



Contribution ID: 224

Type: **Poster Presentation**

Infrastructure development for single beam Coherent Anti-Stokes Raman Spectroscopy

Wednesday, 5 July 2017 17:10 (1h 50m)

Supercontinuum pulses produced by a polarisation maintaining all-normal dispersion photonic crystal fibre (ANDi-PCF) can be used to probe Raman active molecules and produce anti-Stokes Raman scattered light in a single beam setup. This supercontinuum is compressed and pumps and probes the sample 'simultaneously'. In this poster, we present the experimental setup used to perform such Raman measurements. The setup comprises the supercontinuum generation in the ANDi-PCF, the pulse compression and spectrum manipulation using a spatial light modulator in a 4f-shaper, as well as the microscope used to probe the sample. We compare and combine different methods of probing the vibrational spectra of BBO and Cyclohexane by modulating the amplitude, phase and, polarisation of the supercontinuum pulses. The obtained spectra are compared with literature values.

Apply to be considered for a student award (Yes / No)?

Yes

Level for award (Hons, MSc, PhD, N/A)?

PhD

Main supervisor (name and email) and his / her institution

Prof Erich Rohwer
egr@sun.ac.za
Laser Research Institute

Would you like to submit a short paper for the Conference Proceedings (Yes / No)?

No

Primary author: Mr VILJOEN, Ruan (Stellenbosch University)

Co-authors: Mr SPANGENBERG, Dirk-Mathys (University of Stellenbosch); Prof. ROHWER, Erich (University of Stellenbosch); Dr FREY, Hans-Martin (Institute of Applied Physics, University of Bern); Dr NEETHLING, Pieter (Laser Research Institute, University of Stellenbosch)

Presenter: Mr VILJOEN, Ruan (Stellenbosch University)

Session Classification: Poster Session 2

Track Classification: Track C - Photonics