jamshedpur	A Case Study on Pitting Corrosion of Spherical Roller Bearing Spalling
S4a_02	12:55 – 13:10 hrs	Preeti Verma	National Research Laboratory for Conservation of Cultural Property, Lucknow	Effect of Concentration and Multilayered Paraloid B72 Coating on Corrosion Behaviour of Mild Steel
S4a_03	13:10 – 13:25 hrs	Bharat Singh Chahar	IIT Kanpur	Recovery And Utilization of Zinc Dross for Sacrificial Anode Cathodic Protection of Steel Structures
SESSION –4b: Pre-treatment, passivation, organic coatings & functional coatings-II (12:00-13:30 hrs) Venue: Tulip Hall				
Keynote I	12:00-12:20 hrs	Prof. Nikhil K. Singha	IIT Kharagpur	Recent Trends in Multifunctional Coatings

Keynote II	12:20-12:40 hrs	Sanjay Chowdhury	Berger Paints	The Future of Paints and Coating - Sustainability Through Value Innovation
S4b_01	12:40-12:55 hrs	Arindam Chakrabarty	IICT Hyderabad	Self-stabilized Styrene-Acrylic Copolymer Latex for Water and Corrosion Resistant Coatings
S4b_02	12:55-13:10 hrs	Ashok Mohanty	CSIR-NML Jamshedpur	Chemically Bonded Phosphate Ceramic Coating for Rusted Steel
S4b_03	13:10-13:25 hrs	Amrita Chatterjee	IIT Roorkee	Polysilazane-Crosslinked Acrylic Coatings for Wood: A Versatile Solution for Weather Resistance, Stain Repellence, and Fire Safety

Lunch Break (13:30-14:30 hrs)

SESSION -5a: Corrosion modelling, simulation, and prediction (14:30-16:10 hrs) Venue: Himalaya Hall

Keynote I	14:30 – 14:50 hrs	Shubham Pandey	Materials Design, Inc., San Diego, CA	Multiscale Modeling for Studying Corrosion-induced Hydrogen Embrittlement in Zirconium
Keynote II	14:50 – 15:10 hrs	Sujit Kumar Thakur	COMSOL Multiphysics Pvt. Ltd.	Modeling Corrosion and Coating Applications Using COMSOL Multiphysics
S5a_01	15:10 – 15:25 hrs	Sudharsan Pandiyan	Schrodinger India Pvt. Ltd.	Understanding of Corrosion Resistance at the Interface between Metal Surface and Coating: A Molecular Perspective
S5a_02	15:25 – 15:40 hrs	Subhas Ghosal	NIT DGP	Corrosion inhibition properties of heterocyclic organic molecules for mild steel in aqueous HCl medium using Quantum Mechanical based Machine Learning (QMML) methods.
S5a_03	15:40 – 15:55 hrs	Debashish Das	IIT BBS	Design and Formulation of Coatings using Molecular Modelling and Simulation
S5a_04	15:55 – 16:10 hrs	Y. Usha	CSIR-NML Jamshedpur	CFD simulations of varying bend geometry and fluid velocity in a 90o elbow pertaining to the flow accelerated corrosion (FAC)

SESSION -5b: Aqueous and non-aqueous coating processes-II (14:30-16:00 hrs) Venue: Tulip Hall

Keynote I	14:30 -14:55 hrs	Subrata Chakraborty	Grauer & Weil (I) Ltd.	Implications of Corrosion and Some Coatings for Mitigation
S5b_02	14:55 -15:10 hrs	Alka Kumari	CSIR-NML Jamshedpur	Replacement of Cadmium Coating by Electrodeposited Zn-based Alloy Coatings on High Strength Steel
S5b_03	15:10 -15:25 hrs	Sunny Kumar	NIT Jamshedpur	Development and Performance of Electroless Ni-P-Al ₂ O ₃ Composite Coating on Aerospace Grade Mg Alloy

				Obtained via Environmentally Friendly Stannate Conversion Coating
S5b_04	15:25 -15:40 hrs	Juan David Matallana Guerrero	IIT Kharagpur	Synthesis and Properties of Electroplated Zn-Ni Coatings: A Case Study on Citrate-Based Aqueous Electrolytes and Ethaline-200 Deep Eutectic Solvents
S5b_05	15:40 -15:55 hrs	Swastika Banthia	Tata Steel, Jamshedpur	--The Electrochemical Corrosion Resistance of Zn-Mn Coatings Produced by Electrodeposition Using an Acidic Sulphate-Citrate Bath
Tea Break (16:00-16:30 hrs)				
SESSION -6a: Panel discussion (16:30-17:00) & Valedictory Session (17:00-17:30 hrs) Venue: Himalaya Hall				
High Tea (17:30 hrs onwards) Venue: VIBGYOR Hall				

POSTER SESSION

Venue: VIBGYOR Hall; Time: 11:00 – 12:00 hrs; 07 February 2025

Abstract ID	Presenters	Affiliations	Paper Title
S1a_1	Utkarshita Kaushal	CSIR-NML Jamshedpur	Effect of Solution Treatment, Cold Work and Aging on Corrosion and Hydrogen Diffusion and Trapping Behaviour in AA7085 Alloy
S1a_06	M Priyanka	VSSUT Burla	Surface Characterization and Electrochemical Studies on Various Industrially Available Steel Sheets
S1b_02	Sanjay Saraswat	Tata Steel, Khopoli	Dross Management in manufacturing of 55%Al Zn alloy coated steel at Tata Steel Khopoli
S1b_08	Kamal Bahadur Yadav	NIT Jamshedpur	Microstructural Characterization and Nano-mechanical behavior of HA based composite coating
S2a_01	Udaya Bhaskara Rao M	CSIR-NML Jamshedpur	Cathodically Corroded Wire-Arc Additively Manufactured IN625 Alloy for Enhanced Methanol Oxidation and Alkaline Oxygen Evolution Reaction
S2a_07	Sukanta Badaik	NIT Jamshedpur & Tata Steel	Ti3C2TxMXene/Polyimide Composite: A potential coating material for the protection of steel substrate
S2a_08	Suman Pradhan	IIT Kharagpur	Acrylic Emulsion via Ultrasonic Process: A Green and Sustainable Approach
S3a_01	Anushri Nag	Tata Steel, Jamshedpur	A novel hexagonal boron nitride based anti-stick coating for primary steel making accessories
S3a_07	Rohit Arora	Tata Steel, Jamshedpur	Investigative Analysis on Using Calcium Formate as an Additive to Reduce the Setting Time of Cement Mortar Lining in Ductile Iron Pipe
S3b_01	Devina Ratnam	IIT ISM Dhanbad	Study of fabrication of superhydrophobic coating for corrosion inhibition supporting carbon emission mitigation
S3b_04	Apurba Maity	Tata Steel, Jamshedpur	Corrosion Protection of Low Alloy Mild Steel by a Flexible Polyimide Coating: Experimental and Theoretical Studies
S3b_05	Suryakanta Nayak	Tata Steel, Jamshedpur	Spot-weldable and superior corrosion resistance polyimide composite coating for mild steel
S3b_06	Rohit Arora	Tata Steel, Jamshedpur	Development of Colour Changing Coating using PVDF/MMA blend with Enhanced Performance Characteristics
S3b_09	Supriti Sundari Nayak	KIIT Bhubaneswar	Hybrid Carbon Dots Functionalized Graphene Oxide based Epoxy Coatings for Enhanced Corrosion Protection