

Iterative 3D modeling of thermal effects in end-pumped continuous-wave Ho³⁺:YAG lasers

Friday, 2 September 2022 11:45 (15 minutes)

In this work we present a highly accurate model for simulating laser resonators based on a beam propagation method algorithm including thermal effects in the laser. An experimental Ho³⁺:YAG resonator setup is used to validate the model, which shows excellent agreement in output power, resulting M² and output field distribution.

code

Primary authors: RUPP, Marius (Fraunhofer Institute of Optronics, System Technologies and Image Exploitation, Ettlingen, Germany); GOTH, Katharina (Fraunhofer Institute of Optronics, System Technologies and Image Exploitation, Ettlingen, Germany); EICHHORN, Marc (Fraunhofer Institute of Optronics, System Technologies and Image Exploitation, Ettlingen, Germany); KIELECK, Christelle (Fraunhofer Institute of Optronics, System Technologies and Image Exploitation, Ettlingen, Germany)

Presenter: RUPP, Marius (Fraunhofer Institute of Optronics, System Technologies and Image Exploitation, Ettlingen, Germany)

Session Classification: SSL 7 Tm, Ho Lasers