



# Italian Society of Mineralogy and Petrology

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## INAUGURAL ADDRESS BY SIMP PRESIDENT 2010–2011



Stefano Poli, President

Dear friends and colleagues,

As the new president of the Italian Society of Mineralogy and Petrology (SIMP), I would like to thank past president Simona Quartieri and all members of the previous SIMP Council for their enthusiastic commitment to the Society, despite an increasingly difficult national scene. Indeed, the scientific community in Italy is facing a dramatic contraction of financial resources dedicated to fundamental and applied research. The absence of a national funding agency,

comparable to the DFG in Germany, SNF in Switzerland, and NSF in the United States, is a unique situation on the international scene. The only national public funding frame (PRIN-MIUR) did not distribute grants in 2009. Most recent allotments are in the order of just a few thousand euros per year per research unit. Laboratories are forced either to shut down active scientific instrumentation or to dedicate most of their energies to fund-raising. Financial contraction is coupled to a complete absence of government policy on instrumental facilities in the Earth sciences. Such a situation contrasts with our competitive scientific production, as represented in 2009 by more than 500 articles published by Italian authors in international journals in the subject area “geochemistry and geophysics” (ISI-WoS), compared to about 700 articles by French and German authors.

This negative trend can be reversed only by promoting the common initiatives of our learned societies and increasing the influence of our scientific representatives in the political arena. The SIMP will therefore be strongly involved in reinforcing links with the Italian Geological Society, the Crystallographic Association, the Geochemical Society and the Volcanological Association. Another step toward synergy will be the organization of the 89<sup>th</sup> meeting of the SIMP, entitled “The Evolution of the Earth System, from Atoms to Volcanoes,” to be held in Ferrara in September 2010 and chaired by Massimo Coltorti.

Reinforcing relationships with European mineralogical societies will be a major pursuit of the Council. Actions include common editorial or meeting initiatives and the development of an active strategy toward the European Commission (e.g. European Strategy Forum on Research Infrastructures) for sustaining the geosciences and, more specifically, the mineralogical sciences. In parallel, the SIMP Council is committed to improving its outreach activities. The potential impact of mineralogy and petrology on society and the Italian economy is highlighted by phenomena in the public sphere such as large volcanoes and famous marble and granite quarries.

Stefano Poli

## SIMP PRIZES FOR 2009

### Bianchi Prize for Petrology – Two Winners Ex æquo

**Riccardo Avanzinelli** graduated from the University of Firenze in 2000, and he received a PhD from the same university in 2004 for a project developed in collaboration with the University of Bristol (UK). After a postdoc at the University of Firenze, he spent 4 years at the Bristol Isotope Group (University of Bristol), first as a Marie Curie Fellow and later as a research assistant. At present he is employed as a researcher/lecturer at the University of Firenze. His research focuses on the application of different isotope systematics to geologic and petrologic problems. His studies are aimed at understanding mantle



Riccardo Avanzinelli



Chiara Groppo



Giulio Borghini



Maria La Calamita

melting and extraction processes in different geodynamic settings, timescales of magma formation and differentiation, and the recycling of crustal material into the mantle through subduction. Lately, he has been applying different isotope systems (Sr–Pb and Mo isotopes) to the study of the timescales and redox conditions during the genesis, migration and storage of petroleum.

**Chiara Groppo** is a research fellow at the Department of Mineralogical and Petrological Sciences, University of Torino. Her MSc thesis dealt with ultrahigh-pressure metamorphism in the western Alps. She completed her PhD at the University of Torino and the Université Joseph Fourier in Grenoble, where she studied the petrology of asbestos-bearing serpentinites in the western Alps. Currently, Chiara’s research focuses on the reconstruction of the metamorphic evolution of collisional orogens. Her interests cover a large variety of tectonometamorphic processes, from the subduction of continental and oceanic crust at high- and ultrahigh-pressure conditions to high-temperature metamorphism and crustal anatexis. She applies phase petrology and thermodynamic modelling to investigate the *P–T* evolution of metamorphic terranes, mainly in the Alps and Himalayas. Chiara has also been involved in several geological expeditions to the Himalaya and Karakorum ranges. The results of her work have been published in more than 15 papers in international journals.

### SIMP Prizes 2009 for PhD students

**Giulio Borghini** “The Spinel- to Plagioclase-Facies Transition in Mantle Peridotites: Natural and Experimental Constraints”

Plagioclase peridotites are important markers of processes that characterize the petrologic and tectonic evolution of the lithospheric mantle at extensional settings. Subsolvus experiments at 0.25–1.0 GPa and 900–1200°C have been performed on fertile and depleted anhydrous lherzolites modelled in a complex chemical system, to define how the stability of plagioclase changes with varying peridotite bulk composition and to determine the chemical and modal changes in minerals within the plagioclase facies as a function of *P*, *T* and bulk composition. Results shed light on the origin of metamorphic plagioclase peridotites and can be used to constrain the geobarometric evolution of natural mantle peridotites, thus providing insight into the subsolvus exhumation of the lithospheric mantle.

**Maria La Calamita** “Chemical and Structural Study of Anionic and Cationic Sites in Trioctahedral Micas at Room and High Temperatures”

Volcanic trioctahedral biotites from several sources were studied at room temperature (RT) and high temperature (HT), combining EPMA, SIMS, SCXRD, Mössbauer and FTIR spectroscopy. The RT investigation showed the predominance of oxy-type substitutional mechanisms. In some micas, interlayer H<sub>2</sub>O and NH<sub>4</sub><sup>+</sup> occur. These features were interpreted as the likely result of post-magmatic thermal oxidation and hydrothermal alteration, respectively. The HT study provided evidence for a one-step, irreversible Fe-oxidation/deprotonation process and a phase transition with no symmetry change. The kinetics of the process followed an exponential law. The OH stretching region in the FTIR spectrum, collected before and after heating, exhibited significant changes.