



«ETTORE MAJORANA» FOUNDATION AND CENTRE FOR SCIENTIFIC CULTURE
TO PAY A PERMANENT TRIBUTE TO GALILEO GALILEI, FOUNDER OF MODERN SCIENCE
AND TO ENRICO FERMI, THE "ITALIAN NAVIGATOR", FATHER OF THE WEAK FORCES



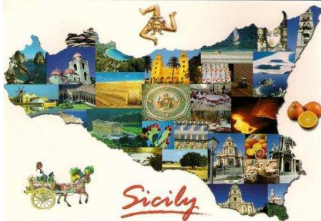
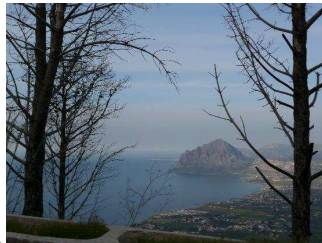
INTERNATIONAL SCHOOL OF QUANTUM ELECTRONICS

48th Course: First Mediterranean International Workshop on Photoacoustic & Photothermal Phenomena

ERICE-SICILY: JULY 11-18 - 2010

Directors of the Workshop: R. LI VOTI and A. MANDELIS

Sponsored by: • Italian Ministry of Education, University and Scientific Research • Sicilian Regional Government –
Sapienza Università di Roma Dipartimento di Energetica -



Lecturers

Photothermal study of dental and smart materials
J.J. Alvarado-Gil – CINVESTAV IPN-Mexico

Optical and photo-carrier characterization of semiconductor wafers.
Bincheng Li - Accademy of Science Chengdu – China

*NDE using thermal waves:
From photoacoustics to Lockin imaging methods*
G. Busse – IKT – Germany

Thermal-wave microscopy with resistive and thermocouple probes
M. Chirtoc - Uni de Reims - France

Photoacoustic effect in phononic structures, and chemically reacting systems
G. Diebold – Brown University, USA

*Analytical methods for characterizing skin penetration
based on non-invasive spectroscopy*
W. Faubel – Karlsruhe - Germany

Heat diffusion in layered samples : 3 omega and thermoreflectance methods
D. Fournier - Pierre et Marie Curie-France

Thermal lens spectrometry and recent progress in environmental analysis
M. Franko – Uni of Nova Gorica-Slovenia

*Photothermal and photoacoustic characterization of material structures in
transient and periodic mode: from nm to sub-micrometer resolution in 3D.*
C. Glorieux – KUL – Belgium

Generation and detection of acoustic phonons by femtosecond lasers
V. E. Gusev – Univ. du Maine – France

Photothermal temperature profiling and imaging in biomedicine
B. Majaron – Ljubljana, Slovenia

*Dental Thermophotonics :
Dental caries diagnostic imaging and depth profiling in clinical dentistry*
A. Mandelis - University of Toronto – Canada

*Photothermal calorimetry
for the study of glassy behavior in confined liquid crystals*
M. Marinelli – Roma Tor Vergata – Italy

*Three-dimensional photoacoustic tomography
of small biological objects with optical detection*
G. Paltauf - Karl-Franzens Universität Graz, Austria

Photoacoustic sonar: principles of operation and imaging
S. Telenkov - University of Toronto – Canada

Nanoscale heat transfer
S. Volz - CNRS – France

*Photothermal characterization of
curved inhomogeneous solids based on Green function method*
C. Wang – Suzhou University, Suzhou, Jiangsu Province, P. R. China

Picosecond laser ultrasonics from all angles
O.B. Wright – Hokkaido Univ - Japan

*seminars:
50 Years of Laser*

Some historical reminiscences
M. Bertolotti - Sapienza University of Rome - Italy

**More information about the «Ettore Majorana» Foundation and Centre
for Scientific Culture can be found on the WWW at the following address:
<http://www.ccsem.infn.it>**

PURPOSE OF THE WORKSHOP

By launching a series of state-of-the-art research presentations by world-renown scientific and engineering authorities, the aim of the Workshop is to bring together scientists, technology developers and technology users who are investigating or exploiting optically and electromagnetically excited acoustical, thermal and related diffusion-wave phenomena for the investigation of a large variety of material properties and applications. The many photoacoustic, photothermal (PA/PT) and diffusion-wave topics indicate that this field has developed a broad range of tools for fundamental and applied research. PA/PT research has reached a mature state, with an established position in instrumentation development and measurement technology and materials characterization. Future progress is guaranteed by the close synergy between advances in laser technology, instrumental development and novel opportunities in areas of current strong growth, such as the fields of biomedical imaging and material/device quality control. This Workshop wants not only to attract the PA & PT community, but also to offer an excellent opportunity for physicists, chemists, engineers, clinicians and technology end users, who are less familiar with this multifaceted field to discover the great potential of photothermal, photoacoustic and diffusion-wave methodologies for non-destructive, mostly non-contact, diagnostics of material properties and physicochemical processes under circumstances where many other techniques fail. A major goal of the Workshop is enhancing synergies and supporting closer interactions among wide segments of the scientific community. Therefore, special attention is given to the breadth of relevance of the research fields of the Workshop by opening the floor to, and promoting, subjects from a wide-range of related domains of research. This First Mediterranean International Workshop on PA/PT Phenomena has emerged also to fill the vacuum left from the cancellation of the well-known biennial series of Gordon Research Conferences in PA & PT science. Participants are encouraged to present their own results in the field.

APPLICATIONS: Persons wishing to attend the Workshop should apply in writing to:

Roberto LI VOTI
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Tel + 39.06.49916540 – Fax + 39.06.44240183
e-mail: WorkshopErice@uniroma1.it
<http://w3.uniroma1.it/photoacoustic-photothermal/>
Application deadline : May 31, 2010

POETIC TOUCH

In Erice you can admire the Castle of Venus, the Cyclopean Walls (~800 B.C.) and the Gothic Cathedral (~1300 A.D.). Erice is at present a mixture of ancient and medieval architecture. Other masterpieces of ancient civilization are to be found in the neighborhood: at Motya (Phoenician), Segesta (Elymian), and Selinunte (Greek). On the Aegadian Islands — theatre of the decisive naval battle of the first Punic War (264-241 B.C.) — suggestive neolithic and paleolithic vestiges are still visible: the grottoes of Favignana, the carvings and murals of Levanzo. Splendid beaches are to be found at San Vito Lo Capo, Scopello, and Cornino, and a wild and rocky coast around Monte Cofano: all at less than one hour's drive from Erice.

DIRECTOR OF THE SCHOOL: S. MARTELLUCCI - A.N. CHESTER
EMFCS PRESIDENT AND DIRECTOR OF THE CENTRE: A. ZICHICHI