

Preface: Geo-Raman X

Geo-Raman meetings, initially supported by the Société française de Minéralogie et de Cristallographie (SFMC), were initiated in Paris in 1986, and continued in Toulouse (1989) and Nantes (1996). The meeting moved out of France for the first time in 1999 (Valladolid, Spain) and commenced a wide international journey on a biennial basis: Prague 2002, Hawaii 2004, Granada 2006, Gent 2008 and Sydney 2010. These meetings focus on the application of Raman Spectroscopy to Earth Sciences, from the surface of the planet to the deep mantle, and to Earth materials used in Cultural Heritage. Such interdisciplinary meetings allow Earth scientists and Raman spectroscopists to present their latest results and to have cross-disciplinary discussions.

The tenth Geo-Raman meeting was held in Nancy (June 11–13, 2012) and brought together 150 participants from Europe, America and Asia. It was followed by a three-day international school entitled ‘Applications of Raman Spectroscopy to Earth Sciences and Cultural Heritage’, which was co-sponsored by the European Mineralogical Union and the CNRS, and gathered some 60 participants. The lectures delivered at the school make up volume 12 of the EMU Notes in Mineralogy (ISBN 978-0-903056-31-1). As to the contributions presented at the meeting itself, the editorial board of the European Journal of Mineralogy is thanked for hosting a Geo-Raman special issue containing a selection of papers giving a flavour of this meeting.

The dominant themes of Geo-Raman meetings vary from one meeting to another, which is a source of variety and permanent renewal, as illustrated by the main topics addressed in this issue. Raman spectroscopy is involved in Planetology through dedicated instrumentation and chemometrics applied to mineral identification. As Raman spectroscopy is an in situ spectroscopic method, this technique can be applied in experimental mineralogy to a wide variety of topics such as speciation studies either in liquid silicate or aqueous fluid, or gas solubility measurement in brines. Experimentation combined with Raman spectroscopy is also a rather new research direction for addressing the pigment or glass degradation studied in cultural heritage. Micro-Raman spectroscopy is, in addition, a key analytical method in petrological, cultural-heritage or environmental studies for which the identification of minerals or their analysis is essential, either for the reconstruction of processes, the pressure-temperature conditions of formation, or the origin of the studied material. It is also worth noting that biomineralization processes in shells, at the frontier between biology and mineralogy, are a topic where Raman spectroscopy may also be very useful.

Finally, we hope that this Geo-Raman X special issue of the EJM will contribute to strengthening the links between Earth Sciences sensu lato and Raman spectroscopy, and thus will provide an impetus for the Geo-Raman XI meeting, to be held in St. Louis (MO, USA) from the 15th to the 19th of June, 2014. All the necessary information can be found on the official website <http://georaman2014.wustl.edu>.

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