



«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 SOLID STATE PHYSICS

## 47th Course: MATERIALS FOR RENEWABLE ENERGY

ERICE-SICILY: 27 MAY – 3 JUNE 2010

Sponsored by the: • Italian Ministry of University and Research • Sicilian Regional Government  
• Materials Research Society • European Materials Research Society •

### PROGRAMME AND LECTURERS

#### *CO<sub>2</sub>/Global Warming*

• L. ORR, Stanford GCEP Program, CA, US

#### *Energy Balance*

• P. WAIDE, International Energy Agency, Paris, FR

#### *Energy: The Big Picture*

• G. CRABTREE, Argonne National Laboratories, IL, US

#### *Conventional Technologies*

• J. POATE, Colorado School of Mines, Englewood, CO, US

#### *Organic Photovoltaic; Energy Storage*

• D. GINLEY, NREL, Golden, CO, US

#### *Photovoltaic 3rd generation*

• A. LUQUE, University of Madrid, ES

#### *Photovoltaic overview*

• J. POORTMANS, IMEC, Leuven, BE

#### *Photovoltaic Conventional*

• D. CARLSON, BP Solar, Bochum, DE

#### *Photovoltaic Industry*

• S. COFFA, ST-Microelectronics, Catania, IT

#### *Photovoltaic Thin films*

• J. BILLY, Stranbery, Helio Volt, Austin, TX, US

#### *Vehicles*

• M. SCHRECKENBERG, University of Duisburg-Essen, DE

#### *Fuel Cells*

• R. O'HAYRE, Colorado School of Mines, Englewood, CO, US

#### *Si wires and plasmonics for Photovoltaics*

• H. ATWATER, Caltech, Pasadena, CA, US

#### *SolarThermal*

• M. MEHOS, NREL, Golden, CO, US

#### *PEC/PhotoBio*

• D. CAHEN, Weissmann Institute, Rehovot, IL

#### *Green Chemistry*

• N. PUGLIANO, Dow/Rohm and Haas Chemical, US

### PURPOSE OF THE COURSE

Aim of the School is to present the state-of-the-art and the future perspectives for materials applied to the production and storing of renewable and sustainable energy. Lectures will be given by some of the most recognized academic and industrial expert, merging physics, chemistry and engineering knowledge in several fields. A general overview of the energy supplying will be presented by discussing also conventional energy sources and next generation nuclear production. Topics of the school are: the global warming problem, conventional and sustainable technologies, solar energy conversion (PV and thermal), thermal energy conversion, solar chemical conversion, wind energy conversion, fuel cells, storage and vehicles. The School will be a great opportunity for bringing together worldwide students, young scientists and experts in a friendly atmosphere for reciprocal benefits in terms of enthusiasm, knowledge and new ideas.

### APPLICATIONS

Persons wishing to attend the Course should apply by e-mail to:

- Professor Antonio TERRASI  
Università di Catania – Dipartimento di Fisica e Astronomia  
Via S. Sofia 64 – 95123 CATANIA, Italy  
Tel +39.095.3785431 – Fax +39.095.3785231  
e-mail: [antonio.terrasi@ct.infn.it](mailto:antonio.terrasi@ct.infn.it)

They should specify:

- i) date and place of birth, together with current nationality;
- ii) affiliation;
- iii) address, e-mail address.

### PLEASE NOTE

Participants must arrive on 27 May, not later than 7 pm.

Further information on the school and application forms for fellowships can be found at <http://www.ct.infn.it/~terrasi/erice.html>

### POETIC TOUCH

According to legend, Erice, son of Venus and Neptune, founded a small town on top of a mountain (750 metres above sea level) more than three thousand years ago. The founder of modern history — i.e. the recording of events in a methodic and chronological sequence as they really happened without reference to mythical causes — the great Thucydides (~500 B.C.), writing about events connected with the conquest of Troy (1183 B.C.) said: «After the fall of Troy some Trojans on their escape from the Achaei arrived in Sicily by boat and as they settled near the border with the Sicanians all together they were named Elymi: their towns were Segesta and Erice.» This inspired Virgil to describe the arrival of the Trojan royal family in Erice and the burial of Anchises, by his son Aeneas, on the coast below Erice. Homer (~1000 B.C.), Theocritus (~300 B.C.), Polybius (~200 B.C.), Virgil (~50 B.C.), Horace (~20 B.C.), and others have celebrated this magnificent spot in Sicily in their poems. During seven centuries (XIII-XIX) the town of Erice was under the leadership of a local oligarchy, whose wisdom assured a long period of cultural development and economic prosperity which in turn gave rise to the many churches, monasteries and private palaces which you see today.

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 neighbourhood: 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.

**More information about the «Ettore Majorana» Foundation and Centre for Scientific Culture can be found on the WWW at the following address:**

<http://www.csem.infn.it>

**Closing Date for Applications 30 April 2010**