

ECE 600 Seminar
Monday, September 26, 2011
1610 Engineering Hall
3:30PM - 5:00PM

Measuring gas properties using custom-built lasers in the telecommunications band

Abstract: Professor Sanders's research group develops custom lasers based on available telecommunications components. Output from these lasers is subsequently directed through gas of interest such as the gas within the cylinder of an automotive engine. By analyzing the interaction between the laser and the gas, properties of the gas such as temperature can be determined. Custom lasers are desired because unusual characteristics (such as instantaneous linewidths < 100 MHz and wavelength sweeping rates $> 1,000,000$ nm/s) produce the best spectroscopic results. This talk will review some of the lasers developed, their characteristics, and provide an outlook for future laser developments.

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