

***MSSC ZOOM MEETING  
FRIDAY, DECEMBER 11, 2020  
7:30PM***

***Natural Radiation – A Tale of Two Minerals  
Presenter: Dr. George R. Rossman***



**Dr. George R. Rossman** is Professor of Mineralogy in the Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, California, and President of the Mineralogical Society of Southern California. He got his B.S. degree in Chemistry and Mathematics from Wisconsin State University, Eau Claire, and his Ph.D. from Caltech in Chemistry. His principal research interests deal with the use of spectroscopic probes to study minerals. His work addresses problems relating to the origin of color phenomena in minerals; phase identification; and the special role of metal ions in minerals. He and his students develop analytical methods for analysis of hydrous components in minerals and examine their role in modifying physical and chemical properties. He is also interested in the long-term effects in minerals from the exposure to background levels of natural radiation. He was the recipient of the inaugural Dana Medal, of the Mineralogical Society of America in 2001, the Richard P. Feynman Prize for Excellence in Teaching at the Caltech in 2004, and the Friedrich-Becke Medal of the Austrian Mineralogical Society in 2005. He was also honored by having a new mineral of the tourmaline family named after him. He has more than 370 publications in the mineralogical and chemical sciences.

***Title: Natural Radiation – A Tale of Two Minerals***

Minerals of the feldspar group are the most common phases volumetrically in the crust of planet Earth. Ideally, when they have the textbook-ideal, composition, they are colorless. But, in fact, there are many colorful varieties of feldspars that are popular with collectors. Amazonite, sunstone, and labradorite evoke images of colorful specimens. Likewise, tourmalines are popular with collectors and have a variety of beautiful colors. Some of the colored varieties of both of these mineral groups are the result of long-term exposure to natural background level radiation. This presentation will examine these colorful minerals and the science behind how we come to understand the origin of their colors.



Amazonite from the Pikes Peak area, Colorado.