

Monolithic Integration of III-V Optoelectronic Devices

Thursday, May 28th, 2026

1:00 P.M. - 2:00 P.M.

In-Person: JHE 326H

Daniel's studies investigate lattice-mismatched III-V compound semiconductor structures for infrared optoelectronic applications, focusing on the short-wave to mid-wave infrared (2–4 μm) spectral region. For this purpose, a virtual substrate platform with engineered lattice constants was developed, enabling systematic bandgap and emission wavelength tuning across integrated device architectures. Based on this approach, a range of infrared photodetectors (PDs) and light-emitting diodes (LEDs) with tunable operating wavelengths were successfully monolithically integrated on an InP substrate.



Engineering Physics

**Phuc Dihn (Daniel)
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Postdoctoral Fellow under Dr. Ryan Lewis

Having received his Ph.D. in Nano Science at Korea Research Institute of Standards and Science- University of Science & Technology, Korea, Daniel's work now focus on the epitaxial lattice mismatched growth of compound semiconductor optoelectronic devices.



Refreshments Provided