

Lecture: *Optical Parametric Device Technology and Applications*

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Abstract:

This lecture will provide an overview of optical parametric device technology, from basic operation principles to the latest advances in the field. The talk will include a brief description of the fundamental concepts in optical parametric generation and amplification, a discussion of critical design issues, nonlinear materials, and device architectures, followed by a review of the current status of technology and new applications. The lecture will cover devices operating from the continuous-wave to the ultrafast femtosecond time-scales and will benefit researchers with little or no background in parametric devices, as well as those more familiar with the field, who wish to enhance their understanding and update their knowledge of the emerging developments in this technology.