

Semiconductor-superlattice oscillator for generation of millimeter waves

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We report on a GaAs/AlAs superlattice oscillator for generation of millimeter waves. The oscillator operated at a frequency around 60 GHz. It was mechanically tuneable by about 10 %. Driven with a dc-power of about 10 mW, we reached a power of about 0.4 mW corresponding to a conversion efficiency of about 4 %. Possibilities to reach higher frequencies will be discussed.