

## Presentation of the Mineralogical Society of America Award for 2019 to Olivier Namur

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I would like to introduce you to Olivier Namur, the 2019 MSA awardee, an outstanding young petrologist who has already advanced significantly our understanding of internal processes of the Earth, as well as other components of the solar system.

At the start of his career, Olivier Namur demonstrated his outstanding skills as a scientist. His master's thesis at Liège (Belgium) was ambitious: a combined study of the Fe-Ti mineralization and Ti-rich phlogopite in the Suwalki anorthosite complex. He showed that he was a curious, motivated, and hard-working student, always ready to ask questions of everyone in the geology department and further afield.

I first encountered Olivier in 2006 when he started to work on the Sept Iles Mafic Intrusion for his Ph.D. at Liege with Jacqueline Vander Auwera and myself. It was nice to find someone with new energy and ideas to work on my old stomping grounds and was immediately clear that he was the ideal candidate: motivated and productive. His Ph.D. came at exactly the right time—we were looking for someone to work on two 2.5 km and 1.5 km cores through the intrusion that the provincial government had decided to throw away as they felt that nobody was interested in hard rocks anymore. He launched himself full force into the project, integrating fieldwork with the cores and demonstrating an amazing capacity of work—he was not afraid of spending hours separating minerals (at that time, LA-ICPMS was not so easily available) and thanks to the very large and careful analytical database that he had built, Olivier was able to decipher the detailed petrological processes that are responsible for the formation of this wonderful layered intrusion. He was then able to extend some of these ideas to the formation of the Moon's crust. At this time, he started to work on silicate liquid immiscibility in mafic magmas with Bernard Charlier: they showed that the process may be widespread in tholeiitic magmas and should be considered an important petrological process.

In 2011, Olivier next took up a postdoc position at Cambridge University with Marian Holness and was introduced to the wonders of the Skaergaard intrusion. He started with the enigmatic colloform banding that developed on the chamber walls: he saw through the mineralogical variation and complexity to develop an elegant solution. He also correlated zoning patterns with cooling and the imminent arrival of new phases. His work on Sept Iles and Skaergaard inspired him to synthesize the current knowledge about Layered Intrusions by coediting a book completely devoted to this topic.

Olivier next branched out into experimental petrology during postdoctoral fellowships at Hannover and Liege. At that time, interest in Mercury had been spurred by the Messenger mission, and Olivier dived into this fascinating field: he was able to simulate the extreme conditions within that planet using experimental petrology methods. This work culminated in several significant papers on mantle melting and sulfur solubility on Mercury and an issue of *Elements Magazine* on the planet. While at Hannover, he received the Heinz Maier-Leibnitz Prize for young researchers.

In 2018, Olivier took up a post at KU Leuven in Belgium, where he continues to innovate with a focus on active volcanoes and crystal mush processes. He participated in an expedition to Nyiragongo volcano and descended into the crater—something to make some of us jealous—and is now a star on PBS Nova film “Volcano on Fire.” He has also started to work on the Azores and other projects. At Leuven, he is building a new lab to combine experimental petrology and geochemistry to decipher the igneous processes taking place below volcanoes located in different geodynamic settings.

Olivier's scientific flair is complemented by his generosity of spirit: He is a wonderful person to work with—he even coped with my rather special accent in French—and is a truly fitting recipient for the MSA Award.

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