Colloquium

“Efficient Modeling of Defects and Impurities in Semiconductors”

**Speaker:**

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**Abstract:**

Defects and impurities in materials affect their properties. For semiconductors, these can significantly affect their electronic and structural properties. Given their usefulness in device applications, there has been extensive research in defects and impurities in semiconductors in order to better understand various phenomena associated with their use. Experimental identification and characterization are challenging as defects sometimes develop even in the best ideal experimental conditions. Theoretical modeling has emerged as a needed complement to experimental work and computational advances have led to reasonable and accurate results that can serve as predictive tools for defect identifications. This presentation will review some theoretical defect modeling techniques and apply the special quasi-random structures approach for the study of defects in cadmium zinc telluride.

**THURSDAY**

**November 8**

**4:15 pm**  
Jones Physical Science Center Room 409  
(Rogers Seminar Room)

**Hosted By:**  
Dr. Yuriy Pershin

**Refreshments Served**

**Everyone Invited**

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