

All are invited to attend the monthly meeting of

Nittany Mineralogical Society

Wednesday, April 17, 2019 - Room 116 EESB, Penn State

Mineral Fluorescence: From Whence Comes the Light?

By Dr. William B. White, Penn State

Our April meeting will be held Wednesday the 17th in room 116 (the smaller auditorium) Earth & Engineering Sciences Building on the west side of the Penn State campus in State College, PA. Maps are available on our web site.

6:45 to 7:45 p.m.: Social hour, refreshments in the lobby.

7:45 to 8:00 p.m.: announcements, questions, answers

about 8:00 p.m.: featured program

The event has free admission, free parking, and free refreshments, and is open to all; parents/guardians must provide supervision of minors. Bring your friends and share an interesting evening!



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Some minerals glow in the dark when excited by ultraviolet light (photoluminescence), electrons (cathodoluminescence), X-rays (Roentgenoluminescence), gas flames (candoluminescence) or other energy sources. Light is energy so the excitation source must pump as much or more energy than is represented by the light coming out. The emitted light is called fluorescence if it goes out when the excitation is shut off and phosphorescence if there is an afterglow. Energy from the excitation source is stored momentarily in the mineral, rearranged, and then released as light. In fluorescent minerals the light re-emerges in microseconds to milliseconds. In phosphorescent minerals the light re-emerges more slowly, many milliseconds to seconds. More information is obtained from the actual spectra of the emission and excitation rather than simply the color. There are three broad storage and release mechanisms for luminescent minerals: **molecular phosphors, insulator phosphors, and semiconductor phosphors.** The presentation will discuss these mechanisms and provide examples.

Please join us for this well-illustrated presentation!

See web site for any updates or changes:

www.nittanymineral.org