

ISRANALYTICA 2025

14-15 JANUARY 2025

THE DAVID INTERCONTINENTAL HOTEL, TEL-AVIV, ISRAEL




























THE 25TH ANNUAL MEETING OF THE ISRAEL ANALYTICAL CHEMISTRY SOCIETY







CONFERENCE & EXHIBITION

Day 1 – 14 January 2025



08:00 – 09:10	Registration			
09:10 – 09:20	Opening Daniel Mandler , <i>Chairman of Isranalytica 2025</i> 			
09:20 – 09:30	Musical Interlude			
09:30 - 10:20 Plenary Session	 Prof. Martin Elsner , <i>Chair of Analytical Chemistry and Water Chemistry, Institute of Hydrochemistry, School of Natural Sciences, Department of Chemistry, Technical University of Munich, Germany</i> Chair: Israel Schechter			
10:20 - 10:50	Coffee Break			
	Hall A	Hall B	Hall C	Hall D
	Session A	Session B	Session C	Session D
	Forensic and Homeland Security Analysis	Environmental and Public Health Analysis	Laboratory Practice in Analytical Chemistry	Medical Analysis
	Chair: Joseph Almog	Chair: Ovadia Lev	Chair: Zvi Naim	Chair: Igal Bar-Ilan
10:50 - 11:20 Keynote	<u>Disaster Victim Identification in the Aftermath of the October 7th, 2023, Massacre: A Focus on Fingerprint Identification</u> Sarena Wiesner <i>Israel Police, Israel</i> 	<u>Per-Fluorinated Alkyl Substances (Pfas) in Drinking Water in Israel: Survey Results and Regulatory Updates</u> Luda Groisman <i>Ministry of Health, Israel</i> 	<u>Procedures, Standards and Guidelines: Who Publishes them and what are the Requirements?</u> Orna Dreazen <i>Chairperson of the Board of Directors of Nextar Ltd.</i> 	<u>Early Cancer Detection by Dogs: Analyzing Breath Air VOCs</u> Reef Einoch Amor <i>SpotitEarly, Israel</i>
11:20 - 11:40	<u>Do More with Less: Where Combination of Refractive Index Measurements and Internal Reference from a Crime Scene Lead to a Stronger Determination in Multi-Fragment Comparison of Glass</u> Ophir Levy <i>Israel Police, Israel</i> 	<u>Introduction to Advanced Analytical Methods for Lithium and Light Elements using EDS, WDS and SXES in Electron Microscopy</u> Omri Dvir <i>Bargal Analytical Instruments, Israel</i> 	<u>Proper Work in the Laboratory Using Different Standards</u> Zvi Naim <i>Yoel Naum Ltd.</i> 	<u>Regulatory, Quality, and Technical Aspects in Clinical Sampling for Early Detection of Pneumonia in Ventilated Patients</u> Irit Segalovich <i>Respiration Scan, Israel</i>
11:40 - 12:00	<u>Identification of Oral Bacteria as a New Forensic Tool for Saliva Detection</u> Gili Betser <i>Israel Police, Israel</i> 	<u>Sensitive Detection of Salmonella Typhimurium with Aptamer-Modified Nanozymes using Porous Silicon Fabry-Pérot Interferometers</u> Saravanan Arumugam <i>Volcani Institute, Israel</i> 	<u>Training for Laboratory Employees: Planning, Implementation, Effectiveness Follow-Up and Program Update</u> Bianca Avramovitch <i>Teva</i> 	<u>Breath Signatures: Detecting Bacterial Biomarkers in In-Vitro and In-Vivo Diagnostics for Sedated and Ventilated Patients</u> Yamit Naor <i>Respiration Scan, Israel</i>

12:00 - 12:20	<u>Fingerprint Transfer Mechanism to Adhesive Tapes Through Latex Gloves</u> Ayal Aronson <i>Toolmarks Lab, Israel</i> 	<u>Nucleic Acid Hybridization-Based Detection of Pathogenic RNA using Microscale Thermophoresis</u> Matan Avivi <i>Bar-Ilan University, Israel</i> 	<u>Validation of Analytical Methods</u> Orna Dreazen <i>Chairperson of the Board of Directors of Nextar Ltd.</i> 	<u>Development of an Algorithm for Early Detection of Pneumonia in Ventilated Patients</u> Igal Bar-Ilan <i>Respiration Scan Ltd, Israel</i> 
12:20 - 12:40	<u>Innovative Cocaine Smuggling- it doesn't Matter if Your'e Black or White</u> Simcha Shimron <i>Israel Police, Israel</i> 	<u>A Nanostructured Microarray-Based SERS Sensor Targeted at Multiplex Mycotoxins Detection in Food and Feedstuff Using Handheld Apparatus</u> Giorgi Shtenberg <i>Volcani Institute, Israel</i> 		<u>Development of a Sensitive and Specific 2-AA Sensor for Detecting Pseudomonas Aeruginosa</u> Ravid Pollak Amoyal <i>The Hebrew University of Jerusalem, Israel</i> 
12:40 - 13:45	 Lunch Break and Poster Presentations			
13:45 - 14:00	 <h2 style="color: red;">Excellence Award</h2> <h3 style="color: blue;">in Memory of Prof. Eli Grushka</h3>			
14:00 - 14:45	 Plenary Session		<u>Forensic Chemistry and Wrongful Convictions: Not Junk Science, Junk Testimony</u> Joseph Almog , <i>Casali Center for Applied Chemistry, The Institute of Chemistry, The Hebrew University of Jerusalem, Jerusalem, Israel</i> 	
		Chair: Daniel Mandler		
14:45 - 15:00	 Coffee Break			
15:00 - 15:10	 Musical Interlude			
	Hall A	Hall B	Hall C	Hall D
	Session E	Session F	Session G	Session H
	Forensic and Homeland Security Analysis	Artificial intelligence (AI) in Analytical Chemistry	Nanomaterials in Analytical Chemistry	Metrology, Informatics, Quality Control and Chemometrics
	Chair: Joseph Almog	Chair: Bianca Avramovitch	Chair: Daniel Mandler	Chair: Ilya Kuselman
15:10 - 15:40	 Keynote	<u>Age Determination of Latent Fingerprints Directly from Forensic Adhesive Tape Using Ultrafast Desorption Electrospray Ionization Mass Spectrometry and Machine Learning</u> Katherine Margulis <i>The Hebrew University of Jerusalem, Israel</i> 	<u>Artificial Intelligence and Analytical Chemistry, Challenges and Solutions An Introductory Overview</u> Bianca Avramovitch <i>Teva Pharmaceuticals LTD, Israel</i> 	<u>Biosensors Signal Measurement and Processing</u> Yosi Shacham <i>Reichman University, Israel</i> 
				<u>A Concept of Interlaboratory Consensus for Categorical Characteristics of a Substance, Material or Object</u> Ilya Kuselman <i>Consultant, Israel</i> 
15:40 - 16:00	<u>Analysis of Fingerprints Using the AFIS on Clay Candles During Excavations of Motza</u> Nora Rajs <i>Latent and Comparison Fingerprint Laboratories, Israel</i> 	<u>Analyzing the Secondary Wastewater-Treatment Process using Faster R-CNN and YOLOv5 Object Detection Algorithms</u> Offir Inbar <i>Tel Aviv University, Israel</i> 	<u>Exploring Polyoxometalate-Gold Nanorod Structures for SERS Applications</u> Offer Zeiri <i>NRCN, Israel</i> 	<u>Production of Food Grade Carbon Dioxide – How did it Fail in November 2009?</u> Amiram Groweiss <i>AG Consultants, Israel</i> 
16:00 - 16:20	<u>Proactive Forensic Science in Biometrics: Novel Materials for Fingerprint Spoofing</u> Michel Saguy <i>The Hebrew University of Jerusalem, Israel</i> 	<u>AI-Powered Analysis of FDA/EP Correspondence: Unveiling Trends and Critical Insights for Pharmaceutical Advancements</u> Yousif Ayoub <i>Teva Pharmaceuticals LTD, Israel</i> 	<u>Bioelectrochemical Sensing of Amino Acids</u> Lital Alfonta <i>Ben-Gurion University of the Negev, Israel</i> 	<u>Digitization and New Scale for Odor and Flavor</u> Michael Zviely <i>Mamay Technologies, Israel</i> 

16:20 - 16:40		<p><u>Beyond the Box: The AI Revolution</u> Doron Azran <i>SK Pharma Group, Israel</i></p> 	<p><u>Monosaccharide-based SWCNT Enantioselective Gas Sensor</u> Shlomo Yitzchaik <i>The Hebrew University of Jerusalem, Israel</i></p> 	<p><u>Classification Accuracy – a Random Model</u> Emil Bashkansky <i>BRAUDE College of Engineering, Israel</i></p> 
16:40 - 17:00		<p><u>Patent Protection and Trends in AI driven Drug Discovery</u> Joseph Wyse <i>Joe Wyse Patent Office, Israel</i></p> 	<p><u>Coupling Oxidoreductases with Electrodes for Biosensing, Biofuel Cells and Biocatalysis Applications</u> Omer Yehezkeili <i>Technion, Israel</i></p> 	<p><u>Comparison of Performance Characteristics of Methods for Measurement of Nitrogen Content in Plant Leaves in A Laboratory Under Accreditation To ISO/IEC 17025</u></p> <p>Alona Telerman <i>Israel Laboratory Accreditation Authority (ISRAC), Israel</i></p> 

Day 2

15 January 2025

Poster Session