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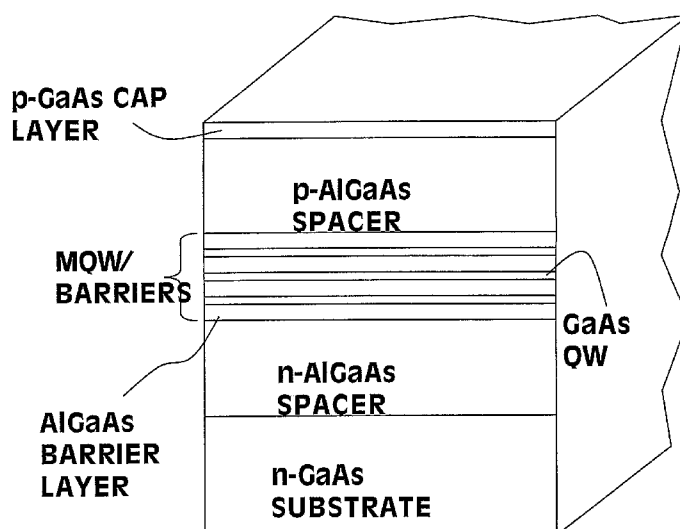
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(54) Title: POLARIZATION MODULATION PHOTOREFLECTANCE CHARACTERIZATION OF SEMICONDUCTOR
QUANTUM CONFINED STRUCTURES



(57) Abstract: A polarization modulation photoreflectance technique has been developed for optical characterization of semicon-
ductor quantum confined structures. By using a tunable laser source in conjunction with polarization state modulation, a single beam
modulation spectroscopy technique may be used to characterize the optical response of semiconductor materials and structures. Dis-
closed methods and instruments are suitable for characterization of optical signatures of quantum electronic confinement, including
resolution of excitonic states at the band edge or other direct or indirect critical points in the band structure. This allows for char-
acterization of semiconductor quantum well structures, for characterization of strain in semiconductor films, and for characterization
of electric fields at semiconductor interfaces.

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