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Energy Quarterly

News and analysis on materials solutions to energy challenges

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MATERIALS FOR ENERGY BLOG
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Hosted by the MRS University Chapter of the University of Texas at Austin

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MRS Bulletin

The Schools of Erice: A seed for the growth of renewable and sustainable energies | www.erice-energy-materials.ct.infn.it

Erice is a very small medieval city on the west side of Sicily, located on top of a mountain with a breathtaking view of the Tyrrhenian and Mediterranean seas. Its beauty deserves a visit at least once in one's lifetime, but it is because of the activities of the *Ettore Majorana Centre and Foundation for Scientific Culture* that Erice has especially become a unique place for scientists. Since 2010, a biannual school on "Materials for Renewable Energy" has been organized under the aegis of the Materials Research Society (MRS) and the European-MRS within the framework of the International School of Solid State Physics.

This third school, held July 12–18, 2014, was attended by about 100 scientists, including speakers and students from 22 countries. The core purpose of the school is the research and development of materials with a view to increase the use of renewable energy sources. This is realized by bringing together people with different scientific backgrounds and expertise, and from various countries, making them work in teams following lectures by outstanding experts. Students work on realistic problems relating to the production and management of renewable energies, comparing and discussing their opinions and proposals under the guidance of the lecturers.

The Erice schools are based on the idea that the growth and consolidation of the use of renewable energy sources needs a "hands-on" approach and a new way of thinking, with very strong interactions among physicists, chemists, engineers, biologists, geologists, economists, and politicians. The course provides an overview of major renewable and sustainable energy sources without neglecting the socioeconomic aspects. The program covers photovoltaics, concentrated solar power, solar fuels, wind energy, geothermal, thermoelectric, fuel cells, nuclear, hydrogen, artificial photosynthesis, batteries and storage, critical materials, water, CO_2 sequestration and recycling, climate change, financial perspectives, and regulation. The school ends with the teams presenting their own projects for the production of renewable energy for a new city of 20,000 inhabitants in different geographical zones. These schools represent a seed for a culture of sustainability and increased and more efficient exploitation of all renewable sources of energy. See you in Erice in 2016!

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