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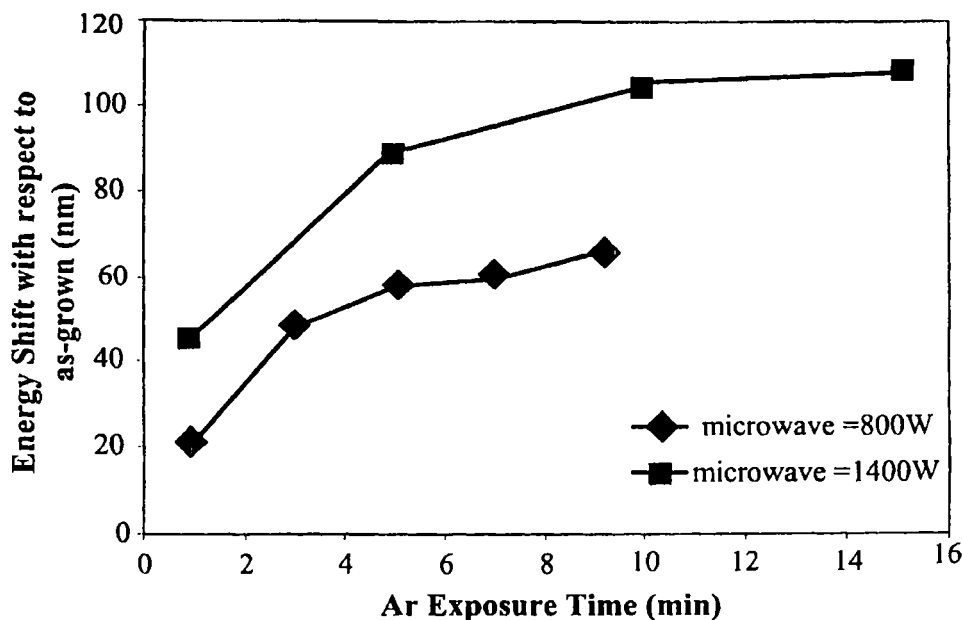
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(54) Title: QUANTUM WELL INTERMIXING



(57) Abstract: In a method of manufacturing a photonic integrated circuit having a compound semiconductor structure having a quantum well region, the structure is irradiated using a source of photons to generate defects, the photons having energy (E) at least that of the displacement energy (E_D) of at least one element of the compound semiconductor. The structure is subsequently annealed to promote quantum well intermixing. The preferred radiation source is a plasma generated using an electron cyclotron resonance (ECR) system. The structure can be masked in a differential manner to selectively intermix the structure in a spatially controlled manner by controlling the exposure portions of the structure to the source of radiation.

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