## **OSCAR Seminar-Juejun Hu1206**

**Dates:** Sunday, November 25, 2012 - 12:00am

## "Chalcogenide Glass Integrated Photonics"

Juejun Hu, Ph. D., Assistant Professor, Department of Materials Science & Engineering, University of Delaware, Newark, DE





This event takes place at 11 a.m. in Rm 600, on the 6th floor of the Wm C Jason Library. *Abstract:* Chalcogenide glasses, namely the amorphous compounds containing sulfur, selenium, and/or tellurium, have emerged as a promising material candidate for integrated photonics given its wide infrared transparency window, almost infinite capacity for composition alloying, as well as high linear and nonlinear indices. This talk will review our recent progress on the processing and characterization of integrated

photonic devices based on chalcogenide glass materials. We have demonstrated integrated waveguide devices operating in the 3-6 micron mid-IR wavelength range for sensing applications. We have further shown that these devices can be monolithically integrated on flexible substrates. 3-D integration of multiple photonic components on a flexible substrate platform has also been demonstrated, which opens up emerging application opportunities for optofluidics, epidermal sensing and flexible optical interconnects.

This lecture occurs as part of the *2012-2013 OSCAR Seminar Series*, which is free and open to the public. For more information about this event, email <u>pbattle@desu.edu</u> [1]. OSCAR is funded by grants from the NASA and National Science Foundation.

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[2] http://desu.edu/sites/default/files/u51/OSCAR%20Flyer%20J%20Hu%20of%20UD-120612.pdf