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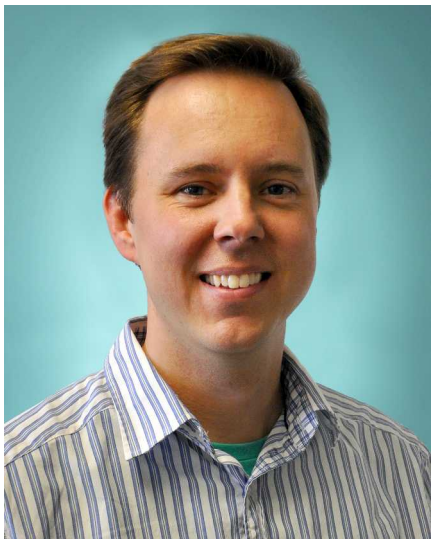

Alexis Bohlin

SHORT BIO:

I obtained my Ph.D. under Professor Per-Erik Bengtsson at the Division of Combustion Physics of Lund University, in developing pure rotational coherent anti-Stokes Raman spectroscopy towards improved gas-phase thermometry in chemically reactive flows. The main effort was to make the technique more robust when employed under a wide range of temperatures and operational conditions.

RESEARCH INTERESTS

I currently hold a postdoctoral position under the direction of Christopher J. Kliewer at the combustion research facility of Sandia National Laboratories in Livermore, developing ultrafast non-linear optical imaging techniques for spatial mapping of temperature and molecular species concentration in transient turbulent gaseous flow conditions. My research interests include non-linear spectroscopy, combustion diagnostics, coherent imaging, time-resolved ultrafast techniques, and molecular physics in general.

EDUCATION

M.S. Engineering Physics, Lund University, Faculty of Engineering in 2008.
Thesis: *Investigation of high resolution vibrational CARS thermometry*.

Ph.D. Physics, Lund University, Faculty of Engineering in 2012.
Thesis: *Development and application of pure rotational CARS for reactive flows*.

SELECTED PUBLICATIONS & PATENTS

- A. Bohlin, C. J. Kliewer, *Communication: Two-dimensional gas-phase coherent anti-Stokes Raman spectroscopy (2D-CARS): Simultaneous planar imaging and multiplex spectroscopy in a single laser shot*, J. Chem. Phys. 138, 221101 (2013).

- A. Bohlin, B. D. Patterson, C. J. Kliewer, *Communication: Simplified two-beam rotational CARS signal generation demonstrated in 1D*, J. Chem. Phys**.** 138**,** 081102 (2013).

- A. Bohlin, E. Nordström, H. Carlsson, X.-S. Bai, P.-E. Bengtsson, *Pure rotational CARS measurements of temperature and relative O_2-concentration in a low swirl turbulent premixed flame*, Proc. Combust. Inst. 34, 3629-3636 (2013).

Google Scholar publication list:
http://scholar.google.com/citations?user=9tAaRD0AAAAJ&hl=en