

Book Reviews

Defect Recognition and Image Processing in Semiconductors 1995

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The Sixth International DRIP (Defect Recognition and Image Processing in Semiconductors) Conference was held in Boulder, Colorado, in December 1995.

The DRIP conference series is devoted to the measurement and mapping techniques for defect recognition and analysis in as-grown and processed semiconducting materials. The 61 papers of the proceedings give many new results in the field of defects in semiconductors.

The imaging techniques in use have atomic to half-millimeter spatial resolution. They are: atomic force microscopy, scanning tunneling microscopy, electron microscopy including cathodoluminescence and electron beam induced current, laser scanning microscopy and topography, photoluminescence microscopy, surface photovoltage mapping, transmission topography, photoemission microscopy, mobile current sensing, positron annihilation mapping and electrooptic sampling. A more definite picture of the defect structures is given by using multiple techniques. Most of the techniques are well-established ones, but few papers deal with their improvement for fast mapping and measurements of material parameters at a large scale.

The DRIP conference is not dedicated to one specific material, even if defects in GaAs and silicon materials and devices are most studied. Other semiconducting materials include LiNbO₃, TiN, InP, GaN, InGaAs, GaInP, ZnSe, ZnCdSe.

Throughout the proceedings, it is clearly demonstrated that the defect imaging techniques are of crucial importance in the comparison of materials measurements to device measurements.

This book can be very much recommended to everyone who is already engaged in the study of defects in semiconductors, either from a fundamental or applied point of view. It will also provide useful information for the researchers and professionals who start working in this particular field of materials science.

It is also worth noting that, as usual with the Conference Series of IOP publications, the reproduction of the prints is of high quality.

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