

## IL DIPARTIMENTO DI SCIENZE MOLECOLARI E NANOSISTEMI

**ORGANIZZA IL SEMINARIO:** 

## Dipartimento di Scienze Molecolari e Nanosistemi

## Challenges and Opportunities with the Valorization of Lignin

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At 12:00

**Conference Room** 

## **Abstract**

Essential scientific and technical milestones that need to be addressed prior to lignin utilization will be initially described. We will thus introduce the foundations for describing our systematic efforts in the following areas aimed at arriving at practical applications for an otherwise intractable raw material.

More specifically the lecture will cover our efforts in:

Refining technical kraft lignin so as to expose its potential as a source for reactive polyphenols of well-defined molecular weight polymers and oligomers.

Creating new thermoplastic lignin polymers and precursors to carbon fibers by applying novel chemistries to it followed by thermal treatments.

Finally, and based on the presented information we are to address the question: are lignin-derived carbon fibers graphitic enough so as to produce high modulus carbon fibers?

L' organizzatore Prof. Claudia Crestini