

DEPARTMENT OF MOLECULAR SCIENCE AND NANOSYSTEMS

Seminars of the PhD Programme in Chemistry

# *Environmental Applications of Nanoporous Sludges*

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**Room Delta0B**

**Scientific Campus - via Torino 155, Venezia Mestre**

## **Abstract**

Sustainable Chemistry is aimed at satisfying the present needs without compromising future ones. The use of nanoporous waste produced in potable water treatment plants generates a series of research, development and innovation opportunities. This conference presents the use of nanoporous sludges, rich in iron and having a surface area of about 100 m<sup>2</sup>/g in the elimination of bad odors (H<sub>2</sub>S and NH<sub>3</sub>) in wastewater treatment plants. Other applications of environmental concern are the selective oxidation of H<sub>2</sub>S to sulfur, the capture of arsenic (As(V) and As(III)) in aqueous media, removal of volatile organic compounds (VOCs) at low temperatures and CO<sub>2</sub> capture.

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