

GREENING TOMORROW: EXPLORING NANOBIOSTIMULANTS FOR A REGENERATIVE ECONOMY AND POSITIVE ENVIRONMENTAL IMPACT

In today's world, balancing environmental sustainability with economic growth is crucial. Nanobiostimulants offer a promising solution, addressing both needs. Our joint event explores their potential to revolutionize agriculture, environmental restoration, and economic progress through nanotechnology. We will examine their environmental benefits, role in regenerative economies, and the innovations driving their adoption, alongside case studies, policy discussions, and collaborative opportunities.

CONFERENCE VENUE
Faculty of Civil and Industrial Engineering
– Sapienza University of Rome
Via Eudossiana, 18 – 00184 Rome (Italy)

Chairs:
Antonella Macagnano (IIA-CNR) &
Fabrizio De Cesare (DIBAF-UniTUSCIA)

Joint Event of September 13, Friday

09:00 - 10:30

UNPACKING THE ESSENTIALS OF PLANT BIOSTIMULANTS

This session on NANOBIOSTIMULANTS emphasizes the transformative potential of biostimulants in making agriculture more sustainable. It brings together experts, farmers, and companies to explore innovations in plant biostimulants, Agriculture 4.0, regenerative bioeconomy, and waste-to-value conversion, all aimed at reducing agriculture's environmental impact.



- 09:00-09:30. Prof. Giuseppe Colla, DAFNE-University of Tuscia, VT**
Microbial and non microbial plant biostimulants: what they are and what they do according to the EU Regulation 2019/1009
- 09:30-09:50. Eng. Francesco Petracchini, DTA-CNR, RM**
Towards Agriculture 4.0: Environmental impact, sustainability, and innovation, perspectives and opportunities
- 09:50-10:10. Prof. Giuseppe Scarascia Mugnozza, DIBAF-University of Tuscia, VT**
Towards a regenerative bioeconomy: Agroforestry and applications from ecofriendly circular nanotechnologies
- 10:10-10:30. Prof. Annalisa Santucci, DBCF-University of Siena, SI**
Circular bioeconomy as a novel source of bioactive compounds

10:30-11:00. Coffee break

11:00-12:40

HARNESSING NANOTECHNOLOGY FOR A GREENER FUTURE WITH NANOBIOSTIMULANTS

This second session on NANOBIOSTIMULANTS explores how nanotechnology can enhance sustainable agriculture. Presentations will cover the use of nanomaterials from waste, converting waste into agricultural products, and developing nanohybrids and nanobiostimulants. We will also discuss integrating microorganisms with nanostructures to boost crop production. Join us to learn how these innovations can reduce agriculture's environmental impact.

- 11:00-11:30. Prof. Daniele Del Buono, DSA3-University of Perugia, PG**
Nanomaterials from waste for a sustainable nano-circular economy. Biostimulant effect of nanoscaled lignin and biogenic nanoparticles
- 11:30-11:50. Prof. Fabrizio De Cesare, DIBAF-University of Tuscia, VT**
Microbial biostimulants: From traditional to nanomaterial-based formulations
- 11:50-12:10. Prof. Giuseppina Luciani, DICMAPI-Federico II University, NA**
Nanotechnology meets sustainable agriculture: Nanohybrids from biowaste
- 12:10-12:30. Dr. Antonella Macagnano, IIA-CNR, RM**
Transforming agriculture: Electrospinning nanobiostimulants for sustainable grow
- 12:30-12:40. Dr. Antonio Di Nardo, Huber AgroSolutions, BO**
Nanomaterials or Nanobiostimulants: When Will We Have a Legally Recognized Definition?

13:00-14:00. Lunch

COLLABORATING FOR A SUSTAINABLE FUTURE: JOINING INDUSTRY, AGRICULTURE AND SCIENCE FOR NANOBIOSTIMULANT DEVELOPMENTS

This third session on NANOBIOSTIMULANTS compares organic farmers' needs with biostimulant manufacturers' offerings and challenges, including regulatory issues. It will showcase the expertise of Italian biostimulant producers and their interest in nanotechnologies for sustainable agriculture. We will explore the conversion of biowaste into valuable resources using electrospun nanofiber technologies, highlighting new materials that support plant growth through functional molecules or beneficial bacteria, along with preliminary findings

- 14:00-14:10. Dr. Leonardo Dragoni, Italtollina-Hello Nature, VR**
The evolution from Italtollina to Hello Nature for a global approach to sustainable fertilization
- 14:10-14:20. Dr. Sarai Augustin, IPCB-CNR, NA**
Characterization of multifunctional nanofibrous systems using hazelnut shell derivatives
- 14:20-14:30. Dr. V. Russo and Dr. D. Spagnuolo, Promethea Biochem Solution, TA**
Beyond Nutrients: The Role of Macroalgae Derived Growth Regulators in Sustainable Agriculture
- 14:30-14:40. Dr. Massimo Mari, DIITET-CNR, RM**
Innovative nanofibers from agro-industrial waste: Pioneering circular economy solutions
- 14:40-14:50. Dr. Mimmo Scollo, Originy S.r.l, CT**
Microalgae bioregistry for nutraceuticals and agriculture, industrial experience in Green Extraction and future prospects
- 14:50-15:00. Dr. Bruna Maturro, IRSA-CNR, RM**
Colonization of sustainable nanotissue derived from agricultural waste by Kosakonia radicincitans and its potential application
- 15:00-15:10. Dr. Anita Maienza, IBE-CNR, FI**
Nanofiber technology as support to plant and root development: Results from tomato pot experiments
- 15:10-15:20. Dr. Claudio Caramadre, Etruscan-Roman Biodistrict, RM**
Future-proofing agriculture: The role of Etruscan-Roman Bio-district in sustainable development



Mandatory Registration (FREE) on website is due by the 6th of September 2024

Conference website: <https://www.nanoinnovation2024.eu/home/index.php/programme/joint-events/greening-tomorrow>

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