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Société Française de Minéralogie et de Cristallographie



MATÉRIAUX 2006

The Société Française de Minéralogie et Cristallographie is one of a number of scientific societies in France. It has developed links with several of them and regularly participates in joint meetings where it sponsors symposia.

As a member of the Fédération Française des Matériaux (FFM), composed of 24 societies in materials sciences and physics, SFMC will participate in the **Matériaux 2006** meeting in Dijon, France, November 13–17, 2006 (www.materiaux2006.net).

The SFMC is responsible for the organization of the following two sessions:

Radiation Effects in Materials and Minerals

MICHEL BEAUVY (GFC), ETIENNE BALAN (SFMC), JEAN-LOUIS BOUTARD (SF2M)

This symposium aims to provide a better understanding of radiation effects in materials and minerals and their applications. Technological, experimental, and theoretical aspects will be addressed. Radiation effects are important in a particularly large number of research fields, including dating methods in Earth sciences and archeology, the generation of nuclear power (present and future nuclear plants, nuclear waste disposal), the design of nanostructured materials, and radiation dosimetry. Many different varieties of radiation can be used, corresponding to particles of various types and energy. Irradiated materials can be crystalline (ceramics, metals, etc.) or amorphous (glasses), and include inorganic and organic compounds. Because the effects of radiation damage range from the most subtle (low concentration of point defects) to the most devastating (amorphization), their investigation makes use of extremely diverse experimental and theoretical tools. The aging of the materials used in the core of nuclear power plants typically requires multiscale modeling methods. The symposium will also include an important contribution from the CPR project SMIRN (Simulation of Materials of Nuclear Plants and Installations) funded by EDF, CEA, and CNRS; subjects will range from the *ab initio* calculation of radiation-induced point defects to the crystal plasticity of Zr alloys and ferritic steels.

Amorphous Materials: Properties, Structure and Durability

DANIEL NEUVILLE (SFMC), LAURENT CORMIER (SFMC), AND JEAN PHALIPPOU (GFC)

Glasses and melts play an important role in the formation and evolution of the Earth, in glass processing, and in the storage of nuclear wastes. The structure and properties of glasses and silicate melts are well known but some aspects remain poorly understood, such as the glass transition, glass durability, and the links between short- and medium-range order. Contributions to this symposium are invited on diverse aspects of glasses and melts, including their properties, structure, dynamics, and durability.

RÉUNION DES SCIENCES DE LA TERRE 2006

SFMC is also the co-organizer, together with the Société Géologique de France, of the **Réunion des Sciences de la Terre (RST) 2006** meeting, in Dijon, December 4–8, 2006.

The RST meetings are usually attended by 500 to 800 scientists, including PhD students, postdocs, and experienced researchers. Originally, they were dedicated to the francophone scientific community. However, because of their enduring success, the audience has grown, so that nowadays, RST meetings are renowned opportunities for scientists from all over the world to meet and discuss their results and hypotheses. Furthermore, these meetings offer to young geologists the chance to meet industrial partners and find job opportunities.

The following sessions are organized by the SFMC:

Hydrothermalism and Fluid–Rock Interactions

MARTINE BUATIER (UNIVERSITÉ DE BESANÇON), ANNE-MARIE KARPOFF (CNRS–UNIVERSITÉ LOUIS PASTEUR)

This session is open to contributions on the mineralogical and geochemical study of natural rocks, fluids and sediments, and on experimental data and modeling of continental and oceanic hydrothermal systems. Presentations dealing with the relations between (1) magmatic activity and hydrothermalism, (2) fluid flow and fluid–rock interaction, and (3) biology and hydrothermalism are welcome.

Magmatic Processes

MONIQUE SEYLER (UNIVERSITÉ DE LILLE) AND PIERRE BARBEY (UNIVERSITÉ DE NANCY)

Heat and mass transfers originating in the convective mantle are important processes in the deep Earth. This session, organized around invited talks and oral and poster presentations, aims to bring together petrologists, analysts, and experimentalists to discuss recent progress in the field of kinetics of magmatic processes, from partial melting to magma emplacement at various levels in the crust.

Emphasis is on the following topics:

1. Characterization of natural phases (structures, physical properties, chemical gradients from crystal to outcrop scales, glass inclusions); quantitative approaches and new analytical techniques (in situ analysis, EBSD, image processing, etc.)
2. Experimental simulation (very low degrees of melting; nucleation and growth; deformation of magmatic suspensions) and extraction of thermodynamic data (equilibrium and non-equilibrium element partitioning, diffusion coefficients, etc.)
3. Numerical modeling of magmatic and eruptive processes and of thermal and seismic properties of partially melted material.

Planets and Primitive Earth

FRANÇOIS COSTARD (CNRS–UNIVERSITÉ DE PARIS SUD) AND OLIVIER GRASSET (UNIVERSITÉ DE NANTES)

Comparative planetology requires complementary approaches, such as geophysics, petrology, sedimentology, geochemistry, climatology, and astronomy. The goal of this session is to gather people from these different fields in order to share recent discoveries and set up new scientific projects using a complementary approach. Planetary surface studies (morphotectonics, surface mineralogy, etc.), numerical modeling, and experimental work (climates, internal structures and dynamics, cosmochemistry) in relation to recent and ongoing space missions will be presented. Mars and Titan show similarities with primitive Earth. Thus, special attention will be given to studies related to the paleoenvironment of Earth and Mars and to the surface–interior interactions on Titan.

The full program of RST 2006 can be found on the meeting website:

<http://www.u-bourgogne.fr/RST-DIJON>