

Vad händer inom **optiken** i Stockholm?

**Torsdagen den 28 november 17.30 – 18.30**

**Studiebesök hos Cobolt AB**



Vretenvägen 13, 171 54 Solna, <http://goo.gl/maps/xckTn>

***“CW lasers in life science applications”***

New high power CW laser sources in the UV-visible spectral range are driving progress in a number of bioanalytical instrumentation technologies. They give biomedical and pharmaceutical researchers access to new imaging and detection tools with unprecedented resolution, speed and sensitivity, and in this way they strongly contribute to the development of a deeper understanding of complex diseases on a micro-biological level as well as the development of new drugs and treatments. This presentation will review some of the recent developments in semi-conductor materials, fiber optics, nonlinear crystals and laser designs that have paved the way for new UV-visible CW lasers on the market with higher output powers, higher efficiency and broader spectral coverage, as well as their use in power demanding applications such as super-resolution microscopy, flow cytometry, Raman spectroscopy and optogenetics.

***“Ultra-compact midIR OPO for sensitive gas sensing with PAS”***

A compact, robust and efficient nanosecond pulsed OPO generating radiation in the mid-IR spectral range is reported. The OPO is based on periodically poled material and produce pulsed emission exceeding 90 mW average power at 3300 nm. Idler parameters are: pulse energy 15  $\mu$ J, pulse duration 4 ns and peak power 4 kW. Input power 1.2 W and electrical power 14 W. The total size of the device is only 125x70x45 mm<sup>3</sup> (LxWxH). Spectral filtering gives idler bandwidth < 2 nm, tuneable over 14 nm. The size and low power consumption make this device suitable for spectroscopy applications. The use of this new midIR laser device in Photo Acoustic Spectroscopy (PAS) for fast and sensitive detection of methane will also be presented.

***About Cobolt:***

Cobolt supplies compact and efficient high performance lasers for advanced analytical instrumentation applications, such as Biomedical fluorescence analysis, Raman spectroscopy, interferometry and particle analysis. The Cobolt lasers are based on periodically poled nonlinear optical crystals for efficient frequency conversion and are manufactured in a compact and robust hermetically sealed package using proprietary HTCure™ Technology which provides outstandingly high tolerance to demanding environmental conditions and ensured lifetime. Cobolt started as a spin-out from KTH/Acreo in 2000 and its head office and manufacturing facility is located in Solna, Sweden.

**OPTOPUB 18.30 –20.00**

**Viktigt: Föranmälan till [moni.rizk@cobolt.se](mailto:moni.rizk@cobolt.se) !!!**

**Doodle-registrera dig också på: [www.doodle.com/dmh8qwqsw4phkr4](http://www.doodle.com/dmh8qwqsw4phkr4)**

**Senast Tisdag 26:e november före kl.14:00 !!!**

**Välkomna!**

**Håkan Karlsson, PhD, CEO**

*Optopubarna samarrangeras av*



Svenska OptikSällskapet  
Swedish Optical Society  
The Swedish Branch of the European Optical Society

