

Mercoledì, 10/07/2024
alle ore 11.15

La **Dott.ssa FIORENZA FANELLI**

Consiglio Nazionale delle Ricerche, Istituto di Chimica dei Composti
Organometallici, Sede Secondaria di Bari

terrà il seguente seminario:

**"Surface engineering using low-temperature atmospheric pressure
plasmas—Opportunities at the interface"**

Il seminario si terrà
in presenza presso l'Aula 5 del Dipartimento di Chimica, Università degli Studi di Bari, e
in modalità telematica, tramite accesso alla piattaforma MicrosoftTeams.

[Partecipa alla riunione ora](#)

ID riunione: 391 475 024 376

Passcode: 4e2hc6

Si invitano tutti gli interessati a partecipare.

Dr. Claudio Sangregorio
Direttore ICCOM

Short Abstract:

In the last decade, low-temperature atmospheric pressure plasma (APP) technology has received considerable attention in materials science and engineering, and significant progress has been made in both cutting-edge laboratory investigations and industrial settings. By providing unique reactive environments at moderate gas temperatures and ambient pressure, low-temperature APPs have opened new avenues for tailoring the surface properties of materials as well as to prepare a variety of thin films with different chemical compositions, structures, and morphologies. In this presentation, an overview of recent advances in the development of APP processes for surface engineering applications will be provided, spanning from the aerosol-assisted deposition of nanocomposite thin films to strategies devised for the surface modification of porous materials. The presented examples will suggest, among others, opportunities offered in the synthesis and processing of heterogeneous catalysts as well as of functional materials for sustainable mobility and environmental remediation.

Short Biography:

Fiorenza Fanelli received her MSc Degree in Chemistry (2002) and PhD in Chemical Sciences (2006) from the University of Bari. Since 2011, she has been a researcher of the National Research Council (CNR), working first at the Institute of Nanotechnology-Bari Unit, and then joining the Institute of Chemistry of Organometallic Compounds-Bari Unit in April 2024. In 2022, she was visiting researcher at University of Ulster (UK) as CNR STM grant recipient, and invited visiting professor at the CNRS-Processes, Materials and Solar Energy Laboratory (France). Her research mainly focuses on the development of low-temperature atmospheric pressure plasma processes for surface modification and thin film deposition. Overall, her interests have encompassed the preparation and characterization of functional materials for potential applications in catalysis, sustainable mobility, environmental remediation, polymer industry, medicine. She has published over 60 peer-reviewed articles and book chapters, and has presented more than 15 invited talks at international conferences. She has served as a symposium organizer at Materials Research Society meetings (2022, 2023) and as a guest-editor of Plasma Processes and Polymers (2012) and IEEE Transactions of Plasma Science (ongoing).