



# Italian Society of Mineralogy and Petrology

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## INTERNATIONAL SCHOOL: MINERALS AND BIOSPHERE

### Campiglia Marittima, September 27–30, 2011

An international school entitled Minerals and Biosphere, promoted by the informal groups Gruppo Nazionale di Mineralogia (GNM) and Georisorse, Ambiente e Beni culturali (GABeC), under the aegis of SIMP, was held in Campiglia Marittima from 27 to 30 September 2011. The school was endorsed by the EMU and by the French and Spanish mineralogical societies (SFMC and SEM). It was attended by about twenty Italian and foreign students, many of whom were financially supported by EMU, SFMC, the company FEL, and the European project Umbrella. The school included 2½ days of lectures on both fundamental and applied topics delivered by a distinguished staff of lecturers, including three non-Italians (Karim Benzerara, Paris; Robert M. Hazen, Washington; and Richard A. D. Patrick, Manchester). The students were also offered the opportunity to display posters about their projects. The school, blessed by extraordinarily favorable weather, ended with a one-day tour of the archeological and mining parks of San Silvestro and Baratti-Popolonia. More details, including the abstracts of the lectures, can be found at [www.socminpet.it/minbio2011/index.html](http://www.socminpet.it/minbio2011/index.html).



Participants prepare to enter the adit of the former Temperino Cu-Pb-Zn mine in the Parco Archeominerario di San Silvestro.

## SIMP PRIZES FOR 2011

### Bianchi Prize (in Petrology) – Two Winners Ex Aequo



**Marco Viccaro** graduated cum laude at the University of Genoa in 2003. He completed his PhD in petrography and petrology at the University of Catania in 2007, with a thesis titled "Genesis, Differentiation and Eruptive Dynamics of Mt. Etna Magmas." Since 2008, he has been a researcher and assistant professor of geochemistry and regional volcanology at the same university. His main research activity is focused on magma genesis and the dynamics of magma differentiation and ascent at various active volcanic systems on Earth (e.g. Etna, Aeolian Islands, Kamchatka). He investigates these topics by combining whole rock trace element and isotope systematics (Sr-Nd-Pb-Hf-O) with textural and in situ microanalysis of crystals and their inclusions. Marco is also involved in scientific collaborations with researchers in applied mineralogy/petrography and the geophysics of volcanic systems. He is a member of groups and societies active in scientific research and outreach in the fields of volcanology, geochemistry, and petrology. Marco is an author or coauthor of 77 publications, including 22 articles in international journals and 55 abstracts and proceedings for national and international conferences.



**Marcella Davì** graduated with honors from the University of Calabria (Unical) in 2003 with a thesis on the Miocene volcanoclastic deposits in Calabria. Three years later, she completed her PhD, on the last subaerial eruption on Lipari Island, at the University of Catania in collaboration with the Institut für Mineralogie, Universität Hannover (Germany). Subsequently, she had two research fellowships, one at Unical and the other at Regione Calabria, characterizing the Lami pyroclastic deposit (Lipari Island). At

present she is still cooperating with Unical on similar research topics. Her research is focused on the petrology and volcanology of the Aeolian Islands. She has investigated in detail the LVVC (south Lipari and north Vulcano Volcanic Complex) by combining field and laboratory approaches, both traditional and experimental. An important result of her research is that the entire Lipari belongs to the LVVC. This conclusion has a great impact on Aeolian volcanic-hazard forecasting.

### SIMP Prizes for PhD Students



**Christian Biagioni**  
"Calcium Silicate Hydrates: Crystal Structure and Thermal Behavior"

Calcium silicate hydrates are natural and synthetic phases of scientific and technological interest. In this study particular attention has been paid to minerals of the tobermorite group. Several natural specimens from the tobermorite group were characterized using various analytical techniques (X-ray diffraction, EDS chemical analysis, <sup>29</sup>Si NMR and micro-Raman spectroscopies, TG-DSC analysis), and their behavior during dehydration was studied in situ and ex situ. The tobermorite group minerals show a complex thermal behavior driven by the quantity and the quality of the "zeolitic" cations and probably also by the hydrogen bond pattern.



**Marco Ferrari** "Mineralogical Transformations in Serpentinites from the Mt. Capanne Thermomorphogenic Aureole (Elba Island, Italy)"

Mineralogical transformations in the Mt. Capanne serpentinites were characterized by XRF, XRPD, SEM/EDS, and TEM/EDS analysis, and the results have highlighted four prograde reactions and two retrograde reactions. The first prograde reaction took place in bastites and mesh cores, producing antigorite. The second led to a fine intergrowth of talc and chlorite, starting in the serpentine of the bastites. The third formed anthophyllite and/or tremolite in bastites and mesh textures. The fourth produced forsterite on meshes, resulting in extremely variable textures. The two retrograde reactions were related to anthophyllite retrograde processes and to olivine alteration.

## THE 2011 NOBEL PRIZE IN CHEMISTRY HAS A MINERALOGICAL FLAVOR

The 2011 Nobel Prize in chemistry has been awarded to Dan Shechtman for his studies on quasicrystals. In a "Scientific Background" document, available at [www.nobelprize.org/nobel\\_prizes/chemistry/laureates/2011/sciback\\_2011.pdf](http://www.nobelprize.org/nobel_prizes/chemistry/laureates/2011/sciback_2011.pdf), two papers are cited [Bindi et al.: Science 324: 1306 (2009); Am. Mineral. 96: 928 (2011)] that refer to the discovery of the first natural quasicrystal, icosahedrite, found at Khatyrka River, Chukotka (Russia); icosahedrite has been approved as a new mineral species. The senior author, Luca Bindi, is curator of the mineralogy section of the Natural History Museum, University of Firenze, where the holotype of icosahedrite is preserved.