

ABSTRACT OF THE DISCLOSUREPROCESS OF AND APPARATUS FOR HEAT-TREATING II-VI
COMPOUND SEMICONDUCTORS AND SEMICONDUCTOR
HEAT-TREATED BY THE PROCESS

A process of heat-treating II-VI compound semiconductors reduces the electrical resistivity without the decrease in crystallinity resulting from the increase in dislocation density. The process comprises the following steps: (a) placing at least one II-VI compound semiconductor in contact with aluminum in a heat-treating chamber having the inside surface formed by at least one material selected from the group consisting of pyrolytic born nitride, hexagonal-system boron nitride, sapphire, alumina, aluminum nitride, and polycrystalline diamond; and (b) heat-treating the II-VI compound semiconductor or semiconductors in a gaseous atmosphere containing the group II element constituting part of the II-VI compound semiconductor or semiconductors. A II-VI compound semiconductor is heat-treated by the foregoing process. An apparatus for heat-treating II-VI compound semiconductors comprises components for performing the foregoing process.



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