

# Welcome



1222·2022  
**800**  
A N N I



UNIVERSITÀ  
DEGLI STUDI  
DI PADOVA

## **Il Dipartimento di Scienze Chimiche accoglie il Dott. Francesco Lamberti che terrà un seminario dal titolo:**

### **The direction of modern science: dealing with the scarcity of critical raw materials**

**Lunedì 25 settembre 2023, alle ore 16:45, Aula A  
Dipartimento di Scienze Chimiche, Via Marzolo, 1.**

*What lessons can be learned from the COVID-19 pandemic and the months of lockdown that have exposed the vulnerability of certain key industries? The COVID-19 crisis has made it clear that Europe is highly dependent on non-EU suppliers for critical raw materials (CRM), and that supply disruptions can have a negative impact on industrial value chains and other sectors. Critical raw materials are required in many key European industries, such as automotive, steel, aerospace, IT, health and renewable energy sectors. For this reason, the exploitation of CRMs must be calmed and new experimental strategies for their substitution and/or their smart engineering or reduction must to be found out. One of these interesting strategies, for instance, is to use copper oxides (copper is not a CRM strictly speaking, but a strategic material) for the production of renewable hydrogen in photoelectrochemical devices.*

*In this talk, after a broad survey of my career and recent achievements, I will present some recent attention-grabbing approaches on the engineering of copper-based materials for photovoltaics and water photoelectrochemical oxidation - that are the basis of my interdepartmental project here at DISC for the next years outlining the perspectives in this relevant field. .*

Il Direttore del Dipartimento  
Michele Maggini