



Bioinorganic/Coordination Chemistry, Sustainability and Extended Reality

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22-24 May 2023

First part: 4 h; Second part: 2h (see time schedule below)

Aula P, Dipartimento di Scienze Chimiche

Content of the teaching program: The lectures focus on applying coordination chemistry for sustainable catalytic reactions that are important in industry, e.g., oxidation of cyclohexane. Extended Reality (Virtual/Augmented Reality in combination with AR) can help understand these reactions and can be applied in teaching.

First part

1) Examples of important catalytic reactions (2 h)

- Presentation and discussion of current industrial processes and their problems
- Examples of metalloenzymes with copper or iron in the active site that are involved in selective oxygenation/oxidation reactions and their model compounds

2) Basics on metals and ligand reactivity (2 h)

- Model compounds for metalloenzymes
- Methods for characterization and reactivity studies

Monday 22 May 2023, 14.30-16.15 AULA P

Tuesday 23 May 2023, 16.30-18.15 AULA P

Second part

Extended reality and artificial intelligence for support in research (2h).

- Application of virtual/augmented reality in research (e. b. platform Nanome) in combination with AI
- Outlook

For this part the students will be divided in two groups (2h for each group), so to allow the use of the visors to more students.

Wednesday 24 May 2023

1st group: 14.30-16.15 AULA P

2nd group: 16.30-18.15 AULA P

A certificate will be provided upon 100% of attendance

Prof. Mauro Carraro
Dipartimento di Scienze Chimiche