Surface passivation and electroluminescence of Ge/GeSn/Ge quantum wells

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Abstract

The direct bandgap emission from strained GeSn is observed in the photoluminescence spectra and the intensity is enhanced by Al_2O_3/SiO_2 passivation due to the field effect. The electroluminescence of the direct bandgap emission of strained GeSn is observed from the Ni/Al_2O_3/GeSn metal-insulator-semiconductor tunneling diodes. The emission wavelength of photoluminescence and electroluminescence can be tuned by Sn content.



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