Chemistry at the Surface
Key Aspects in Materials Design and Catalysis

An International Workshop in Honor of Gaetano Granozzi and Elio Giamello

25th-27th November 2021, Baveno, Italy

Plenary Speakers

Prof. Gianfranco Pacchioni (IT)
Prof. Hans-Joachim Freund (DE)
Prof. Catherine Louis (FR)
Prof. Zbigniew Sojka (PL)
Prof. Damien Murphy (UK)
Prof. Jürg Osterwalder (CH)
Prof. Jürgen Behm (DE)

Topics

- ***Surface chemistry***
- ***Surface science***
- ***Low dimensional systems***
- ***Oxides chemistry***
- ***(Photo)Catalysis***
- ***Open-shell species***

The Workshop is embedded within the 6th PARACAT Network Symposium and features plenary lectures, key note and oral communications.

The Workshop commences on Thursday November 25th in the afternoon and is preceded by a morning session dedicated to the research activities of the PARACAT project.

Location and Venue

The conference will take place at the Grand Hotel Dino in Baveno a charming village along the Lake Maggiore shores, facing the Borromean Islands http://www.bavenoturismo.it/en/storia-di-baveno

Registration Fees

	Before 1st October 2021	After 1st October 2021	One day conference
Academics	400 €	450 €	100
Students	350 €	400 €	100

The quote includes: welcome party, (Thursday 25th November evening), coffee breaks, lunches and accommodation for two nights at the Grand Hotel Dino.

Conference dinner: 60 €

Organising and Scientific Committee

University of Turin
Mario Chiesa
Maria Cristina Paganini
Stefano Livraghi
Enrico Salvadori

University of Padua
Stefano Agnoli
Laura Calvillo
Antonella Glisenti
Gian Andrea Rizzi

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Società Chimica Italiana
Divisione di Chimica Inorganica

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Scientific Programme

Thursday 25/11/2021		Friday 26/11/2021		Saturday 27/12/2021	
09:00	**Opening of the PARACAT Session**	09:00	**Catherine Louis** *From Gold to non-Noble Catalysts for Selective Hydrogenation*	09:00	**Hajo Freund** *Model Systems for Heterogeneous Catalysis at the Atomic Scale*
09:15	**Ilenia Serra** *Pitfalls in Sample Preparation of Metalloproteins for Low Temperature EPR: the Example of Alkaline Myoglobin*	09:40	**Francesco Carraro** *Post Synthetic Metalation of MOFs: Pores as Nanoreactors*	09:40	**Francesco Sedona** *Oxygen Dissociation on Iron Phthalocyanine: Tuning the Catalytic Activity by the Supramolecular Order on Ag(110) and Ag(100).*
09:35	**Maruan Bracci** *Trap and study of the peroxidase intermediate Compound I using the combination of Rapid Freeze Quench – EPR*	10:00	**Svetlozar Surnev** *Interaction of Na with a two-dimensional WO3 layer on Pd(100): From doping to 2D sodium bronzes formation*	10:00	**Plinio Innocenzi** *Defects Controlled Optical Properties of h-BN Nanostructures*
09:55	**David Fioco** *Photoreactivity Studies of Cr(I) Complexes by EPR Spectroscopy*			10:20	**Oliver Diwald** *Rubbing Powders and Other Approaches to Activate Intergranular Charge Transfer in Metal Oxides*
10:15	**Kavyprya *Thangavel*** *EPR Investigations on Metal Organic Frameworks to Elucidate the Gas and Liquid Adsorption Properties*	10:30	Coffee-Break	10:50	Coffee-Break
10:35	**Andrea Guidetti** *Development of a Combined Methodology Towards Mechanistic Investigation of Rare Metal-Free, Light Activated Catalysts*	11:00	**Zbignew Sojka** *Mechanistic steps of SCR reaction over Cu, Ni and Co zeolites investigated by EPR/HYSCORE and IR/2D COS techniques combined with DFT molecular modeling*	11:20	**Mikhail Petukhov** 2D Cuprous Fluoride on Copper Crystal
10:55	**Tony Famulari** *Electronic and Structural Characterization of, Peroxygenase-Like Cytochrome P450, Cyp116b5hd*	11:40	**Paolo Bruzzese** *Determination of the Structure and Dynamics of Copper Single-Metal Sites in Zeolites by Means of 17O EPR and DFT Modelling*	11:40	**Jürgen Behm** *Electrocatalysis at the Atomic Scale: Nanostructured Bimetallic Electrodes*
11:15	Paracat Meeting	12:00	**Angelika Brukner** *Active surface sites in solid catalysts: Searching the needle in a haystack by EPR and friends*	12:20	*Closing Remarks*
		12:30	LUNCH Buffet	12:30	LUNCH Buffet
14:00	**Chemistry at the Surface Registration**	14:30	**Luca Artiglia** *Temperature and Reaction Environment Influence the Nature of Platinum Species Supported on Ceria*		
15:00	*Opening of the Workshop*	15:00	**Piotr Pietrzyk** *Role of surface reactive oxygen species in adsorption and removal of water toxicants by amorphous metal oxides in the presence of hydrogen peroxide*		
15:10	**Gianfranco Pacchioni** *Oxide Surfaces: in the Search of the Hidden Electrons*	15:20	**Valeria Lagostina** *CW and Pulse EPR Studies of Vanadium Species on Shape Controlled Anatase Nanocrystals.*		
15:50	**Gabriele Deplano** *Titration of Accessible Cu(I) Sites in Cu-Exchanged ZSM-5 by Volumetric CO Adsorption*	15:40	**Cristiana Di Valentin** *Modelling Complex Nanosystems for Drug Delivery, Targeting and Imaging.*		
16:10	**Leonora Podvorica** *Isolated Ti(III) Species on the Surface of a Pre Active Ziegler-Natta Catalyst*	16:10	Coffee-Break		
16:30	Coffee-Break	17:00	**Thomas Risse** *The role of radicals for the hydroxylation of a supported silica bilayer on Ru(0001)*		
17:00	**Yu-Kai Liao** *Unravelling the Nature of Cr5+ Species on Silica Surface in Phillips Catalyst by Advanced EPR Techniques*	17:30	**Damien Murphy** *Dual mode MW resonators for dielectric heating of radical reactions*		
17:20	**Mathias Blanco** *Endohedral Functionalization of Carbon Nanotubes with Enhanced Photocatalytic Activity*	18:00	**Gaetano Granozzi** *My scientific journey: encounters and sliding doors*		
17:40	Cristina Pavan *New Molecular Descriptors of Silica Surface: Towards a Revised Paradigm for Particle Toxicology*				
18:00	**Jürg Osterwalder** *Model systems for water splitting electrode surfaces*	18:20	**Elio Giamello**		
19:00	**Welcome Party**	19:30	**Gala Dinner**		