Sociedad Española de Mineralogía

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PARTIAL RENEWAL OF THE EXECUTIVE COMMITTEE OF THE SPANISH MINERALOGICAL SOCIETY

In accordance with its statutes, the Spanish Mineralogical Society (SEM) renews half of its Executive Committee every two years. The elections for this renewal were held during the General Assembly of members in 2024, and the new Committee was formally constituted in January 2025. The first session took place during the SEM Annual Meeting, held in Seville from January 15th to 18th.

The new composition was presented as a single slate of candidates, which received broad support from the membership. The incoming members bring enthusiasm and a strong commitment to serving SEM and the scientific community, contributing a wide range of profiles, experience, and energy to our shared mission.

The new members of the Executive Committee are: **Dídac Navarro Ciurana** (Universitat Autònoma de Barcelona), who joins as Secretary; **Cinta Barba Brioso** (Universidad de Sevilla), as Vice Secretary; and the members **Elisa Laita Florián** (Universidad de Jaén), **Nuria Sánchez Pastor** (Universidad Complutense de Madrid), **Concepción Lázaro Calisalvo** (Universidad de Granada), **Francisco Macías Suárez** (Universidad de Huelva), **Susana Timón Sánchez** (IGME–CSIC), and **Raúl Carlos Santos Jorge** (Universidade de Lisboa).

As President, and on behalf of SEM, I would like to express my sincere thanks to all of them — and especially to those who have now stepped down. Their dedication, commitment, and generosity during their time on the Committee have been vital to the smooth functioning of the Society and will undoubtedly serve as a reference for those who now continue the work.

Ángeles Fernández González
SEM President

Société Française de Minéralogie et de Cristallographie

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SFMC HAUY-LACROIX 2025 PRIZE

The French Society of Mineralogy and Crystallography committee attributed its Haüy-Lacroix 2024 price to Jeanne CAUMARTIN and Timmo WEIDNER

Jeanne Caumartin's thesis, entitled 'Study of environmental determinants and anoxia in the formation of microbialites', was carried out at the Institut de Minéralogie, de Physique des Matériaux et de Cosmochimie (Sorbonne University) and the Écologie, Société et Évolution Laboratory (Université Paris-Saclay) under the supervision of K. Benzerara and P. Lŏpez-García. This work showed the existence of present-day microbialites, rocks formed by microorganisms, in seasonally anoxic environments in contrast to most of the present-day ones known until then. This is particularly interesting because these present-day objects are often used as analogues for fossil microbialites, the oldest of which, several billion years old, also thrived in anoxic conditions. An approach combining mineralogical studies, analysis of microbial diversity, and solution geochemistry on natural and laboratory-incubated samples was used. This made it possible to (i) highlight the existence of a critical saturation threshold of solutions with respect to carbonate mineral phases, close to the solubility of amorphous phases, necessary for the formation of microbialites, (ii) identify mineralogical and geochemical signatures of anoxia, also leading to microbial adaptations, and (iii) detect early diagenetic mineral changes in these structures, leading to the formation of carbonate phases such as huntite. These results will improve our knowledge of the geographical and environmental distributions of present-day microbialites, and provide a better understanding of the extent to which major environmental changes—particularly those linked to anthropogenic activities—could influence the mineral composition and microbial ecology of these ecosystems.

Timmo Weidner's thesis, entitled 'Dislocation electron tomography – applications and association to continuum mechanics and dislocation dynamics', was carried out at Lille University within the plasticity group under the supervision of A. Mussi, K. Gouriet, and P. Cordier.

Through the use of dislocation electron tomography, a technique that enables 3D reconstructions of dislocation microstructures using transmission electron microscopy, his research aimed to deepen the understanding of plastic deformation in minerals. His work combines tomography with continuum mechanics, opening new perspectives for integrating electron microscopy with dislocation dynamic modelling. A key focus of his thesis was the role of dislocation climb under natural strain rates. Through dislocation dynamic modelling of periclase, he demonstrated that, at lower mantle pressures, climb acts as the rate-limiting mechanism for creep as anionic diffusion becomes extremely slow. Consequently, periclase deforms more slowly than bridgmanite, suggesting that bridgmanite, which deforms predominantly by pure climb, controls mantle rheology. Applying electron tomography to naturally deformed quartz revealed a significant contribution from 'mixed climb' dislocations, whereby climb works not only as a recovery process, but also actively contributes to natural strain. Overall, his thesis highlights the limitations of laboratory-based data alone and emphasizes the need for advanced 3D characterization techniques to fully understand deformation processes in Earth's interior.