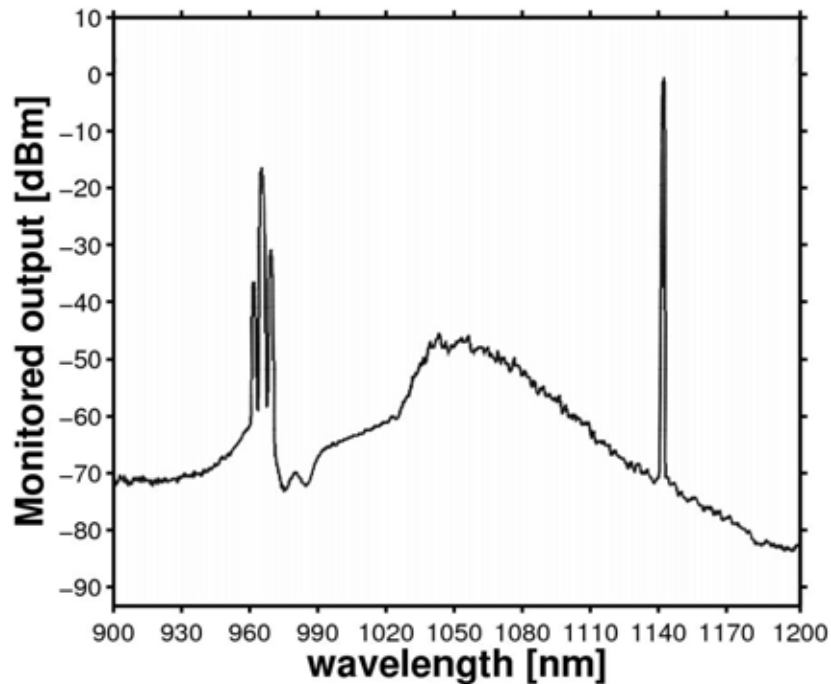


A tuneable fibre ring laser from 1040 nm to 1150 nm

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Abstract:

An efficient CW fibre ring laser operating at wavelength from 1040 nm to 1150 nm has been developed. The ring laser gain medium is a 3 m long ytterbium doped single mode polarization maintaining fibre giving a stable linearly polarized output. Our ring laser is tuneable over the specified wavelength range and with a single etalon it is only lasing at a few modes spaced at 55 MHz. The mode bandwidth is estimated to be well below 1 MHz. In bidirectional operation the slope efficiency reaches a maximum of 25 % of the absorbed pump power. Generation of visible light at 520 nm - 575 nm has been tested by second harmonic generation in an external cavity using a 7 mm long lithium triborate crystal (LBO).