List of publications and presentations

Unit 1

Publications

A. Fortunelli


Presentations:

A. Fortunelli


Barcaro G., Fortunelli A., “DFT study of the interaction of small coinage metal clusters and extended depositions with the regular and defected MgO(100) surface” *Summer School on Self-Organised Nanostructures*, Cargese (Corsica), July 17th-23th 2005


G. Vitulli

G. Vitulli, C. Evangelisti, G. Uccello Barretta, F. Balsano, P. Salvadori, .Armelao, E. Tondello,


Unit 2

Publications:

S. Valeri


S. Altieri, S.F. Contri, S. Valeri, “Hydrolysis at MgO(100)/Ag(100) oxide-metal interfaces”, Phys. Rev. Lett., submitted.[IF 07.035]


A. Rota, S. F. Contri, G. C. Gazzardi, S. Cottafava, S. Valeri, “Focused Ion Beam induced swelling in MgO(001)”, Surf. Sci., submitted [IF 02.063]

G. Pacchioni


L. Giordano, G. Pacchioni, “Pd nanoclusters at the MgO(100) surface”, Surface Science, 575, 197-209 (2005).[IF 02.063]


A. Del Vitto, L. Giordano, G. Pacchioni, U. Heiz, “Cluster and periodic DFT calculations of MgO/Pd(CO) and MgO/Pd(CO)2 surface complexes”, J. of Physical Chemistry B, 109, 3416-3422 (2005).[IF 03.679]


L. Giordano, M. Baistrocchi, G. Pacchioni, “Bonding of Pd, Ag, and Au atoms on MgO(100) surfaces and MgO/Mo(100) ultra-thin films. A comparative DFT study”, Physical Review B, 72, 115403-11 (2005).[IF 02.962]

R. Ferrando, A. Fortunelli and G. Rossi
Quantum effects on the structure of pure and binary metallic nanoclusters
Physical Review B 72, 085449 (2005) [IF 02.962]

Global optimization of bimetallic cluster structures. I. Size-mismatched Ag Cu, Ag Ni, and Au Cu systems
Journal of Chemical Physics 122, 194308 (2005)[IF 02.950]

G. Rossi, R. Ferrando, A. Rapallo, A. Fortunelli, B.C. Curley, L.D. Lloyd, and R.L. Johnston,
Global optimization of bimetallic cluster structures. II. Size-matched Ag-Pd, Ag-Au, and Pd-Pt systems
Journal of Chemical Physics 122, 194309 (2005) [IF 02.950]

Presentations:

S. Valeri

S. Altieri, et al., Hydrolysis at MgO(100)/Ag(100) oxide-metal interfaces (oral), Fourth International Workshop on Oxide Surfaces (IWOX-4) Torino University, Torino Italy and Centre Paul Langevin, Aussois France, 04-08 January 2005.


S. Valeri, Micro-nano structures in metal-oxide systems (invited), NIS Colloquia “Nanostructured Oxide Surfaces”, Torino (Italy), February 17, 2005.


S. Benedetti, et al., Interfacial reactivity and morphology at the Au/NiO(001) interface (poster), Matter, Materials and Devices Meeting, Genova (Italy) 22-25 June 2005.

S. Valeri, Nanofabrication by ion beams (invited), Eurocores Workshop on Surface Nanopatterning, Pisa, 30 June - 01 July 2005.

P. Luches , Fe local atomic environment at the Fe/NiO(001) interface studied by polarization dependent XAS (oral), XIII Meeting of the Italian Society for Synchrotron Radiation, Modena (Italy) 7 - 9 July 2005.

S. Benedetti, et al., Toward the understanding of Au/NiO(001) interfacial reactivity (poster), 8th International Conference on the Structure of Surfaces, Munich, Germany, 18-22 July 2005.

A. Rota, et al., Focused Ion Beam induced swelling in MgO(001) (poster), ECOSS 23 – European Conference on Surface Science, Berlin (Germany), 5-9 September 2005.

G. Pacchioni


G. Pacchioni, “Metal atoms and clusters on oxide surfaces and thin films: charging mechanisms and consequences” (invited), Department Chemie, Technische Universität München, Monaco (Germania), 3 Maggio 2005.

G. Pacchioni, “Metal atoms and clusters on oxide surfaces and thin films: charging mechanisms and consequences” (invited), School of Physics, The University of Sydney, Sydney (Australia), 6 Luglio 2005.

G. Pacchioni, “Charge transfers at metal-oxide interfaces” (invited), Fritz-Haber Institut der Max Planck Gesellschaft, Berlino (Germania), 17 Agosto 2005.


G. Granozzi

Fourth International Workshop on Oxide Surfaces (IWOX-4)
January 04 to January 08 2005
Torino University, Torino Italy (Tuesday)
And Centre Paul Langevin, Aussois France

Oral Presentation
Reactive deposition of NiO ultrathin films on Pd (100): an overview
T. Orzali, S. Agnoli, M. Sambi and G. Granozzi

Invited plenary lecture of Gaetano Granozzi
X-th Symposium on Surface Physics July 10 - 15, 2005 Prague, Czech Republic
Preparation and structure of oxide nanostructures on metal single crystals

R. Ferrando

G. Barcaro, A. Fortunelli, C. Mottet, G. Rossi, F. Nita and R. Ferrando
Structure and diffusion of small Pd clusters on the MgO(001) surface

F. Nita G. Rossi, R. Ferrando, C. Mottet, G. Barcaro, A. Fortunelli,
Structure and diffusion of Pd clusters on the MgO(001)
23rd European Conference on Surface Science (ECOSS23), Berlin September 4-9 2005

Unit 3

Publications

M.P. Pileni
"Reverse micelles used as templates: a new understanding in the nanocrystals growth of silver and copper nanocrystals by using hydrazine as reducing agent."
Journal of Experimental Nanoscience 2005 to be published [IF NA]

Presentations:

Christophe Petit
“Collective Magnetic Properties of Mesostructure made of cobalt Nanocrystals”
Workshop on surface nanopatterning Pisa, Italy, 30/6 /05-1/07/05

Unit 4

Publications:

C. Barth, C.R. Henry;
High resolution imaging of gold clusters on KBr(100) surfaces investigated by Dynamic Scanning
Force Microscopy

Structure and deformations of Pd-Ni core-shell nanoparticles

O. Meerson, G. Sitja, C.R. Henry;
Low temperature and low pressure CO oxidation on gold clusters supported on MgO(100)

C. Barth, C. Claeys, C.R. Henry;
Surface preparation of hard ionic crystals by UHV cleavage

C.R. Henry
Morphology of Supported Nanoparticles
Prog. Surf. Sci. 2005 (in print) [IF 03.744]

S. Ferrero, K. Hoejrup-Hansen, C.R. Henry;
Growth and Morphology of Gold Nanoparticles on MgO(100): a combined AFM-TEM study
Phys. Rev. B (Submitted) [IF 02.962]

O.H. Pakarinen, C. Barth, A.S. Fosters, R.M. Nieminen, C.R. Henry;
High resolution atomic force microscopy of gold nanoclusters on the KBr (001) surface
C. Barth, C.R. Henry;
Kelvin probe force microscopy on surfaces of UHV-cleaved ionic crystals
Nanotechnology; (Submitted) [IF 02.304]

C. Barth, C. R. Henry;
Imaging nanoclusters in the constant height mode of the dynamic SFM
Nanotechnology; (Submitted) [IF 02.304]

Presentations:

NC-AFM conference, Seattle (USA), October 2004
**Oral:** O.H. PAKARINEN, C. Barth, A.S. Foster, R.M. Nieminen, C.R. Henry
**NC-AFM imaging of Au clusters on the KBR surface**

IWOX-4, Aussois (France), January 2005
**Invited talk:** C. BARTH, C.R. Henry
The clean (001) surface of UHV-cleaved MgO and KBr: An investigation by Dynamic Scanning Force Microscopy and Spectroscopy
**Oral:** G. HAMM, C. Becker, C.R. Henry
Monometallic Au, Pd and bimetallic Au-Pd cluster arrays on thin alumina film on Ni$_3$Al (111)
**Poster:** C.R. HENRY, S. Ferrero, O. Meerson, C. Barth, K. Hoejrup-Hansen
Gold on MgO(100): Nucleation, Structure and Reactivity

JSI (Journées Surface-Interface, Lyon (France) January 2005
**Poster:** S. Sao Joao, S. GIORGIO, C. Mottet, L. Piccolo, J. Goniakowski, C.R. Henry
Interface Ni/MgO – Agrégats « Cœur-coquille » Pd-Ni/MgO : structure et réactivité
**Poster:** J. Prunier, B. Domenichini, S. Sao-Joao, S. GIORGIO, C.R. Henry, S. Bourgeois;
Premiers instants de la croissance du nickel sur MgO(100)
Ecole de Sciences des Surfaces de Porquerolles “OXYSOL”, Porquerolles island (France) June 2005
**Invited Talk:** C. R. HENRY
Etude par microscopie en champ proche des surfaces d’oxydes et de la croissance de nanoparticules métalliques sur ces surfaces

ESF-SONS, (Pisa, Italy) June 2005
**Invited talk:** C. R. HENRY
Self-Organised Growth of Metal Clusters on Oxide Surfaces
**Poster:** G. Hamm, C. Becker, C.R. Henry
Growth of highly ordered metal nanocluster arrays on a thin alumina film

EUROPACAT-7 (Sofia, Bulgaria) August-Septembre 2005
**Oral:** G. Hamm, G. Sitja, J.C. Dupin, C.R. HENRY;
Arrays of bimetallic clusters supported on alumina used as model catalysts
**Oral:** S. Sao-Joao, S. Giorgio, C. Mottet, L. Piccolo, C.R. HENRY;
Core-shell nanoparticles of Pd-Ni/Mg: structure and reactivity

ECOSS 23 (Berlin, Germany) Sept. 2005
**Invited talk:** C. R. HENRY
Bimetallic clusters arrays grown on nanostructured alumina surfaces: a new type of supported model catalysts
Poster: C. Barth, C.R. Henry
Imaging clusters with the dynamic scanning force microscope: techniques and solutions
Poster: C. BARTH, C.R. Henry
Kelvin probe force microscopy on surfaces of UHV cleaved ionic crystals

NC-AFM 8, Bad Essen (Germany) August 2005
Oral: C. BARTH, C.R. Henry
Imaging nanometer sized metal clusters in the constant height mode
Poster: C. BARTH, C.R. Henry
Kelvin probe force microscopy on surfaces of UHV cleaved ionic crystals

Unit 5

Publications:

Presentations:
G. Renaud, “Surface Nanopatterning through GISAXS”,
Workshop on Surface Nanopatterning, Tirrenia (Pisa), June 30, July 1st 2005

Unit 6,9

Publications:

Optical absorption spectrum of gold atoms deposited on SiO₂ from cavità ringdown spectroscopy

Gold atoms and dimers on amorphous SiO₂: Calculation of optical properties and cavity ringdown spectroscopy measurements
J. Phys. Chem. B, in press.[IF 03.679]

A.S. Wörz, U. Heiz, F. Cinquini, G. Pacchioni
Charging of Au atoms on TiO₂ thin films from CO vibrational spectroscopy and DFT calculations

Presentations:
Gordon Research Conference on Fuel Cells Bryant College, RI, USA July 17-22 2005

Unit 7
Publications:


Presentations:

Supported metal aggregates: growth, structure and chemistry", 229-th ACS Meeting, San Diego, 13.03.2005


Unit 8

Publications:

J. Schoiswohl, S. Agnoli, B. Xu, S. Surnev, M. Sambi, M.G. Ramsey, G. Granozzi, F.P. Netzer
Growth and thermal behaviour of NiO nanolayers on Pd(100)
Surface Science, Sept. 2005, in print [IF 02.063]

Strain relaxation and surface morphology of nickel oxide nanolayers
Surface Science, submitted August 2005 [IF 02.063]

J. Schoiswohl, S. Surnev, F.P. Netzer
Reactions on inverse model catalyst surfaces: Atomic views by STM
Topics in Catalysis, Sept. 2005, in print [IF 02.187]

Presentations:

J. Schoiswohl, B. Xu, S. Surnev, M.G. Ramsey, F.P. Netzer, S. Agnoli, M. Sambi, G. Granozzi
Ultrathin nickel oxide films on Pd(100)
55th Annual Meeting of the Austrian Physical Society, Vienna (Austria) 27-29 September 2005

G. Parteder, J. Schoiswohl, S. Surnev, F.P. Netzer
Growth of Manganese Oxide Layers on Pd(100)
55th Annual Meeting of the Austrian Physical Society, Vienna (Austria) 27-29 September 2005-10-03

S. Surnev
The marvelous world of oxide nanostructures
7th Intern. Summer School – Conference “Advanced Materials and Technologies”, Palanga, Lithuania, 27-31 August 2005-10-03
F. P. Netzer, S. Surnev, J. Schoiswohl, G. Parteder, M. G. Ramsey, G. Kresse
Oxide nanolayers: Artificial phases in low dimensions
AVS 52nd Intern. Symposium, Boston (USA), 30 Oct.-4 Nov. 2005