



Francesco Caminati

Parma (Italy)

Italian

Languages: Italian, English, French, Spanish

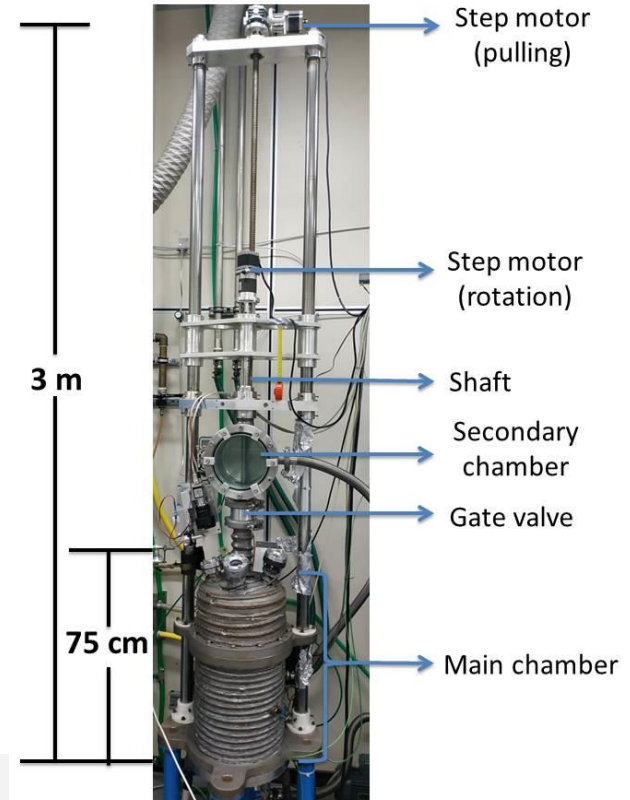
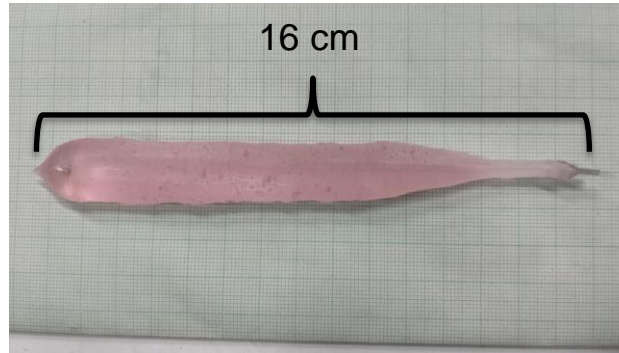
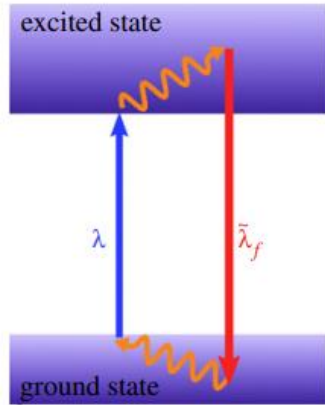
Hobbies: reading, video games, board games, RPGs, baseball, volunteer (AFS/Intercultura)

Education

- **High school:** St. Stephen's episcopal school Houston, Liceo G. Ulivi Parma
- **Bachelor's degree** in Physics at Parma University
- **Master's degree** in Matter Physics at Pisa University (thesis project: «Impurities effects on optical refrigeration efficiency»)

Optical refrigeration at 2 microns

Growth, optical characterization and cooling performance evaluation of Ho:YLF high purity monocystals in the 2 μm optical range.

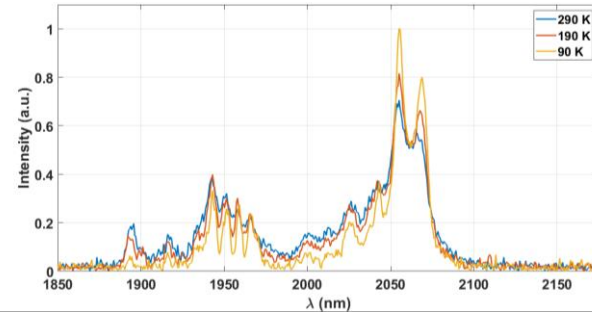
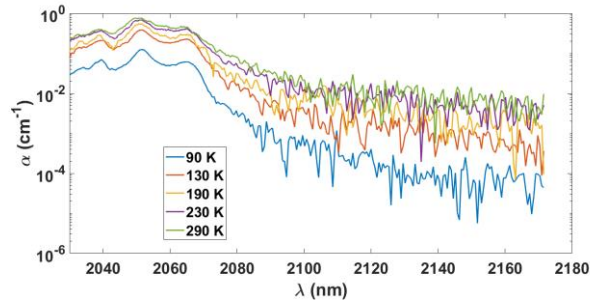
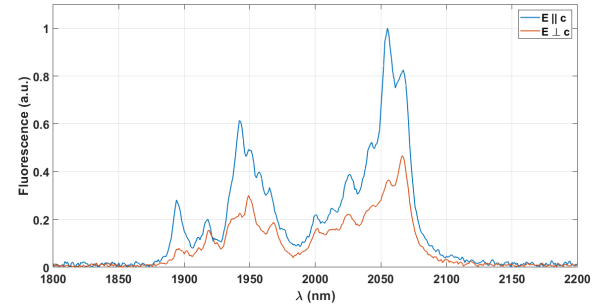
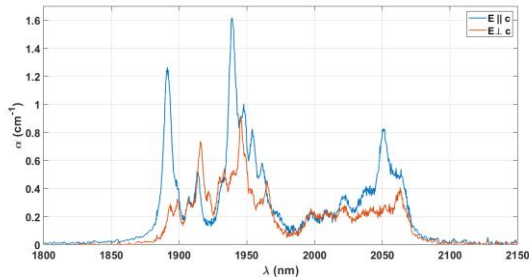


Left: Scheme of the energy transitions involved in optical refrigeration based on anti-Stokes fluorescence.

Center: a Ho:YLF crystal boule

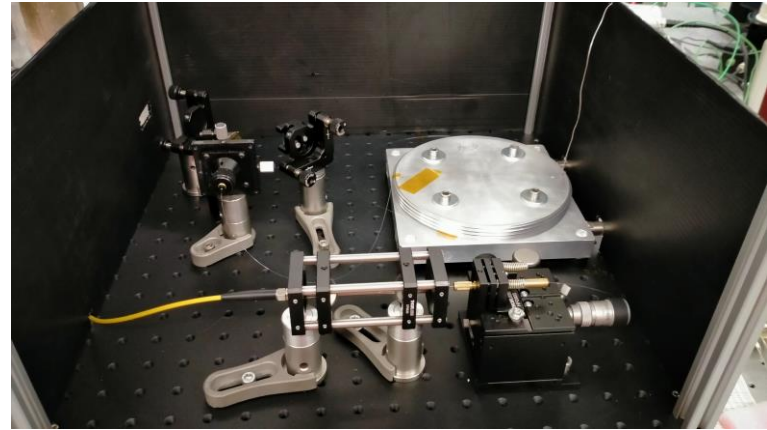
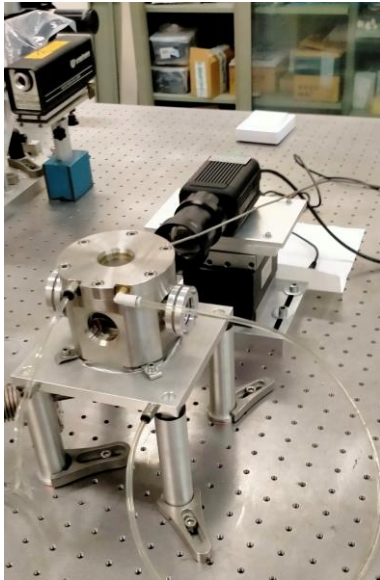
Right: One of the Czochralski furnaces at the University of Pisa laboratories

Optical refrigeration at 2 microns



Absorption and fluorescence measurements at different temperatures from 290 to 90 K

Optical refrigeration at 2 microns



Equipment for the cooling measurements: steel vacuum chamber with temperature stabilization (left) and prototype tunable laser at 2 μm (1,9-2,1 μm operational range)