## **Chalcogenide Optical Fiber Components -INVITED**

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Abstract: This talk features recent achievements of the Nonlinear Photonics Group at McGill University towards the fabrication of chalcogenide-based optical fiber components such as nonlinear gain fibers, optical fiber couplers, filters, and saturable absorbers.

**OCIS codes:** (060.2320) Fiber optics amplifiers and oscillators; Nonlinear optics, fibers; (140.3070) Infrared and far-infrared lasers.

## Introduction

In a quest for the development of optical fiber sources that operate in the mid-infrared, the availability of optical components that are all-fiber and compatible with the mid-infrared is of utmost importance. Fiber components made from chalcogenide glass raise attention in this context, owing to their transparency in the 1-13 µm wavelength range and their high nonlinearity that enables nonlinear processing. In this talk, I will present recent achievements of the Nonlinear Photonics Group at McGill University towards the fabrication of all-fiber chalcogenide components and devices that are compatible with the mid-infrared. These include gain media, optical fiber couplers, optical fiber filters, all-fiber saturable absorbers and emerging devices build from those building blocks.

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