American Mineralogist, Volume 110, page 662, 2025

Acceptance of the Mineralogical Society of America Award for 2024

Denis Fougerouse[1,*]

[1]School of Earth and Planetary Sciences, Curtin University, Perth, Western Australia, Australia

Madame President, Members of the Society, and Guests:

I am terribly excited to be here today, and I humbly accept this honor. Thank you to my nominator, Prof. Steve Reddy, my referees, and the selection panel for supporting me.

My first introduction to geology was unremarkable. In high school, the concept of the subduction zone quickly sparked my interest; however, this interest was very soon tamed by the metamorphic reactions we had to study. By the end of high school, I had to decide on my tertiary education, and only one thing was certain: I had to be a scientist. My father was a medical doctor, and my brother was studying chemistry, so I had to choose something different. My local university, the University Jean Monnet of Saint-Etienne in central France, was offering a combined biology and geology course, which seemed to be a low-risk option with varied job prospects. Within a week, I knew. With the other geology-minded people, I found a community, a family. I oriented my post-graduate studies towards economic geology, with an M.Sc. degree at the University of Loraine in Nancy on the east side of the country. This is where things started to accelerate. I found an exceptional academic mentor in Anne-Sylvie Andre-Mayer and an exciting project on sulfide Re-Os geochronology on West African gold deposits as part of an international research collaboration project. The geology family just got a whole lot bigger! Connections were made, and I flew to Perth, Australia, for my Ph.D., looking at other gold deposits in West Africa. I am still in awe at the confidence of my 23-year-old self, packing a suitcase to a country on the other side of the world, knowing absolutely nothing about the place I was going and broken English.

Perth is a very special place on this planet. The geology in the state of Western Australia is extraordinary, with not only one but two Archean cratons and nothing less than the most ancient terrestrial zircons discovered from the Jack Hills conglomerate. It also hosts incredible resources, and the mining industry drives the economy. In parallel to this natural wealth, the closest big city, Adelaide, is located over 2000 km away. Put together, this creates the perfect cocktail for a strong Perth-based geoscience academic cohort, well supported by major research infrastructure investments for minerals research. This background is important to understanding my research. Many analytical facilities, sometimes unique, are available at our fingertips. It is the perfect environment for geoscience research.

One of these unique analytical facilities is the Geoscience Atom Probe. For a long time, it was the only atom probe

tomography instrument dedicated to geoscience research. It was initiated by the genius of Prof. Steve Reddy, who took a gamble that this technique could be useful to geoscientists. Atom probe tomography can reveal the nanoscale distribution of atoms in minerals, including trace elements and isotopes. I am extremely grateful to Steve for welcoming me into this new research group and giving me this amazing opportunity to start something new with a completely different approach.

Steve's gamble paid off, and today, atom probe tomography has a solid base of publications in geoscience. The applications are diverse in many fields related to mineralogy. Perhaps one of my favorite aspects of working closely with the atom probe facility is the opportunity to collaborate with researchers from around the world. Whether graduate research students or esteemed professors, the academic and social interactions with members of our broad community are rewarding and engaging.

I feel privileged to be in this position, and reaching back out to the community is important to me. Geology does not always have a good public image and is often associated with environmental issues, in particular, related to fossil fuel energy and mining. We should feel concerned about this, and it is our shared responsibility to communicate this passion to the boarder community for the sustainability of our profession.

Once again, thank you for this award; it is an honor to accept it and become a fellow of the Mineralogical Society of America.

* Corresponding author E-mail: denis.fougerouse@curtin.edu.au

0003-004X/25/0004–662$05.00/DOI: https://doi.org/10.2138/am-2025-AP11047