



International Connect & Expo on Carbon Chemistry and Materials

October 26-28, 2026 | Frankfurt, Germany

CARBONCONNECT2026



Special Session On: Supramolecular Sensing by Functionalized Carbon Nanoparticles: a New Class of SupraNanoSensors

Call For Papers

Organized and Leader by:
Prof. Giuseppe Trusso Sfrassetto
University of Catania, Italy

Short Description:

This work focuses on developing advanced fluorescence-based sensors using carbon nanoparticles derived from natural sources. Their tunable surface properties and strong optical responses enable highly selective detection of chemical and biological analytes, including environmental pollutants and important biological analytes. The study emphasizes potential real-world applications, including portable and multiplexed sensing using devices like smartphones or hyperspectral cameras.

Scope and Topics of Interest: The session welcomes original research papers, case studies, and review articles addressing, but not limited to, the following topics

- * Advanced Nanomaterials for Fluorescence-Based Sensing
- * Carbon Nanoparticles for Environmental Monitoring and Pollution Detection
- * Portable and Multiplexed Biosensing Technologies
- * Natural-Source Nanomaterials in Analytical Chemistry
- * Optical and Fluorescence Properties of Functionalized Nanoparticles
- * Smart Sensing Platforms Using Nanomaterials and Mobile Devices
- * Nanoparticle-Based Detection of Hazardous Chemical and Biological Agents
- * Integration of Nanotechnology and Hyperspectral Imaging for Real-World Applications
- * Sustainable Nanomaterials for Green and Low-Cost Sensors
- * Innovations in Point-of-Care and Field-Deployable Sensing Devices



Short info about Organizing Team:

The special session “Nanoparticles for Smart Applied Sensing” highlights innovative research led by Prof. Giuseppe Trusso Sfrazzetto, University of Catania, Italy, along with co-authors. The Organizing Committee warmly encourages interested participants to join this session and engage with cutting-edge developments in fluorescence-based nanoparticle sensing. Attendees are invited to elaborate their research through oral presentations, with both individual and group participation opportunities available.



Prof. Giuseppe Trusso Sfrazzetto
University of Catania, Italy



Dr. Rossella Santonocito
University of Catania, Italy



Dr. Alessia Cavallaro
University of Catania, Italy

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Who Should Contribute:

This session invites contributions from scientists, engineers, policy experts, academics, research fellows, and industry practitioners working in carbon chemistry, advanced carbon materials, nanomaterials, and sustainable energy technologies. Contributions on carbon-based catalysts, carbon capture and utilization, energy storage materials, and environmental applications are particularly encouraged. Interdisciplinary research and practical insights from ongoing projects in carbon materials synthesis, functionalization, and applications are highly welcome.

Submission Guidelines:

- Authors should submit an extended abstract in the prescribed conference format (PDF or Word).
- Submissions must be made through the conference submission portal: <https://carbonchemistry.theinfiniteminds.net/abstract>
- All papers will be peer-reviewed for quality, relevance, and originality.
- Accepted papers will be included in the conference book and presented during the special session.
- Selected contributions may also be considered for publication in associated journals or special issues, subject to editorial review.

Important Deadlines:

Abstract submission deadline	: March 25, 2026
Notification of acceptance	: Within 4–5 working days of submission
Early-bird registration deadline	: December 20, 2025
Conference dates	: October 26–28, 2026

(All deadlines are subject to adjustment; please refer to the official conference website for updates.)

Session Objective

This session aims to bridge the gap between research, innovation, and practical applications in fluorescence-based nanoparticle sensing. It highlights cutting-edge developments, real-world implementations, and interdisciplinary approaches for chemical and biological detection.

Conference Contact Details

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