



51st Congress of the Physical Chemistry Division

7-10 July 2026 Polytechnical University Bari

Latest programme update 15 June 2026



Tuesday 7 July 2026

Time	Room A	Room B	Room E
09:15-10:00	Registration		
10:00-10:30	Coffee break		
10:30-11:15	Opening: Prof. M. Venanzi (President DCF SCI), Prof. Umberto Fratino (Rector, Polytechnic University of Bari), Prof. Roberto Bellotti (Rector, University of Bari), Prof. Lidia Armelao (Director, DSCTM-CNR), Prof. G. Palazzo, (Director of Chemistry Department University of Bari), Dr. Onofrio Maragò (Director of CNR IPCF), Prof. Angela Agostiano (President, EuChemS).		
11:15-12:00	Plenary lecture - Isabel Pastoriza-Santos, Colloidal Plasmonic Nanomaterials as Platforms for (Bio)Sensing – (Room A)		
12:00-13:00	<p>Room A Topic: Fundamental Physical Chemistry: Structure, Dynamics, and Spectroscopy Chair: TBD Donato Ranieri - Enhancing the Optical Response of Gold and Silver Nanoclusters via Rigid Embedding in High-Refractive Index Polyacrylamide Matrix Anna Mercedi - Spectral Reshaping of Porphyrin Excitation by Plasmonic Nanostructures Giuseppe Cappelletti - Valorization of Soot into Carbon Nanomaterials for Both Nanocomposite-Based Sensors and for Fluorescent Devices Adriana Grandolfo - Chemical-Affinity-Driven SERS Response of Histidine-Functionalized RGO/Ag Nanowire Nanocomposites on Hydrophobic Paper</p>	<p>Room B Topic: Physical Chemistry for Health and Life Sciences Chair: TBD Rosario Oliva - Modulating Disease-Related Biocondensates with Small Bioactive Peptides Daniela Roversi - Membrane Interactions of Antimicrobial Peptides: a Kinetic Perspective Marianna Roggio - Aerosol-Assisted Atmospheric Pressure Plasma Jet Deposition of Antimicrobial Zinc-Based Nanocomposite Thin Film</p>	<p>Room E Topic: Materials and Nanoscience for Sustainable Technologies Chair: TBD Sebastiano Garroni - Low-Temperature Formation of BCZT Piezoceramics: Kinetic Pathways and Structure–Property Relationships Swaseen Slimani - Spin Disorder in Hollow Nanoarchitectures: Beyond Geometric Surface Effects Giuseppe Ragusano - Enhanced Physico-Chemical Characterization of Complex Hybrid Nanocomposites: an O₂-GCIB TOF-SIMS Depth Profiling Approach Valentina Spampinato - Physico-Chemical Insights into the Stepwise Assembly of Copper-Based Metal–Organic Frameworks Thin Films on Functionalized Silicon Oxide</p>
13:00-14:40	Lunch		
14:40-15:25	Plenary lecture - Cinzia Giannini, Deciphering the Hierarchical Structure of Natural and Engineered Materials - A Multiscale X-ray Scattering-based Approach – (Room A)		
15:25-15:35	Sponsor presentation - Graziella Gariano ALFATEST		
15:35-16:05	<p>Room A Topic: Fundamental Physical Chemistry: Structure, Dynamics, and Spectroscopy Chair: TBD Filomena Luigia Damiani - Crystal Structure Refinement of New Organocatalyst: Benchmarking Between Independent Atom Model (IAM) Refinement and Hirshfeld Atom Refinement (HAR) Luca Evangelisti - Decoding Molecular Structure with Rotational Spectroscopy</p>	<p>Room B Topic: Soft Matter, Interfaces, and Complex Systems Chair: TBD Valerio La Gambina - Exact Stoichiometry Far-Off Neutrality Catanionic Nanotubes: Unconventional Self-Assembly of Oppositely Charged Surfactants Giovanni Li Destri - Macro- and Nanoscale Electrostatics Govern the Static and Dynamic Behaviour of Charged Aqueous Interfaces</p>	<p>Room E Topic: Materials and Nanoscience for Sustainable Technologies Chair: TBD Davide Peddis - From Cultural Heritage to Fundamental Magnetism: Insights from Nanostructured Hematite Maria Luisa Saladino - The NanoLuBC Project: a Join Chairs on Innovative Nanostructured Materials with Luminescent Properties for Cultural Heritage</p>
16:05-16:45	Coffee break		
16:45-17:30	<p>Room A Topic: Fundamental Physical Chemistry: Structure, Dynamics, and Spectroscopy Chair: TBD Greta Sambucari - Integrating Twisted and Push-Pull Structural Motifs for Efficient Dual-Functioning Near-Infrared Bodipy Photosensitizers Paola Sassi - Spatially Resolved Biochemical Signatures of Cardiorenal Syndrome Revealed by FTIR Imaging Sara Massardo - SpeComp: a User-Friendly Tool for Spectral Comparison to Facilitate Microplastics Detection in Complex Biological Matrices</p>	<p>Room B Topic: Soft Matter, Interfaces, and Complex Systems Chair: TBD Serena Napoletano - Soluplus® Micelles Characterization and Application in Drug Delivery Rachel Elisabetta Camerini - Bio-Based Polyglycerol Esters for LLPS-Driven Soft Microencapsulation</p>	<p>Room E Topic: Electrochemistry, Catalysis, and Energy Conversion Chair: TBD Regina Del Sole - Combined Atomic Layer Deposition and Sputtering of ZnO/Cu Coatings for CO₂ Electroreduction Nevilia Iuliano - Spectroelectrochemical Insights into Heterogeneous Catalysts for the CO₂ Reduction Reaction Federico Panagini - Structural Insights on FeZnCuK Catalysts for Mild Photothermal CO₂-to-Hydrocarbons</p>
17:30-18:00	Invited lecture – Pier Paolo Abis (Acquedotto Pugliese S.p.A.), Ensuring Drinking Water Quality in Acquedotto Pugliese through the Digitalization of the Water Safety Plan - (RoomA)		
18:00-18:15	Leonardo Marchese – The Research and Development Center for Environmental Remediation and Protection (RisPA CENTER)		
18:30-20:30	Welcome event at Caffè Vergnano Via Amendola		

Wednesday 8 July 2026

Time	Room A	Room B	Room E
09:15-10:00	Plenary lecture - Giovanni Pavan, The Information Contained in Self Assembling Systems - (Room A)		
10:00-11:15	Room A Topic: Theory, Modelling, and Data-Driven Physical Chemistry Chair: TBD Francesco Avanzini - Coarse Graining Photo-Isomerization Reactions: Thermodynamic Consistency and Implications for Molecular Ractchets Gianfranco Bocchinfuso - Multiscale Molecular Dynamics for Probing Second-Timescale Protein Conformational Changes: The SHP2 Activation Case Nunzio Tuccitto - When Molecules Communicate: Entropy Production as the Thermodynamic Cost of Molecular Information Transfer Silvia Pezzola - The Perfect Couple: a Critical Analysis of CAM-B3LYP/SMD for Alcohol pKa Prediction Duccio Tatini - Machine Learning and Data Fusion Strategies for the Investigation of Hofmeister Effects in Polysaccharide Systems Combining IR Spectroscopy and Thermal Analysis	Room B Topic: Physical Chemistry for Health and Life Sciences Chair: TBD Pierfrancesco Maltoni - Magnetic Response of Giant Unilamellar Vesicles Embedding Functionalized Magnetite Nanoparticles Giulia Quaglia - Photothermal Effect of Gold Nanostructures on Amyloid Aggregates: Role of Shape and Size in the Optical Response Francesco Cardoni - Plasmonic Au NP-Derived Thin Films for Monitoring Cardiac Cells and Their Biomarkers Giacomo Mandriota - Functionalized Petal-Like ZnO as a Promising Nanoplatfrom for Gene Delivery Vincenzo De Leo - Liposomal Co-Encapsulation of Curcumin and Quercetin Enhances the Protective Effect on Endothelial Cells from TNF- α -Induced Inflammation, Oxidative Stress, and Apoptotic Damage	Room E Topic: Electrochemistry, Catalysis, and Energy Conversion Chair: TBD Matteo Grattieri - Tuning Bacteria-Electrode Interfaces for Biohybrid Electrochemical Systems Massimo Viviani - Stability and Electrochemical Properties in Multi-Doped Sr Ferrates Andrea Astengo - The Gilded Cage: Towards High Thermoelectric Efficiency in Single-Filled Skutterudites Vittorio Ferrara - Interference and Plasmonic Effects in Dielectric/Metal/Dielectric Multilayers for Semi-Transparent Perovskite Solar Cells Claudia Zonno - Controlling Energy Flow in <i>Rhodobacter Sphaeroides</i> Chromatophores via Selective Electron Transfer Inhibition
11:15-12:00	Coffee break		
12:00-12:30	Keynote - Pier Luigi Gentili, The Contribution of Photochromic Materials in the Development of Chemical AI - (Room A)		
12:30-13:30	Room A Topic: Fundamental Physical Chemistry: Structure, Dynamics, And Spectroscopy Chair: TBD Andrea Scarperi - Multinuclear Solid-State NMR Investigation of Adsorption-Induced Structural Changes and CO ₂ Dynamics in Calf-20 Arianna Ghelardi - Molecular Motions of Active Pharmaceutical Ingredients Investigated by Solid-State NMR Spectroscopy Sonia Melandri - The Halogen Advantage: the Role of Halogen Atoms in Architecting Novel Non-Covalent Interactions	Room B Topic: Soft Matter, Interfaces, and Complex Systems Chair: TBD Giuseppe Graziano - Magnitude of Macromolecular Crowding Caused by Dextran and Ficoll Gerardo Palazzo - The Empirical HLD-NAC Model of Microemulsion Can Be Rationalized on the Basis of Random Field Description of Oil/Water Domains Alessandra Del Giudice - Complex Coacervation Between Sodium Decanoate and Cationic Inulin: Structural and Deposition Studies of Bio-Based Polymer and Surfactant Mixtures Matilde Tancredi - Microfluidic Production of Rhamnolipid Coacervates: Linking Droplet Formation to Internal Organization	Room E Topic: Environmental Physical Chemistry Chair: TBD Alessio Carmelo Perri - Thiol-Functionalized Chitosan Derivative as a Novel Bioadsorbent for Selective Mercury Remediation Mariafrancesca Baratta - Synthesis and Preparation of Cyclodextrin Modified Carbon Nanotube Bucky papers for the Efficient Removal of Carbofuran from Water Suwat Nanan - Magnetic Fe ₃ O ₄ /BiOBr for Sunlight Degradation of Tetracycline Antibiotic Fausto Secci - Probing Aluminum Speciation and Surface Acidity in Mesoporous Aluminosilicates: Structure-Acidity Insights for CO ₂ -to-DME Conversion
13:30-15:15	Lunch		
15:15-16:00	Plenary lecture - Rebeca Marcilla, Unlocking the Potential of Organic Materials for Energy Storage: The Fascinating Journey Toward Sustainable Batteries – (Room A)		
16:00-16:30	Keynote - Ana B. Muñoz-García, Addressing Complexity in Energy Materials and Interfaces: Predictive Modeling Strategies Beyond DFT - (Room A)		
16:30-17:15	Room A Topic: Theory, Modelling, and Data-Driven Physical Chemistry Chair: Tbd Michael Alejandro Zambrano Angulo - Atomistic Insights into Hole Injection at Multi-Cation Perovskite/HTL Interface Alessandro Landi - From Electronic Structure to Nonradiative Pathways in INVEST Emitters: a Combined Electronic-Structure and Quantum-Dynamics Perspective Ranjini Sarkar - First-Principles-Based Insights into Adsorption and Reactivity of Na ⁺ Salt and Room-Temperature Ionic Liquids at Sodium Metal Surface	Room B Topic: Physical Chemistry for Health and Life Sciences Chair: TBD Ivana Miletto - Advanced Yb ³⁺ /Er ³⁺ -TiO ₂ Architectures: Mastering Upconversion for NIR-To-Visible Light Harvesting Luigi Fabiano - Tuning Physicochemical Properties of Pedot:PSS/Hnts Nano Composites for Smart Bioactive Interfaces Vincenzo Piscopo - Development of Dielectric/Metal/Dielectric (DMD) Architectures for Optical Biosensing Applications	Room E Topic: Electrochemistry, Catalysis, and Energy Conversion Chair: TBD Fabrizio Murgia - Boosted Ionic Conductivity in Na ₂ B ₁₂ H ₁₂ /SiO ₂ Nanocomposite Electrolyte for Solid-State Sodium Batteries Umberto Mattia - Enhanced Biophotocurrent Generation via Tailored Nano-Biointerfaces in <i>Rhodobacter Capsulatus</i> Biohybrids Sergio Brutti - "The SIGNE project: Composite Silicon Nanowire on Graphite Anodes with Ni-Rich Cathodes and Safe Ether based Electrolytes for High-Capacity Li-ion Batteries
17:15-19:00	Poster session and refreshment		
19:30-on	Social event: Guided tour following the "Di Arco in Arco" itinerary in Bari's Old Town		



51st Congress of the Physical Chemistry Division

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Thursday 9 July 2026



Time	Room A	Room B	Room E
09:15-10:00	Plenary lecture - Raffaele Mezzenga, Amyloid-metal Supramolecular Hybrids for Health and Environmental Remediation Technologies – (Room A)		
10:00-10:30	Keynote - Enrica Gianotti, Confined Spaces, Boundless Opportunities: Controlling Confinement in Porous Materials from Catalysis to Nanomedicine – (Room A)		
10:30-11:15	Room A Topic: Theory, Modelling, and Data-Driven Physical Chemistry Chair: TBD Marta Corno - Atomistic Modeling of Hydroxyapatite Surfaces: from Biomolecular Adsorption to Environmental Catalysis Valeria Palumbo - A New Method to Characterize the Porosity of Materials: Distribution of Nanoporous Volume, Specific Surfaces and Prediction of Gas Adsorption Sofia Chiara Sarnataro - Computational Exploration of Derivatized Cyclodextrin-Based Drug Delivery Systems	Room B Topic: Physical Chemistry for Health and Life Sciences Chair: TBD Paola Albanese - Photomodulation of Vesicle Dynamics Using Fluorescent Photoswitchable Amphiphiles Nicoletta Depalo - pH-Responsive Dendritic Large-Pore Mesoporous Silica Nanoplatfoms for 5-Fluorouracil Delivery in Colorectal Cancer Alessandro Auditore - Decoding Molecular Information via Mass Transport–Electron Transfer Coupling	Room E Topic: Environmental Physical Chemistry Chair: TBD Gioele Ancora - A Sequential Probe Adsorption Approach for the Characterization of Acid Sites in Hierarchical Zeolites Gabriele Mulas - Valuable Waste for CO ₂ Conversion and H ₂ Evolution Induced by Mechanical Energy Pierluigi Lasala - Cellulose-Based Nanocomposites Embedding Metal Oxides Nanoparticles for Dye Removal from Wastewater by Synergistic Adsorption and Photocatalytic Processes
11:15-12:00	Coffee break		
12:00-12:45	Plenary lecture - Debora Berti, Engineering Nano-Bio Interfaces: From Self-Assembly to Functional Hybrid Nanosystems – (Room A)		
12:45-13:15	Room A Topic: Fundamental Physical Chemistry: Structure, Dynamics, and Spectroscopy Chair: TBD Luigi Gentile - Acid-Induced Plasticization on Cellulose Thin Films Raffaella Lettieri - Structure-Property Relationships In Cellulose Acetate Composites Containing Microalgal Residues	Room B Topic: Soft Matter, Interfaces, and Complex Systems Chair: TBD Leonardo Bellandi - Physicochemical Characterization of PVA-Based Twin Chain Polymeric Networks Loaded with a Citric Acid Solution Pietro Tordi - Ion-Programmed Biopolymer Organohydrogels for Multiresponsive Soft Electronics	Room E Topic: Materials and Nanoscience for Sustainable Technologies Chair: TBD Rossella Labarile - Microbial Photosynthesis for Space Applications Giulia Rando - Next-Generation Sustainable Membranes: Nanostructured Platforms for Environmental and Energy Challenges
13:15-14:45	Lunch		
14:45-15:15	Keynote lecture - Chiara Milanese, The C Treasure in Biomasses for Energy and Analytical Systems – (Room A)		
15:15-16:00	Room A Topic: Fundamental Physical Chemistry: Structure, Dynamics, and Spectroscopy Chair: TBD Donato Valli - Doping Strategies in Lead-Free Double Perovskites for X-Ray to NIR Photodetection Maria Chiara Di Gregorio - Engineering Metal-Organic Frameworks for Highly Nonlinear Photonics Tommaso Gentili - Infrared-Activated Dynamic Crystals: Remote Motion in a Metal-Organic Framework	Room B Topic: Soft Matter, Interfaces, and Complex Systems Chair: TBD Emanuela Gatto - From Nature to Nanoscience: Peptide Building Blocks Driving Photoinduced Electron Transfer Massimo Trotta - Repurposing Bacterial Photosynthesis	Room E Topic: Electrochemistry, Catalysis, and Energy Conversion Chair: TBD Hans Peter Bloch - A Comprehensive DFT Study of the Mechanism of Selective PE Oxidation with a Ruthenium-Porphyrin Catalyst Daniele Conelli - Photoinduced Surface-Driven Bromination of Electron-Rich Arenes on Lead-Free Cs ₂ AgBiBr ₆ Microcrystals under Sustainable Conditions Gabriele Manca - Ultrafast Piezo-Assisted Engineering of Metal-ZnO Interfaces for Catalytic Applications
16:00-16:45	Coffee break		
16:45-19:00	Assembly of the Physical Chemistry Division and Medals Ceremony		
20:30-on	Social dinner at Villa Romanazzi Carducci		

Friday 10 July 2026

Time	Room A	Room B	Room E
09:15-09:45	Keynote lecture - Maria Rosaria Plutino, Innovative Hybrid Materials for a Sustainable Future: Bridging Circular Resources, Nanotechnologies, and Green Transition (Room A)		
09:45-11:00	Room A Topic: Fundamental Physical Chemistry: Structure, Dynamics, and Spectroscopy Chair: TBD Federico Locardi - Persistent Luminescence Nanocrystals Rita Gelli - Bisphosphonates and Polyacrylates Control the Size and Assembly of Amorphous Magnesium-Calcium Phosphate Particles Andrea Mangolini - Structural and Magnetic Properties of Iso-Oriented Assemblies of Co–Zn Ferrite Nanoparticles Vittorio Scardaci - Study and Characterization of the Gold Nanoparticle's Formation Mechanism by Re-Irradiation of Linear Bromide Induced Gold Nanoparticle Chains Carlo Nazareno Dibenedetto - Assembling Colloidal Emissive Nanocrystals into 3D Super-Architectures	Room B Topic: Soft Matter, Interfaces, and Complex Systems Chair: TBD Francesco Sarnelli - A Physicochemical Approach to Surfactant-Mediated Deposition of Volatile Compounds from Detergent Formulations onto Fabrics Céline Adamo - Controlling Fibroin Self-Assembly in Sustainable Consolidants for Fragile Silk Artifacts Michele Baglioni - Influence of Surfactants on Industrial Cheese Sauces Giorgia Ballabio - Interfacial and Emulsifying Properties of Potato Protein Hydrolysates Obtained by Enzymatic Processing Jessica Costa - Physicochemical Characterization of High-Performance Chitosan Based Adhesives: a Sustainable Approach to Enhances Interfacial Adhesion	Room E Topic: Materials and Nanoscience for Sustainable Technologies Chiara Ingrosso - Innovative Hybrid Nanocomposites based on Soot Carbon Nanoparticles Decorated with Au Nanoparticles for Electroanalytical Sensors Carlo Carandente Coscia - Modulating the Morphology of Lignin Microparticles via Green Solvent-Shifting Federico Morari - Activated Carbon Derived from Agro-Industrial Waste for H ₂ Storage Monica Tonelli – 3D-Printable Bioreceptive M–S–H Cements Containing Large Quantities of Marble Dust Waste Lorenzo Viacava - Flexible Synthesis of Copper, Iodine – Based Coordination Polymers with Modulable Luminescent Emission
11:00-12:00	Coffee break		
12:00-13:00	Conference awards ceremony		
13:00-13:30	Closing remarks		