



Blue Minerals: Exploring Cause & Effect

Presentation by

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“From its vast expanses of cerulean waters to its azure heavens above, our world is dominated by blue, so it is no wonder that the color blue is favored by many across cultures and throughout the ages. The allure of minerals owes much to the perception of color inherent to a particular species or variety. Arguably, whether a person is a seasoned collector or small child, color is what first attracts attention, and quite often its cause is the earliest question posed. Scientific investigations into its nature and articulation of its nuances of hue and quality are the subjects of volumes of literature in both the mineralogical and gemological sciences. While the present overview narrowly focuses on a selection of blue minerals and aims to do so with some exploratory tools and twists, its concepts also provide insights into causation of other colors seen elsewhere in the mineral kingdom, as well as in gemstones fashioned from denizens of that realm.

Many very fine works on color in minerals are dominated by in-depth discussions of chemistry, formalisms on wave and particle theory, as well as mineral physics. But, this is not often where we begin a conversation about color in minerals, whether in the museum, in a classroom, at a mineral show or out in the field. Inquiry starts with gazing upon a specimen, holding it up to the light, and

noting its obvious attributes. Such activities rarely fail to capture the imaginations of young and old, especially those new to the mineral world, and even the simplest of these can reveal much before advanced investigation is embarked upon.” So begins the author’s paper “**Blue Minerals: Exploring Cause & Effect**” which she was invited to write for the special blue minerals issue of *Rocks & Minerals* magazine in 2016. This presentation takes the audience on visual tour of causation of color in the mineral & gem world while overviewing the paper along the way.



Elise A. Skalwold is an Accredited Senior Gemologist, independent researcher, educator, author, and photographer. She has served as Consulting Gemological Curator at her alma mater Cornell University (B.Sc. 1982) and is Contributing Editor and author for the quarterly column *G&G Micro-World* featured in *Gems & Gemology*, the peer-reviewed scientific journal of the Gemological Institute of America (GIA). Ms. Skalwold is a Graduate Gemologist (G.G.) trained in residence at the Gemological Institute of America Robert Mouawad Campus located in Carlsbad, CA. While living in Thailand she worked in the famous gem markets of both Chanthaburi and Bangkok and pursued studies at the Gem & Jewelry Institute of Thailand for which she was subsequently elected a Fellow of the Gemmological Association of Great Britain (F.G.A.) in London.

As well as having co-authored the 415 page book [The Edward Arthur Metzger Gem Collection](#) and presently working on a companion volume to it, Ms. Skalwold is an author/co-author of gemology and mineralogy papers featured in *Rocks & Minerals Magazine*, *Gems & Gemology*, *The Journal of Gemmology*, *InColor*, and (most proudly) two optical mineralogy booklets published by the Mineralogical Society of America. Passionate about her work, she takes great pride in representing gemology as a relevant geoscience around the world and with having done so at Cornell University; birthplace of the 125+ year-old Geological Society of America (GSA). A quintessential theme throughout her work was represented by the paper “Scholarly Treasure: The Role of Gems in a University Setting” presented at the 2013 GIA-sponsored first-ever Gemological Session of the GSA (for her review of the event, please see: “Gemology Bears Triumphant Tidings: a Review of the Historic 125th Anniversary Annual Meeting of the Geological Society of America” http://www.nordskip.com/GSA_Gemology_Session.pdf).

An internationally sought-after speaker, her engagements have recently included: 2018 Keynote Speaker at the Scottish Gemmological Association Conference in Dullatur, Scotland; the Scandinavian Gem Symposium in Kisa, Sweden; the Accredited Gemologists Association Conference in Tucson; several chapters of the Gemological Institute of America Alumni Association; Banquet Speaker, as well as, past speaker for the New York Mineralogical Club (co-founded by George F. Kunz in 1886); repeat speaker for the Rochester Mineralogical Symposium; and was the only female speaker for the prestigious 11th Annual Sinkankas Symposium [Ruby] held at the Gemological Institute of America in Carlsbad, CA.

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