

CSW 2021

First Virtual Conference



IPRM 2021

The 32nd International Conference
on Indium Phosphide and Related
Materials



ISCS 2021

The 47th International
Symposium on Compound
Semiconductors

Workbook



WeA2.2 Frequency combs in QCLs and ICLs

8:30

Benedikt Schwarz (TU Vienna, Austria)

INVITED

WeA2.3 Continuous-wave Surface-emitting Ring Interband Cascade Lasers

9:00

Borislav Hinkov, Hedwig Knötig, Johannes Waclawek, Bernhard Lendl, Gottfried Strasser (TU Wien, Austria); Robert Weih, Johannes Koeth (Nanoplus, Germany); Sven Höfling (Uni Würzburg, Germany)

We present the first realization of surface-emitting ring interband cascade lasers (ICLs) in continuous wave (CW) mode. The devices are single mode emitting through the implementation of a second order distributed feedback (DFB) grating, while the light is outcoupled through the GaSb substrate. The devices are mounted epitaxial-side down on copper heatsinks for thermal reasons and emit up to 6.5 mW of optical output power into a single spectral mode (side-mode suppression-ratio of 20 dB) at 20 °C. Their maximum operation temperature is 38 °C, with still about 1 mW of optical power.
