

Programme Summary

		Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
8:00	8:45		REGISTRATION				
8:45	9:00		OPENING (Richter)				
9:00	9:15		Reining	Zahn	Aspnes	Hinrichs	Onida
9:15	9:30						
9:30	9:45						
9:45	10:00		Cricenti (1)	Weightmann	Huebner	Isted	Tolk
10:00	10:15		Garbuio	Mosca Conte	Terlinden	Price	Steigerwald
10:15	10:30		Hingerl	Schofield	Bourguignon	Lavrentiev	Kakudji
10:30	10:45						
10:45	11:00		COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK
11:00	11:15						
11:15	11:30		Pulci	Smith	Tahara	Bruhn	Pettinger
11:30	11:45			Simonsen		Gordeeva	
11:45	12:00					Nibonyanagi	
12:00	12:15		Hogan	Letnes	Pedersen	Ehlert	Del Gobbo
12:15	12:30		Vogt				Buick
12:30	12:45						
			LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
15:00							
15:30	15:45					15:15 EXCURSION TO CASTELLO ARAGONESE & SANT'ANGELO	
15:45	16:00		Shkrebtii	Kavokin	Bechstetd		Palummo
16:00	16:15						
16:15	16:30		Bussetti	Gumhalter	Chen		Esser
16:30	16:45		Mendoza	Mochan	Cricenti (2)		Speiser
16:45	17:00						
17:00	17:15		COFFEE BREAK	COFFEE BREAK	COFFEE BREAK		COFFEE BREAK
17:15	17:30						
17:30	17:45	REGISTRATION	Noguez	Degoli	Duo'		Silva
17:45	18:00			Lane			Pucci
18:00	18:15			Keilmann	Savoini	McGilp	
18:15	18:30			Caramella	Esteve	Park	Zahn (Summary)
18:30	18:45						Noguez (Next: OSI IX)
18:45	19:00						Cricenti (Next: Epioptics)
19:00	19:15	Welcome Reception					Del Sole (Closing remarks)
19:15	19:30						
20:00				Poster Session/Buffer		SOCIAL DINNER	

Sunday 6th September

17:30–19:00 Registration

19:00–20:00 Welcome Reception

Monday 7th September

08:00–08:45 Registration

08:45–09:00 Opening

09:00–10:45 Morning Session I

INVITED 09:00 Lucia Reining (LSI, CNRS, Ecole Polytechnique, Palaiseau)
Insight and prediction of materials properties from *ab initio* calculations of electronic excitations.

09:45 Antonio Cricenti (ISM-CNR, Rome)
SNOM characterization of Ordinary Chondrites at different spectral lines: a novel contribution to the solving of the asteroids reddening problem.

10:05 Viviana Garbuio (Università di Roma “Tor Vergata”)
Effect of proton disorder in the excited state properties of ice.

10:25 Kurt Hingerl (Universität Linz)
Spectroscopic Ellipsometry in the Mid IR and UV-VIS for Investigating Low Temperature Plasma Activated Wafer Bonding.

10:45–11:15 Coffee Break

11:15–12:45 Morning Session II

INVITED 11:15 Olivia Pulci (Università di Roma “Tor Vergata”)
Ab initio description of electronic excitations in 2-dimensional systems.

12:00 Conor Hogan (CNR-INFN-SMC & Università di Roma “Tor Vergata”)
Structure and optical properties of the Sb-rich GaSb(001) surface.

12:20 Patrick Vogt (Technische Universität Berlin)
Adsorption configuration of self-assembled lead-phthalocyanine on GaAs(001).

12:40–15:40 Lunch

Monday 7th September

15:40– 17:00 Afternoon Session

INVITED 15:40 Anatoli Shkrebtii (University of Ontario Institute of Technology)

Theory of the temperature dependent dielectric function of semiconductors: from bulk to surfaces.

16:25 Gianlorenzo Bussetti (Università di Roma “Tor Vergata”)

Direct evidence of electron quantum confinement in semiconductor surfaces.

16:45 Bernardo Mendoza (Centro de Investigaciones en Optica, Mexico)

Optical coherent current control at surfaces: theory of injection current.

17:05– 17:35 Coffee Break

17:35– 19:00 Evening Session

INVITED 17:35 Cecilia Noguez (Istituto de Fisica, UNAM, Mexico)

Optically active nanoparticles.

18:20 Fritz Keilmann (MPI Quantum Optics. Garching. Germany)

Frequency Combs for Spectroscopy and Nanoscopy.

18:40 Lucia Caramella (Università degli Studi di Milano/ETSF)

High resolution EEL spectra of reconstructed Si(100) surfaces: a first principles study.

Tuesday 8th September

09:00–10:45 Morning Session I

INVITED 09:00 Dietrich Zahn (Chemnitz University of Technology)

Thin films of perylene derivatives and phthalocyanines on semiconductor surfaces studied by in situ Raman spectroscopy.

09:45 Peter Weightman (University of Liverpool)

Real Time Measurements of Conformational Change in Proteins

10:05 Adriano Mosca Conte (Università di Roma “Tor Vergata”)

Photo-isomerization of minimal Schiff base model: a theoretical investigation by quantum many-body and TDDFT methods

10:25 Amy Schofield (University of Liverpool)

Using nanofibres to align collagen – a RAS and AFM investigation.

10:45–11:15 Coffee Break

11:15–12:40 Morning Session II

11:15 Caroline Smith (University of Liverpool)

The structure of adenine monolayers adsorbed at the Au(110)/electrolyte interface.

INVITED 11:35 Ingve Simonsen (Norwegian University of Science and Technology)

No disorder – no fun: a random walk through rough surface scattering phenomena.

12:20 Paul Anton Letnes (Norwegian University of Science and Technology)

Multipole Excitation in Clusters of Nanospheres: Field Penetration and High Order Resonances.

12:40–15:40 Lunch

15:40–17:05 Afternoon Session

INVITED 15:40 Alexey Kavokin (Università di Roma “Tor Vergata”)

Exciton-polariton lasers and Bose-Einstein condensation.

16:25 Branko Gumhalter (Institute of Physics, Zagreb, Croatia)

How slow should be ultrafast measurements to reveal features of quasiparticles excited in surface bands: from optically induced transient excitonic precursor states to relaxed band states of image potential.

16:45 Wolf Luis Mochan (ICF – UNAM, Mexico)

Enhanced transparency in metal-dielectric metamaterials.

17:05–17:35 Coffee Break

17:35–18:55 Evening Session

17:35 Elena Degoli (Università di Modena e Reggio Emilia)

From free-standing to embedded Si nanocrystallites: the role of size, oxidation, and strain.

17:55 Paul David Lane (University of Edinburgh)

Molecular Orientation studied by Reflection Anisotropy Spectroscopy

18:15 Matteo Savoini (Politecnico di Milano)

Sub diffraction interaction of polarized light with photosensitive polymers.

18:35 David Esteve (Université Paris Sud, Orsay)

In situ monitoring of $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ monolayers grown by Pulsed Laser Deposition.

20:00 Poster Session and Buffet.

Wednesday 9th September

09:00–10:45 Morning Session I

- INVITED 09:00 David Aspnes (North Carolina State University, Raleigh, USA)
Bond models of linear and nonlinear optics.
- 09:45 Hannes Huebener (LSI, Ecole Polytechnique, Palaiseau)
Ab Initio Calculation of Second Harmonic Generation in Semiconductors.
- 10:05 Nick Martinjin Terlinden (Eindhoven University of Technology)
Measuring the density and polarity of fixed charges in surface passivation layers on c-Si by electric-field-induced SHG.
- 10:25 Bernard Bourguignon (CNRS Univ. Paris Sud)
Using Second Harmonic and Sum Frequency Generation to probe metallic nanoparticles at surfaces.

10:45–11:15 Coffee Break

11:15–12:40 Morning Session II

- INVITED 11:15 Tahei Tahara (Advanced Science Institute, RIKEN, Japan)
Multiplex Electronic Sum-Frequency Generation (ESFG) Spectroscopy and Its Extension to Femtosecond Time-Resolved Measurements.
- 12:00 Satoshi Nihonyanagi (Advanced Science Institute, RIKEN, Japan)
Absolute orientation of water molecules at charged interfaces determined by heterodyne-detected VSFG spectroscopy.
- 12:20 Karl Pedersen (Department of Physics, Aalborg University, Denmark)
Second harmonic generation from Ge interfaces.

12:40–15:40 Lunch

Wednesday 9th September

15:40–17:10 Afternoon Session

- INVITED 15:40 Friedhelm Bechstedt (Friedrich-Schiller-Universitaet, Jena)
Progress in description of optical properties and excitonic effects:
Transparent conducting and antiferromagnetic oxides.
- 16:25 Weizhe Chen (Radboud University, Nijmegen)
Apertureless SNOM Study on Gold Nanoparticles: Size Effect and
Its Full Simulations.
- 16:45 Antonio Cricenti (ISM-CNR, Rome)
A multipurpose hybrid Conventional/Scanning Near Field Optical
Microscope for applications in materials science and biology.

17:05–17:35 Coffee Break

17:35–19:00 Evening Session

- INVITED 17:35 Lamberto Duo' (Politecnico di Milano)
Plasmonics in gold nanostructures: linear and nonlinear response.
- 18:20 John McGilp (Trinity College, Dublin)
X-ray magnetic circular dichroism and reflection anisotropy
spectroscopy Kerr effect studies of capped magnetic nanowires
- 18:40 Heungman Park (Vanderbilt University, USA)
Boron induced charge traps at the interface of Si/SiO₂ probed by
second harmonic generation.

Thursday 19th September

09:00–10:45 Morning Session I

INVITED 09:00 Karsten Hinrichs (ISAS, Berlin)

IR Ellipsometry for characterization of thin organic films.

09:45 Greg Isted (University of Edinburgh)

The effect of thermally induced surface defects on the optical anisotropy of Ag(110).

10:05 Jimmy Price (University of Texas, Austin)

Resonant photo-ionization of specific point defects in HfO₂ observed by second-harmonic generation.

10:25 Vasily Lavrentiev (Nuclear Physics Institute AS CR, Czech Republic)

Silicon disordering induced by gold ion implantation.

10:45–11:15 Coffee Break

11:15–12:35 Morning Session II

11:15 Thomas Bruhn (TU-Berlin and ISAS, Berlin)

Influence of molecule adsorption on the surface electric fields at GaAs(001) as measured via the linear electro-optic effect.

11:35 Anastasiya Gordeeva (Ioffe Institute, Moscow)

Effects of the local-field and inherent deformation in reflectance anisotropy spectra of AIIIIBV semiconductor surfaces

11:55 Markus Pristovsek (TU Berlin)

Determination of the complex linear electro-optic coefficient of GaAs and InP bulk and surfaces.

12:15 Robert Ehlert (University of Texas, Austin)

Step-induced electronic resonance at vicinal Si(001) observed by spectroscopic SHG and RAS.

12:35–15:15 Lunch

15:15–19:30 Excursion to Castello Aragonese and Sant'Angelo.

The **Aragonese Castle** was built on a rock near the island in 474 BC, by Hiero I of Syracuse. At the same time, two towers were built to control enemy fleets' movements. The rock was then occupied by Parthenopeans (the ancient inhabitants of Naples). In 326 BC the fortress was captured by Romans, and then again by the Parthenopeans. In 1441 Alfonso V of Aragon connected the rock to the island with a stone bridge instead of the prior wood bridge, and fortified the walls in order to defend the inhabitants against the raids of pirates. Thanks to Alfonso V the Castle was frequented by artists and men of letters, it became the center of the court life; between the XV and XVI centuries the Castle flourished. For a long time the story of Ischia was bound fast to the Aragonese Castle where the Ischia inhabitants could find secure shelter in case of attacks. The XVIII century marked the decline of the role of the Aragonese Castle which was abandoned by the rich families and isolated from the rest of the Island. It also underwent a bombardment in 1809 and was sold to a private owner. Nowadays the castle is the most visited monument of the island. It is accessed through a tunnel with large openings which let the light enter. Along the tunnel there is a small chapel consecrated to Saint John Joseph of the Cross (San Giovan Giuseppe della Croce), the patron saint of the island.

Today the old fishing village **Sant'Angelo d'Ischia** is an international tourist resort. No cars are allowed to enter, and for this reason Sant'Angelo can be considered a peaceful oasis. With an area of 150 hectares and about 400 inhabitants Sant'Angelo is on the south coast of the island Ischia. Full of trees and plants of any kind, Sant'Angelo offers a marvellous panorama featuring colourful houses joined to the small hill on the harbour, whose small roads overlook the clear blue sea. You can taste and enjoy different fresh fish and Ischia's special gastronomy in the restaurants near the sea. A very special dish is the "pollo alla fumarola" which is cooked under the local volcanic sands at the "Fumarole" beach. But what is really unique and distinguishes Sant'Angelo from other villages in the world is the small island called "la Torre". It is a volcanic rise island with lots of semicircle terracings. Once at the top of this 105 metres high formation there was a small church, where the cult of St. Michael's Archangel began (Sant'Angelo's Patron Saint).

20:00 Social Dinner

Restaurant *Umberto a Mare*, via Soccorso 2, Forio d'Ischia.

This historic venue, dating back three generations, offers classical Ischian seafood with a modern creative twist.

Friday 10th September

09:00–10:45 Morning Session I

- INVITED 09:00 Giovanni Onida (Universita' di Milano)
Vibrational properties of *sp* carbon atomic wires in cluster-deposited carbon films: theory and experiments.
- 09:45 Norman Tolk (Vanderbilt University, Nashville)
Ultra-Fast Carrier/Spin and Coherent Phonon Dynamics.
- 10:05 Andrew Steigerwald (Vanderbilt University, Nashville)
Surface generated acoustic phonon waves for materials characterization and modification.
- 10:25 Ernest Kakudji (PMR, University of Namur, Belgium)
In-situ nonlinear optical spectroscopy of electron-phonon couplings at alkali-doped C₆₀/Ag(111) interfaces.

10:45–11.15 Coffee Break

11:15–12:40 Morning Session II

- INVITED 11:15 Bruno Pettinger (Fritz Haber Institute, Berlin)
Tip-enhanced Raman spectroscopy and microscopy of a few Dye Molecules.
- 12:00 Silvano Del Gobbo (Università di Roma “Tor Vergata”)
Low dimensionality effects in Raman Spectra of CdS Quantum Dots.
- 12:20 Benjamin Buick (Università di Roma “Tor Vergata”)
Single AlGaAs nanowires probed by Raman Spectroscopy.

12:40–15:40 Lunch

Friday 10th September

15:40–17:05 Afternoon Session

- INVITED 15:40 Maurizia Palummo (Università di Roma “Tor Vergata”)
Quasiparticles and excitons in Si nanowires: effect of doping, surface termination and mixing.
- 16:25 Norbert Esser (ISAS, Berlin)
Optical spectroscopy of surface excitations: a promising approach to study atomic nanowires
- 16:45 Eugen Speiser (ISAS, Berlin)
Surface vibrations on semiconductor nanowires probed by Raman spectroscopy.

17:05–17:35 Coffee Break

17:35–18:40 Evening Session

- 17:35 Ana Silva (New University of Lisbon)
Size effects in laser induced thermal emission from nickel nanowires
- INVITED 17:55 Anne Marie Pucci (Kirchoff Institute of Physics, Univ. Heidelberg)
Surface Enhanced Infrared Spectroscopy

18:40 Summary

Dietrich Zahn (Chemnitz University of Technology)

18:50 OSI-IX

Cecilia Noguez (Instituto de Fisica, UNAM, Mexico)

19:00 Epioptics 11

Antonio Cricenti (CNR-ISM, Rome)

19:10 Closing remarks

Rodolfo Del Sole (Universita di Roma “Tor Vergata”)

List of posters

Claudio Goletti

University of Rome "Tor Vergata"

Optical anisotropy read-out in solid state porphyrins for the detection of volatile compounds

Lamberto Duo'

LNESS - Dipartimento di Fisica, Politecnico di Milano

Cross-antenna structures for polarization control and analysis

Bernardo Mendoza

Centro de Investigaciones en Optica, Mexico

Effective Optical Response of Metamaterials

Bernardo Mendoza

Centro de Investigaciones en Optica, Mexico

Optical spin injection at Si(111) surfaces

Yves Caudano

PMR, University of Namur, Belgium

Combining linear and nonlinear optical spectroscopies to probe molecular orientation at interfaces

Bernardo Mendoza

Centro de Investigaciones en Optica, Mexico

Reflectance anisotropy spectra of CdTe surfaces

Primož Rebernik Ribic

Ecole Polytechnique Federale de Lausanne

Initial stages of pentacene thin-film growth on polymeric surfaces

Matteo Savoio

LNESS - Dipartimento di Fisica, Politecnico di Milano

Experimental Observation of a Photon Bouncing Ball

Junwei Wei

University of Texas, Austin

Comparative Linear and Nonlinear Optical Spectroscopy of Silicon Nanocrystals embedded in SiO₂

List of Posters

Lei Ming

University of Texas, Austin

Hot carrier injection from angstrom-scale silicon-on-insulator films measured by optical second-harmonic generation

Antonio Cricenti

CNR-ISM, Rome

Collection of optical superresolution using higher harmonics and different acquisition modes in an aperture tapping SNOM

Alexandr Dejneka

Institute of Physics ASCR, Prague

Spectroscopic ellipsometry of SrTiO₃ crystals applied to antiferrodistorsive surface phase transition

Tor Nordam

Norwegian University of Technology and Science (NTNU)

Trondheim

Optics of Structured Surfaces: Theory and Experiments

Viviana Garbuio

University of Rome "Tor Vergata"

Excited states properties of formamide in water solution

Adriano Mosca Conte

University of Rome "Tor Vergata"

Many-body perturbation theory extended to the quantum-mechanics/molecular-mechanics approach: Application to indole in water solution

Frank Rebenrost

Max-Planck-Institut für Quantenoptik, Garching, Germany

Excitonic effects on the nonlinear optical response of a Si(111) surface

Anatoli Shkrebtii

University of Ontario Institute of Technology

Raman optical spectroscopy sensitive vibrations at the clean C(111) 2×1 surface from Born-Oppenheimer dynamics

