



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



# INTERNATIONAL SCHOOL OF MATERIALS FOR SUSTAINABLE DEVELOPMENT AND ENERGY

1<sup>st</sup> Course:

## ***MATERIALS FOR RENEWABLE ENERGY AND SUSTAINABILITY***

**ERICE-SICILY: 6 – 13 JULY 2018**

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

### PROGRAMME AND LECTURERS

*Energy Climate and Sustainability*  
*Energy Water Food Nexus*  
*Approaches to CO<sub>2</sub> Mitigation*  
*Critical Materials*  
*Circular Economy and Life Cycle Analysis*  
*Photovoltaic Material and Technologies*  
*Nuclear Energy and Fusion*  
*Wind Power Systems*  
*Energy Storage Batteries*  
*Energy-efficient Transport and its Future*  
*Solar Fuels*  
*Biofuel and Biomass*  
*Thermoelectric Energy Conversion*  
*Fuel Cells*  
*Materials by Design for Energy Applications*  
*Energy Efficiency and the Grid*  
*Health Issues and Air Pollution*  
*High efficiency Low Energy Cost Si-HJ Photovoltaic Modules*  
*Emerging Trends for 21<sup>st</sup> Energy Technologies*

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### PURPOSE OF THE COURSE

The 7<sup>th</sup> edition of "Materials for Energy and Sustainability" becomes the 1<sup>st</sup> Course of a new School of the "Ettore Majorana" Foundation and Centre for Scientific Culture. Co-organized by the Materials Research Society and the European Materials Research Society, the aim of the Course is to present the state-of-the-art and the future perspectives for materials applied to the generation and storage of renewable and sustainable energy. Lectures will be given by some of the most recognized academic and industrial experts, merging physics, chemistry and engineering knowledge in several fields. A general overview of the global energy landscape will be presented by discussing also conventional energy sources and next generation nuclear production. Topics of the school are: the global warming issue, conventional and sustainable technologies, solar energy conversion (PV and thermal), thermoelectric energy conversion, solar fuels, wind energy conversion, fuel cells, storage and vehicles. The School will be a great opportunity for students and postdoctoral fellows from around the world to meet with and learn from their peers, and established experts in a friendly atmosphere, reaping benefit in terms of enthusiasm, knowledge and new ideas and benefitting the future of mankind.

### APPLICATIONS

Persons wishing to attend this Course should apply via web site:  
[www.eric-energy-materials2018.ct.infn.it](http://www.eric-energy-materials2018.ct.infn.it)

or via e-mail to:

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### PLEASE NOTE

Participants must arrive in Erice on July 6, no later than 7 p.m.

### 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 Sicilians 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 Anchise, by his son Enea, 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 other activities of the  
"ETTORE MAJORANA" FOUNDATION AND CENTRE FOR SCIENTIFIC CULTURE  
can be found on the WWW at the following address:  
<http://www.ccsem.infn.it>

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