

<b>Title</b>	<b>Single source coherent anti-Stokes Raman microspectroscopy using spectral focusing</b>
<b>Authors</b>	Wolfgang Langbein <sup>1</sup> , Israel Rocha-Mendoza <sup>1,2</sup> , and Paola Borri <sup>2</sup>
<b>Publication</b>	Appl. Phys. Lett. <b>95</b> , 081109 (2009); doi:10.1063/1.3216073 (3
<b>Abstract</b>	We demonstrate coherent anti-Stokes Raman scattering (CARS) microspectroscopy using a single Ti:sapphire laser oscillator and simple passive optical elements. Spectral selection by dichroic mirrors and linear chirping by glass elements creates a vibrational excitation tuneable over a large spectral range ( $\sim 800\text{--}2200\text{ cm}^{-1}$ ) with adjustable spectral resolution ( $\sim 10\text{--}100\text{ cm}^{-1}$ ). We furthermore demonstrate the applicability of differential CARS, enhancing the chemical selectivity, with the proposed single-laser configuration.
<b>Laser Quantum Product</b>	
<b>Institute</b>	<sup>1</sup> School of Physics and Astronomy, Cardiff University, The Parade, Cardiff CF24 3AA, United Kingdom <sup>2</sup> School of Biosciences, Cardiff University, Museum Avenue, Cardiff CF10 3AX, United Kingdom