

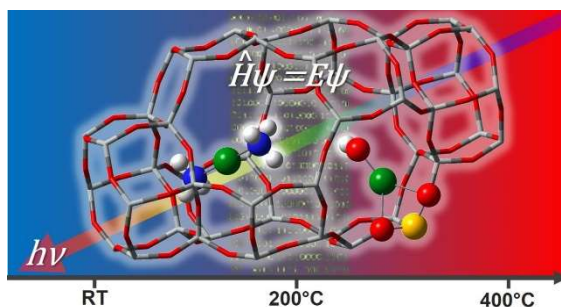
## NIS Colloquium

# Cu-based zeolites, versatile materials for redox catalysis

Friday July 20<sup>th</sup> 2018

*Aula Canizzaro, Chemistry Dept. University of Turin, via P. Giuria 7*

**Organizers: Gloria Berlier, Elisa Borfecchia, Silvia Bordiga, Carlo Lamberti**



**Chair:** Elisa Borfecchia, University of Oslo, Norway

09:30 – 10.15

**Christopher Paolucci**, University of Virginia, US

Cu mobility in Cu-CHA zeolites: consequences for spectroscopy and catalysis

10:30 – 11.00

**Kirill A. Lomachenko**, The European Synchrotron Radiation Facility, France

BM23 and ID24 beamlines of the ESRF: the future

11:00 – 11.20

Coffee Break

11:20 – 11:35

**Andrea Martini**, University of Turin, Italy and University of Rostov-on-Don, Russia

XAS Multivariate Curve Resolution (MCR) analysis applied to the Cu-CHA zeolite

11:45 – 12:00

**Dimitrios K. Pappas**, University of Oslo, Norway

Reducibility of Cu-zeolites: a descriptor for the activity in the methane to methanol conversion

12:10 – 12:25

**Carlo Buono**, University of Oslo, Norway

A density functional theory investigation of the catalytic conversion of methane to methanol in chabazite

12:35 – 14:00

Lunch

**Chair:** Gloria Berlier, University of Turin, Italy

14:00 – 14:45

**Enrico Tronconi**, Polytechnic University of Milan, Italy

Identification of the intermediates in the reduction half cycle of low-T NH<sub>3</sub>-SCR over Cu-CHA by combining chemical trapping and UV-Vis-NIR with DFT

15:00 – 15:30

**Ton V. W. Janssens**, Umicore Denmark ApS, Denmark

The role of protons and formation Cu(NH<sub>3</sub>)<sub>2</sub><sup>+</sup> during ammonia-assisted solid-state ion exchange of Cu(I) oxide into zeolites

15:45 – 16:00

Coffee Break

16:00 – 16:15

**Chiara Negri**, University of Turin, Italy

Investigating the low temperature formation of Cu<sup>II</sup>-(N,O) species on Cu-CHA zeolites for the Selective Catalytic Reduction of NO<sub>x</sub> by FTIR operando spectroscopy

16:25 – 16:40

**Iliia A. Pankin**, University of Rostov-on-Don, Russia and University of Turin, Italy

DFT-assisted XANES modelling and EXAFS wavelet analysis for Cu oxo species in MOR and CHA

16:50 – 17:20

**Hanne Falsig**, Haldor Topsøe A/S, Denmark

On the Oxygen Activation in Cu-CHA

17:35 – 17:45

Concluding remarks

**Registration is free but requested**

**please send an e-mail to [gloria.berlier@unito.it](mailto:gloria.berlier@unito.it) before 13-07-2018**