

Lectures by Foreign Speakers

Applications of Synchrotron Radiation

Giorgio Paolucci

- Synchrotron radiation for basic and applied sciences: Elettra and SESAME

Maya Pertova Kiskinova

- Synchrotron and FEL-based Imaging and Spectromicroscopy at Elettra
- Recent Advances of Synchrotron-based Photoelectron Microscopy in Addressing Properties of Morphologically Complex Materials and Nano-structures
- Microscopic insights on chemical state and morphology of key components in operating model fuel cells using synchrotron-based methods

Giuliana Aquilanti

- Fundamentals of X-ray absorption spectroscopy and applications to environmental and materials science.
- XAFS at Elettra: recent achievements and future projects

Plasma Physics

Joseph Niemela

- 50 years of the Abdus Salam ICTP and an International Year of Light

Peter H. Yoon

- Nonlinear Processes in Space Plasma I: General Concepts and Application.
- Nonlinear Processes in Space Plasma II: Electromagnetic Effects
- Nonlinear Processes in Space Plasma III: Magnetized Plasmas

Mitsutoshi Aramaki

- Experimental study of strongly coupled plasma using ion trap and laser cooling technique"
- Precise plasma spectroscopy using a tunable diode laser.

Hafiz Nasr A. Mohamed

- Laser-Plasma Electron Acceleration Research at Shanghai Jiao Tong University

Mustapha Maamache

- A modified Quantum Damped oscillator model for electromagnetic fields in time-varying plasma

Hanan Sa'adeh

- Coincident Rutherford Backscattering Spectrometry

Wang Jiasheng

- Analysis of metal elements in solid wastes by calibration-free LIBS technique

Rinda Hedwig

- Review on the Experiment of Laser Induced Shock Wave Plasma Spectroscopy

New Materials for Energy Applications

Muhammet Sadaka Toprak

- Nanomaterials for Energy Applications
- Nanoengineered Thermoelectric Materials for Waste Heat Recovery
- Environmental Friendly Thermoelectric Materials

Akrajas Ali Umar

- Poriferous TiO₂ Nanostructure for High Efficiency Dye-Sensitized Solar Cells

Ahmed A. Moosa

- Synthesis of Carbon Nanotubes for Nanocomposites
- Air Plasma Spraying (APS) of Aluminum-Silicon/ CNTs nanocomposite coating on Aluminum alloy.

Md. Feroz Alam Khan

- Magnetic properties of Fe/Cu sputtered nanoparticle thin film
- Spinodal decomposition and magneto-resistive properties of Alnico melt-spun magnetic ribbon
- Exchange bias effect in MnO magnetic nanoparticles fabricated by inert gas condensation (IGC) technique.

Osman Adiguzel

- Numerical and Physical Simulation of Phase Transformation in Ni-Al Alloy Model

Earth Systems

Angelo De Santis

- Geosystemics for an ever-changing world
- Entropy of Earthquakes and possible chaotic evolution of a seismic sequence

Rhodora V. Azanza

- Harmful Algal Blooms in Tropical Coastal Environments-
- Research and Development on Toxic Algal Blooms Events in the Philippines

Vladimir Kosobokov

- Earthquake Prediction: 20 Years of Global Experiment.
- Spatial and Temporal Variations of Climate in Europe.
- Global Seismic Hazard Assessment Program Maps are Erroneous.
- On Solar Flares and Cycles 23 – 24

Pavel Kalenda

- Static vertical pendulum – apparatus for in-situ relative stress measurement
- Multiparametry observations of precursors before strong earthquakes (Tohoku 2011, Okhotsk Sea 2012, Iran-Pakistan 2013)
- Non-linear asperity model for earthquake prediction

Shen Wenbin

- Study of anomalous gravity signals prior to large earthquakes: a case study.
- Observation of Earth's low-frequency oscillation modes based on superconducting gravimeters records.

Lixin Wu

- Infrared Radiation Change of Stressed Rock to fracturing.
- Earthquake Anomaly Recognition with Multiple Parameters from GEOS.

Tariq Javaid Cheema

- Environmental hydrological investigation of storing petroleum byproducts.
- Variation of hydraulic conductivity with depth in fractured aquifers.
- Environmental hydrological issues in reclaiming open pit mines.