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InGaN tandem blue–violet quantum well lasers with high frequency self-pulsations

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Abstract

Theoretical investigations have been carried out to study the dynamics of tandem blue–violet lasers. The theoretical results show that self-pulsating operations are possible when one of the regions is adjusted with an external electric circuit. Self-pulsation with high frequencies has been observed in the numerical calculations. We found that features of the external circuit strongly affect the self-pulsation. Influence of device and material parameters on the laser dynamics was also investigated.