



# 2012 GSA ANNUAL MEETING & EXPOSITION

4-7 November | Charlotte, North Carolina, USA

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Paper No. 57-1

*Presentation Time: 1:45 PM*

## REFRACTIONS AND THE CAREER OF F. DONALD BLOSS

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F. Donald Bloss is THE modern champion of optical mineralogy. His research, publications, and enthusiasm for optics as an analytical tool in mineralogy have demonstrated the power of optical methods to generations of geologists. At a time when optical mineralogy was neglected and fading in the shadow of newer technologies, Don Bloss and his students demonstrated its relevance to modern mineralogical research. Along the way, they revived and improved optical tools, such as the spindle stage and the Abbe-Pulfrich refractometer, adding mathematical techniques and software to help analyze and utilize optical data. Don envisioned a computer-assisted future for refractometry through his patent for and efforts to develop the Bloss Automated Refractometer. He made optical mineralogy, crystal chemistry, and the spindle stage accessible to students through his clearly-written textbooks. Although optical mineralogy courses have declined in number, optics continues to be taught in mineralogy and petrology classes as essential knowledge for the study of rocks in thin section. In addition to its practical value to petrographers, optical mineralogy benefits all students as one of the best pedagogical frameworks for teaching the scientific method through hypothesis testing with immediate results. As mineralogists look for deeper understanding of minerals and how they respond to variations in composition and physical conditions, optical properties, which depend on the electronic structure of minerals, have the potential to provide important insights. Because of the scientific contributions of Don Bloss, we are better prepared to achieve this potential.

Session No. 57

**T130. Bloss Mineralogical Session II: In Honor of the Life-Time Accomplishments of F. Donald Bloss, Emeritus Alumni Distinguished Professor, Virginia Tech, as a Researcher, Author, and Teacher in the Field of Optical Mineralogy**

*Sunday, 4 November 2012: 1:30 PM-5:30 PM*

*Charlotte Convention Center 208B*

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See more of: [Bloss Mineralogical Session II: In Honor of the Life-Time Accomplishments of F. Donald Bloss, Emeritus Alumni Distinguished Professor, Virginia Tech, as a Researcher, Author, and Teacher in the Field of Optical Mineralogy](#)

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