

Prof. Marc Koper

*Professor of Catalysis and surface chemistry
Leiden Institute of Chemistry
LIC/Energy & Sustainability
m.koper@chem.leidenuniv.nl*



Double layer and electrolyte effects in electrocatalysis

Venerdì 25 Febbraio 2022, ore 14.30

Aula A (Nasini)

Zoom: <https://unipd.zoom.us/j/81260112114?pwd=eTVBRWhEQ0hNMUhuN2VIQ1Azak40Zz09>

ID riunione: 812 6011 2114

Passcode: 304368

Abstract: In my talk, I will discuss new results on the double layer structure of the Pt(111) electrode, showing significant deviations with Gouy-Chapman-Stern theory, also (in fact especially) at low electrolyte concentrations. A new theory will be introduced, specifically taking into account an additional attraction between ions and the surface, as well as the interaction of water with the Pt(111) surface. I will also show how the composition of the double layer, mainly the presence of cations, has a crucial influence on the electrocatalysis of hydrogen evolution and CO₂ reduction. This then leads to the concept of cation-coupled electron transfer.

La presenza della S. V. sarà molto gradita.

Prof. Michele Maggini
*Direttore del Dipartimento
di Scienze Chimiche*



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