Preface

A special issue devoted to Christian Chopin, in recognition of 30 years of dedicated service to the *European Journal of Mineralogy*

Christian Chopin stepped down as Managing Editor of the European Journal of Mineralogy at the end of 2018. This issue is dedicated to his outstanding and devoted contributions to the journal over a time span of 30 years. As a young scientist at the École Normale Supérieure in Paris, Christian was involved in the complex proceedings leading up to the birth of EJM as a common project (see historical report of Okrusch & Bambauer, 2010) of the three national mineralogical societies Deutsche Mineralogische Gesellschaft (DMG), Société Française de Minéralogie et de Cristallographie (SFMC) and Società Italiana di Mineralogia (SIMP). Christian became the first Chief Editor representing SFMC when the journal was launched in 1989. He will surely remember those early years of lively discussions as the Managing Committee attempted to reach a consensus on how to steer the journal to a successful future. Christian is known to most as a mild-mannered colleague, but in those early years of hard-nosed fencing, he showed that he could thrust and parry with anyone. Christian took over the task of Managing Editor from Christian Willaime in 2001.

Over the course of 30 years, Christian Chopin has seen many new developments in EJM come and go, and he was deeply involved in all of them. From the first, the stated goal of EJM was to become a truly European journal, and in 1996 the European Mineralogical Union, which represents 27 national mineralogical societies from Europe, was invited to provide a Chief Editor and to join the Managing Committee. Other national societies were regularly invited to join the consortium as co-owners with a designated Chief Editor and Managing Committee Member, with the stipulation that a joining society should give up publication of its national journal, just as the French, German and Italian societies had done. On this basis, the Spanish society Sociedad Española de Mineralogía (SEM) joined in 2004. These were indeed significant decisions of enormous consequence, but as usual it was the small steps that took time and impassioned dedication. Christian was never satisfied with superficial discussions; he picked arguments to the bone. Meetings were never over until problems had been clarified. EJM began as a paper-only enterprise. It is hard to believe now, but 25 years ago it took almost brute force to

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Christina Chopin was dedicated to the ideals of a journal published by a learned society, where scientists sacrifice their time for the benefit of other scientists by contributing to low-cost, high-quality publication. For him the publish-for-profit publishers with horrendous pricing policies benefitting mainly company shareholders were at best “big sharks” feeding off scientists and the public money invested in their research. He never tired of lambasting the “monopolistic publishing houses that have been dominating the market and pressurizing institutional subscribers for decades” (Chopin, 2018), a sentiment that echoes as a central theme through all his many editorials. However, the “big sharks” in most cases were at least dedicated to a rigorous review process guaranteeing scientific quality. At present there is an acute danger from the so-called predatory publishers, whose business model is based on “open access” funding. The author pays the fee, not the reader or the library. Both the journal and the author are happy, and both are all the more happy if the review process is not too rigorous and does not get in the way of rapid publication. In his latest opinion article (Chopin, 2018), Christina Chopin left us with an urgent plea for “The credibility of scientific writing: an appeal for responsibility”. There is little to add, except that with Christian Chopin’s retirement we have lost a valuable voice in the publication community that is not afraid to call a spade a spade and to insist that scientific publication must follow ethical guidelines.

Despite the potential dangers of open access publication, a number of national and international funding agencies have recently begun exerting pressure on funded authors to publish their scientific results only in journals with an unconditional (“gold”) open access policy. The four societies and co-owners of EJM have now voted to switch to gold open access beginning in 2020. One can only hope that this decision is a wise one for EJM. Even if we can be assured of scientific quality, access for low-budget authors remains a problem to be solved. For the first time in 30 years Christian Chopin will be watching this transition from the side-lines, probably with some understandable concern and certainly with a lump in his throat.

Considering the work-load that EJM imposed on Christian, it is amazing that he found the time to establish a fantastic scientific oeuvre as well. Christian is probably best known to every metamorphic petrologist in the world for his role in establishing a whole new area of research called ultra-high-pressure (UHP) metamorphism (e.g., Chopin, 2003). The key here is a mineral called coesite. As Tremblay (2013) very fittingly expressed it: “The little mineral that changed everything”. Participants of the Penrose Conference on “Blueschists and related Eclogites” in Bellingham, Washington, in September 1983 will probably never forget his talk that began on a very low key describing apparently unremarkable grani
tic orthogneiss in the Western Alps. Then Christian showed a thin-section slide with a garnet displaying expansion cracks around a very small inclusion. Those in the audience familiar with garnet from kimberlite incredulously whispered “coesite”, but in a crustal rock? Then Christian, with his sly smile, pulled a huge, white crystal of pure pyrope from a brown paper lunch bag in front of him. When he switched to a pressure-temperature (P-T) diagram of mineral stabilities, the whole audience realized the implications of what they had just been shown for our geodynamic understanding of continental crust in collision scenarios. No doubt, the report of metamorphic coesite in crustal rock by Chopin (1984) and in the same year by Smith (1984) is a milestone in the geosciences.

In the course of his career, Christian Chopin published close to 100 papers in international journals, and more can now be expected in the future. He not only studied and mapped HP and UHP rocks in the field, but also used high-pressure laboratory techniques and thermodynamic calculations to delineate the P-T stability fields of their constituent minerals and mineral assemblages, such as magnesiocarpholite, dumortierite, magnesiostaurolite, carbonatite + sapphire. Many of these phases were newly discovered solid-solution members of known minerals, but completely new rock-forming minerals like betrathite and bennettite were studied as well. Nevertheless, Christian Chopin was also intrigued by the structure and crystal chemistry of the strange, unusual minerals he found in the Mg-rich rocks hosting pure pyrope garnet. He turned to partners from crystallography and began a rich cooperation that evolved from UHP and HP minerals to other more traditional P-T regimes. Christian published more than a dozen papers on the structure and crystal-chemistry of Ca-Mg phosphates. He also dealt with newly discovered and known rock-forming silicates. Christian was involved in a seminal paper on the new nomenclature scheme for the epidote supergroup, also discovering and describing new members of the epidotes. In later years Christian dealt with chlorite, clay minerals and disordered graphitic material as geothermometers.

Christian Chopin’s scientific career has received international acclaim. He was awarded the V.M. Goldschmidt Prize, the “young scientist” honour of the German Mineralogical Society. The European Mineralogical Union awarded...
its Medal for Research Excellence. Christian also received the Buttgenbach Prize of the Royal Academy of Belgium, the Van den Broeck Medal of the Belgian Geological Society and the Bronze Medal of the Centre National de la Recherche Scientifique. A new mineral, the high-pressure form of $\text{Mg}_3(\text{PO}_4)_2$, was named "Chopinite" in his honour (Grew et al., 2007). In 2005 Christian Chopin was inducted into the prestigious Leopoldina, the German National Academy of Science founded in 1652, and in 2012 he became a member of the similarly esteemed Accademia dei Lincei in Rome, founded in 1603.

This special issue honours both Christian Chopin’s service to the geoscientific community as well as his outstanding scientific career. It is a collection of papers written by friends and colleagues of Christian Chopin, who spontaneously responded to our call to provide a token of gratitude for his many contributions to our science. The papers are grouped and ordered according to Christian’s core interests, which range from large-scale and regional geodynamics and petrology to small-scale crystal chemistry and crystallography of minerals. We thank Chief Editor Patrick Cordier for his patient guidance and the more than 40 reviewers, whose selfless, prompt and in-depth work made this issue possible.

Walter V. Maresch, Thomas Armbruster and Hans-Peter Schertl
Guest Editors

References