

The Chemist's Interactions

Seminars @the Chemistry Department

Friday, 21st February 2020

Prof. Silvia Bordiga
Università degli Studi di Torino

Room G21
H 14.30

Characterization of Metal Centers in Zeolites for Partial Oxidation Reactions

The contribution will illustrate some possibilities provided by an appropriate combination of advanced characterization techniques in understanding the environment of metal ions in different metal-zeolites, as well as the role played by them in different catalytic reactions involving partial oxidations. Main focus is into the nature of the active site precursors (i.e., mono or di-/trinuclear ions, oxidation state, and local environment) and into the electronic and geometric structure of the oxo species formed upon interaction with the oxidizing agents. Moreover, examples about *in situ* or *operando* experiments following changes during the reaction are reviewed. The main considered techniques are X-ray absorption spectroscopy (XAS), IR, resonance Raman (rR) and diffuse reflectance UV-Vis spectroscopies, often coupled to density functional theory (DFT) modeling.



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FREE COFFEE @4pm
for all participants