



A theoretical and experimental investigation of the dynamics of tandem blue–violet lasers

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Abstract

Theoretical and experimental investigations have been carried out to study the dynamics of blue–violet lasers with two regions that are adjacent in the longitudinal direction. The theoretical results show that both CW and self-pulsating operations are possible when one of the regions is a saturable absorber. Self-pulsation with frequencies in the range 1.6–2.2 GHz has been observed in a fabricated device and it is found that the theoretical predictions of the behaviour of the device are generally in good agreement with experiment.