Contribution ID: **15** Type: **Oral**

Recent progress on rare earth amplifiers and lasers directly on silicon

Tuesday, 30 August 2022 11:15 (15 minutes)

We report on our recent developments on rare-earth-based gain and lasing directly on silicon photonic chips. We demonstrate laser emission around 1.8-1.9 μm in thulium-doped tellurium oxide coated silicon hybrid microdisks, with on-chip output powers of > 1 mW and sub-milliwatt threshold pump powers at 1.6 μm.

Primary authors: BRADLEY, Jonathan D. B. (McMaster University, Hamilton, Canada); KIANI, Khadijeh Miarabbas (McMaster University, Hamilton, Canada); FRANKIS, Henry C. (McMaster University, Hamilton, Canada); NARAINE, Cameron M. (McMaster University, Hamilton, Canada); BONNEVILLE, Dawson B. (McMaster University, Hamilton, Canada); KNIGHTS, Andrew P. (McMaster University, Hamilton, Canada)

Presenter: BRADLEY, Jonathan D. B. (McMaster University, Hamilton, Canada)

Session Classification: FWD 1 Planar waveguide devices