

ISA 2023

Incontro di Spettroscopia Analitica

Milano, 14-16 Giugno 2023



UNIVERSITÀ
DEGLI STUDI
DI MILANO



Società Chimica Italiana

Sala Napoleonica, Università degli Studi di Milano
Via Sant'Antonio, 12, 20122 Milano MI

Sponsor



ThermoFisher
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Segreteria email: isa2023milano@gmail.com

PROGRAMMA MERCOLEDÌ 14/06/2023

Ore 14.00-15.00

REGISTRAZIONE

Ore 15.00-16.00

**Saluto delle autorità Maria Pia Abbracchio - Prorettrice dell'Università degli studi di Milano.
Premiazione e Relazione del vincitore Premio Mazzucotelli conferito da Alice Mazzucotelli**

GIURLANI W. Application of computational methods to analytical spectroscopy techniques for the characterization of films and metal alloys

Department of Chemistry "Ugo Schiff", University of Florence

National Interuniversity Consortium of Materials Science and Technology (INSTM)

Sessione 1

Ore 16.00-16.15

IZZI M. Probing the interaction of antimicrobial metal nanoparticles with lipid membranes by fluorescent probes

Department of Chemistry, University of Bari Aldo Moro

Ore 16.15-16.30

CASULA G. Growth and Characterization by ARXPS of (3-mercaptopropyl) trimethoxysilane (MPTMS) films on Gold and Food-Grade PVC

Department of Chemical and Geological Sciences, University of Cagliari

Ore 16.30-16.45

VOROBYOVA M. Spectroscopic characterization of PVD coatings for decorative applications

National Interuniversity Consortium of Materials Science and Technology (INSTM)

Department of Chemistry "Ugo Schiff", University of Florence

Ore 16.45-17.00

BIGGIO D. Unravelling the composition of surface films formed on Ni-free DIN 1.4456 stainless steel for orthodontics by XPS

Department of Chemical and Geological Sciences, University of Cagliari

Ore 17.00-17.15 **SPONSOR THERMO FISHER**

Sessione 2

Ore 17.15-17.30

MACCIONI I. Spectroscopic characterization of corrosion processes on galvanic coatings

Department of Chemistry "Ugo Schiff", University of Florence

Rubinetterie 3M S.r.l

Ore 17.30-17.45

MARCHIANÒ V. Cerium oxide Nanoparticles stabilized by PLGA micelles and englobed in gelatine and starch films

CSGI-Centre for Colloid and Surface Science, Bari Unit

Ore 17.45-18.00

PICCA R.A. Electrosynthesis and analytical characterization of antimicrobial mixed oxides for cultural heritage applications
Department of Chemistry, University of Bari Aldo Moro

Ore 18.00 **Aperitivo di benvenuto**

PROGRAMMA GIOVEDÌ 15/06/2023

Ore 9.00-9.30 **Invited lecture**

FELIPE CONZUELO - Instituto de Tecnologia Química e Biológica António Xavier, Universidade Nova de Lisboa, Oeiras, Portugal

Scanning Photoelectrochemical Microscopy for the Study of Light-Dependent (Bio)electrochemical Reactions

Sessione 3

Ore 9.30-9.45

BONECHI M. A spectroscopic investigation of palladium recovery from electroplating solutions using carbon materials and electrochemical reduction

Department of Chemistry "Ugo Schiff", University of Florence

Ore 9.45-10.00

DITARANTO N. Correlation between surface chemical composition and catalytic activity of MnO₂-based catalysts

Department of Chemistry, University of Bari Aldo Moro

CIRC, Interuniversity Consortium on Chemical Reactivity and Catalysis, Bari

CSGI-Centre for Colloid and Surface Science, Bari Unit

Ore 10.00-10.15

PINNA M. Overcoming beam damage in In-situ XAS: study of Ni-SrTiO₃ deactivation during overall photocatalytic water splitting

Department of Science and High Technology, University of Insubria

Faculty of Science and Technology, University of Twente

Sessione 4

Ore 10.15-10.30

GORLA G. How explore raw data characteristics and sources of uncertainty could be a crucial step for spectroscopic method development

Department of Science and High Technology, University of Insubria

Ore 10.30-10.50 **SPONSOR NANOVISION**

Ore 10.50-11.45 **Coffee Break e SESSIONE POSTER I**

Sessione 5

Ore 11.45-12.00

CAMPANELLA B. Aqueous derivatization by ethyloxonium salts extended to the analysis of methionine and selenomethionine in foods

Institute of Chemistry of Organometallic Compounds, National Research Council

Ore 12.15-12.30

BELLASSAI N. Functional antifouling coating on plasmonic platform for Lysozyme aptamer-based detection in food sample

Department of Chemical Sciences, University of Catania

Biostructures and Biosystems National Institute (INBB)

Ore 12.30-12.45

FORNASARO S. Surface enhanced Raman scattering of crevicular fluid in periodontics and implantology

Department of Chemical and Pharmaceutical Sciences, University of Trieste

Ore 12.45-13.00

GIUSSANI B. A new process control tool based on ATR-FT-IR spectroscopy and dissimilarity index to identify anomalies in wine alcoholic fermentation

DISAT, University of Insubria

Ore 13.00-14.30 **Pranzo libero**

Ore 14.30-14.45 **SPONSOR JEOL**

Sessione 6

Ora 14.45-15.00

TRICASE A Analytical investigation of SAMs-modified gold electrodes

Department of Chemistry, University of Bari Aldo Moro

CSGI-Centre for Colloid and Surface Science, Bari Unit

Ore 15.00-15.15

MEOLI A. Colour evaluation via everyday tools: cameras and smartphone

Department of Chemistry "Ugo Schiff", University of Florence

Creazioni Lorenza S.r.l

Ore 15.15-15.30

D'AGATA R. Advances in Diagnostics using Plasmonic-based Imaging Sensor and liquid biopsy approaches

Department of Chemical Sciences, University of Catania

Biostructures and Biosystems National Institute (INBB)

Ore 16.00- 17.00 **Coffee Break e SESSIONE POSTER II**

Ore 17.00-18.00 **Gita Sociale**

Ore 18.30 **Aperitivo Sociale**

PROGRAMMA VENERDÌ 16/06/2023

Ore 9.00-9.30 **Invited lecture**

FEDERICA POZZI - Direttrice dei Laboratori Scientifici. Centro per la Conservazione ed il Restauro dei Beni Culturali "La Venaria Reale", Italia

The Visconti-Sforza tarocchi cards: unveiling court secrets through analytical spectroscopy

Sessione 7

Ore 9.30-9.45

PRATI S. New advances in the application of NIR hyperspectral based methods for the non destructive characterization of artistic multilayered artefacts and archeological remains
Department of Chemistry "G. Ciamician", University of Bologna, Ravenna Campus

Ore 9.45-10.00

BERGOMI A. Characterization of black crusts from the Monumental Cemetery (Milan) using a combined LIBS and Raman approach
Department of Chemistry, University of Milan

Ore 10.00-10.15

GUGLIELMI V. The Identification of Pigments through Non-Invasive Spectroscopic Analyses: the Bernardino Luini Frescoes of Santuario della Beata Vergine dei Miracoli in Saronno (Italy) as a Case Study
Department of Chemistry, University of Milan

Ore 10.15 -10.30 **SPONSOR MADATEC**

Ore 10.30-11.30 **Coffee Break e SESSIONE POSTER III**

Sessione 8

Ore 11.30-11.45

PULIDORI E. Characterization of unknown animal glues from artwork samples by structural, rheological and thermal analysis
Department of Chemistry and Industrial Chemistry, University of Pisa

Ore 11.45-12.00

LOMBARDI C.A. Preliminary results on archaeological materials from Miaswan Project (Mummies Investigations Anthropological and Scientific West Aswan Necropolis)
Department of Sciences of Antiquity, University "La Sapienza"
Department of Chemistry, University of Milan

Ore 12.00-13.00 **Riunione del gruppo di spettroscopia analitica**

Ore 13.00-13.15 **Conclusioni finali**

**SESSIONE POSTER DAL 14/06/2023 AL
16/06/2023**

N°	CONTRIBUTO POSTER ACCETTATI
1	<p style="text-align: center;">Morphological and Spectroscopic Characterization of Self-Templated Highly Porous Gold (h-PG) as D-(-)-Fructose Amperometric Biosensor</p> <p style="text-align: center;"><u>Marchianò V.</u></p> <p style="text-align: center;"><i>CSGI - Centre for Colloid and Surface Science, -Bari Unit, Bari (Italy)</i></p>
2	<p style="text-align: center;">Electrochemical pH-controlled apo-Ferritin Bionanoreactors for CdSe nanoparticles synthesis</p> <p style="text-align: center;"><u>Tricase A.</u></p> <p style="text-align: center;"><i>Dipartimento di Chimica, Università degli Studi di Bari Aldo Moro (Italy) Centre for Colloid and Surface Science - Università degli Studi di Bari Aldo Moro (Italy)</i></p>
3	<p style="text-align: center;">Development and characterization of antimicrobial composites for food packaging containing bioactive species</p> <p style="text-align: center;"><u>Picca R. A.</u></p> <p style="text-align: center;"><i>Dipartimento di Chimica, Università degli Studi di Bari Aldo Moro, Bari</i></p>
4	<p style="text-align: center;">Chiral “doped” MOFs: an electrochemical and spectroscopic study</p> <p style="text-align: center;"><u>Bonechi M.</u></p> <p style="text-align: center;"><i>Department of Chemistry “Ugo Schiff”, University of Florence, Italy</i></p>
5	<p style="text-align: center;">Reconsidering the value of the information from the OH stretching band in FT-IR spectroscopy</p> <p style="text-align: center;"><u>Geminiani L.</u></p> <p style="text-align: center;"><i>Dipartimento di Scienza e Alta Tecnologia, Università degli Studi dell’Insubria, Italy</i></p>
6	<p style="text-align: center;">Electrodeposition of manganese arsenides (Mn₃As) and its compositional optimization assisted by microanalysis spectroscopy</p> <p style="text-align: center;"><u>Giurlan W.</u></p> <p style="text-align: center;"><i>Department of Chemistry “Ugo Schiff”, University of Florence, Italy National Interuniversity Consortium of Materials Science and Technology (INSTM), Italy</i></p>

7	<p style="text-align: center;">Analytical Spectroscopy in Electroplating industry</p> <p style="text-align: center;"><u>Innocenti M.</u></p> <p style="text-align: center;"><i>Dipartimento di Chimica "Ugo Schiff", University of Florence INSTM, Florence, Italy</i></p>
8	<p style="text-align: center;">Electrochemical impedance spectroscopy (EIS) as a valuable technique for the quantification of additives in electroplating baths</p> <p style="text-align: center;"><u>Innocenti M.</u></p> <p style="text-align: center;"><i>Department of Chemistry "Ugo Schiff", University of Florence, Italy National Interuniversity Consortium of Materials Science and Technology (INSTM), Italy National Research Council-Organometallic Compounds Chemistry Institute (CNR-ICCOM) Italy, Center for Colloid and Surface Science (CSGI), Italy</i></p>
9	<p style="text-align: center;">Combined Reflectance and Fluorescence VNIR imaging for the Study of Coloured Textiles: the role of chemometric strategies in the processing of multiblock hyperspectral data</p> <p style="text-align: center;"><u>Li Z.</u></p> <p style="text-align: center;"><i>Dept. of Chemistry, Università di Bologna – Ravenna Campus, Italy</i></p>
10	<p style="text-align: center;">Spectroscopic characterization of bioactive coatings for food packaging applications</p> <p style="text-align: center;"><u>Izzi M.</u></p> <p style="text-align: center;"><i>Department of Chemistry, University of Bari Aldo Moro, Italy</i></p>
11	<p style="text-align: center;">Experimentation in accelerated ageing chambers to evaluate the action of catalysts in the sulphation process</p> <p style="text-align: center;"><u>Comite V.</u></p> <p style="text-align: center;"><i>Dipartimento di Chimica, Università degli Studi di Milano, Italy</i></p>
12	<p style="text-align: center;">Multispectral 3D models for monitoring in conservation of wooden statues</p> <p style="text-align: center;"><u>Croci S.</u></p> <p style="text-align: center;"><i>Dipartimento di Scienza Applicata e Tecnologia, Politecnico di Torino, Italy;</i></p>
13	<p style="text-align: center;">Biomarkers in human saliva via vibrational spectroscopy in tandem with chemometrics: role of the preanalytical step</p> <p style="text-align: center;"><u>Bramanti E.</u></p> <p style="text-align: center;"><i>National Research Council of Italy, C.N.R., Institute of Chemistry of Organometallic Compounds-ICCOM, Italy</i></p>

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Validation of Methods and Analysis of Metals in Food Matrices by ICP-MS

Borelli M.

Dipartimento di Chimica, Università degli Studi di Milano, Italy