

Acceptance of the Mineralogical Society of America Award for 2004

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Mr. President, members of the society, and guests,

It is a tremendous honor for me to receive the MSA award. I am both humbled and inspired by it. Looking back, there are many people who have helped me along the way. But in the interest of not diminishing their importance, I would like to just mention four. These are my principal scientific mentors.

Still very wet behind the ears with a geological sciences B.S. in hand, starting graduate school in Bob Bodnar's lab at Virginia Tech was a real eye-opener. Among many other things, he exposed me to a wide range of new scientific tools and concepts that I could explore. It was here that I realized that I was always going to prefer tackling "real-time" problems, the kind that I would not have to wait for millennia to see if the results would be reproducible. Keeping me on a long leash, he gave me many opportunities. I also ever increasingly appreciate and now try to emulate his knack for articulating a penetrating scientific question.

From Mike Hochella I gained a new perspective on the way our natural environment works, and an understanding of where some of the major scientific issues lie. His enthusiasm for seeking molecular-scale causes for macroscopic observables was and still is ever contagious for me. So much so that it is now fully a part of who I am. Mike taught me the importance of discriminating and homing-in on key scientific details. But what I appreciate most about him is how he takes care of his students, treating us more like cherished friends and esteemed colleagues from the very start.

I wish time were more availing now so that I could better describe the connection I have with Jerry Gibbs. Besides being one of my scientific "grandfathers," in no one else have I ever found a greater passion for pure scientific exploration. At heart we both just want to focus on what makes minerals behave like they do, and leave the rest of the "hubbub" that comes with a career in science behind. He's both my scientific role model and dear friend.

As a new hire at Pacific Northwest National Laboratory, I gained what I consider to be many important refinements under John Zachara. He taught me how to define a scientific question and plan that would withstand a trial-by-fire. He kept me grounded, all the while helping me develop a realistic forward-thinking stance. It has been a very rewarding relationship, one that has given me a healthy dose of confidence in my abilities.



If my scientific career can be likened to a building, then these four are the cornerstones. If the building is standing square as it so appears, it is because of them. So among the many things the MSA award stands for, to them I would add this: That it also should stand to recognize the efforts of excellent mentors.

An award like this is also an opportunity to provoke some thoughts toward the future. The fascinating world of mineralogy is constantly changing. It is hard to pin it down with a definition any better than that. More and more it requires us to look at various scales, including the molecular level, to understand the origins of mineral properties and reactive behavior. It also requires examination from an increasingly diverse set of perspectives, which now routinely include biologic and quantum mechanical perspectives. If this award may be viewed as a charter to me to accomplish bigger and better things along these lines, then I gladly accept the challenge. I can only hope that my future endeavors will stand the test of time.

Thank you Jodi, Ethan, and Natalie for the joy you bring to my life and for your unfailing support. Thank you Lord Jesus for giving it all meaning to me.