

Performance Enhancement of GeSn Transistor Laser with Symmetric and Asymmetric Multiple Quantum Well in the Base

© *Soumava Ghosh, Bratati Mukhopadhyay, Gopa Sen*

Institute of Radio Physics, Electronics,
92 A. P. C Road, Kolkata, 700009
E-mail: ghoshsoumava2@gmail.com

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The performance of a Multiple Quantum Well (MQW) Heterojunction Bipolar Transistor Laser (HBTL) has been studied using GeSn alloy. Both symmetric and asymmetric quantum wells have been considered. Main analysis is focused on finding the minority carrier concentration in the base, the base threshold current, light output power of the device and the values are compared with GeSn based Single Quantum Well and InGaAs based Multiple Quantum Well Transistor Laser.

Keywords: HBTL, SQW, S-MQW, A-MQW.

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