



PRIMA-SAFE at the VIII CUCS Conference in Florence: Tackling Water Contamination Challenges

Description



Water contamination remains one of the most pressing issues globally, threatening ecosystems, public

health, and access to clean water. The VIII CUCS Conference, held from 12th to 14th September 2024 at the University of Florence, served as a vital platform to address these challenges. Themed “University and Cooperation: Contemporary Challenges. Research, Education, Territorial Cooperation, and Scientific Diplomacy,” the event gathered experts, academics, and innovators to discuss sustainable solutions for pressing global concerns.

PRIMA-SAFE: A Step Toward Sustainable Water Solutions

Among the esteemed participants, PRIMA-SAFE made a notable contribution by presenting its innovative research on advanced treatment technologies aimed at combating water contamination. Specifically, the team showcased their study on:

Advanced Treatment Technologies for Mitigating Water Contamination:

This research focuses on the activation of peroxymonosulfate via biochar, a method designed for efficient pollutant removal from water systems. Let's break down these key terms:

- **Peroxymonosulfate (PMS):** A powerful oxidizing agent often used in advanced oxidation processes (AOPs). It is highly effective in breaking down organic pollutants into harmless byproducts, making it a cornerstone in water treatment technologies.
- **Biochar:** A form of carbon-rich material produced from the pyrolysis of organic waste. Biochar has a highly porous structure, which enhances its ability to adsorb contaminants and serve as a catalyst for chemical reactions.



The combination of PMS and biochar creates a synergistic effect, amplifying the breakdown of complex pollutants and improving water purification efficiency. This innovative approach aligns with global efforts to develop sustainable and cost-effective water treatment solutions.



Key Takeaways from PRIMA-SAFE's Presentation

PRIMA-SAFE's session emphasized the importance of innovative methodologies for safeguarding water resources. Here are the major highlights:

1. **Innovative Approaches for Sustainable Water Management:** PRIMA-SAFE's work demonstrates the potential of integrating advanced oxidation processes with natural, renewable materials like biochar to create environmentally friendly water treatment systems.
2. **Ensuring Water Quality and Safety:** By targeting contaminants at a molecular level, the presented technology ensures the removal of harmful substances, contributing to improved water safety for communities and ecosystems.
3. **Fostering Global Cooperation Through Scientific Diplomacy:** The conference underscored the significance of international collaboration. PRIMA-SAFE's research serves as a testament to how shared scientific efforts can address challenges that transcend borders.

Why This Matters

The pressing issue of water contamination requires interdisciplinary efforts, combining chemistry, engineering, and environmental science to devise practical solutions. Events like the CUCS Conference highlight the critical role of universities and research institutions in driving innovation and fostering global partnerships.

PRIMA-SAFE's participation in the VIII CUCS Conference is a clear example of how research can address real-world problems. The activation of peroxymonosulfate via biochar not only represents a breakthrough in water treatment but also underscores the potential of using renewable resources to create sustainable solutions. Such advancements pave the way for a future where access to clean, safe water is a universal reality.

For more updates on PRIMA-SAFE's initiatives and research, stay tuned to our platform!

Category

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