

# Seminar

Thursday, January 18, 2024

2-3 p.m. in WEB 2250

## **Growth and Properties of Materials for LEDs**

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Light emitting diodes (LEDs) have become the dominant display and lighting sources due to their high efficiency and long operating life. Similar materials are also used for high efficiency solar cells.

This talk will discuss the historical development of the key materials used for LEDs, their properties and growth. An understanding of the thermodynamic properties of the III/V alloys used provides a basis for understanding the growth process, in particular the importance of organometallic vapor phase epitaxy (OMVPE). Solid phase thermodynamics also elucidates the surprisingly high efficiencies observed for AlGaInN green and blue LEDs.