

Department of Electronic Engineering

Alina A.RahmanOthman

B.Eng, M.Eng

Room: PS2 107

Phone: +61 3 9479 1920

Email: arahmanothman@students.latrobe.edu.au

Research

My research focuses on the uptake of oxygen during MBE growth of AlGaAs. It is well known that oxygen contamination in AlGaAs and related materials is one of the most important determinants of material quality that may affect or degrade the performance of devices. It is also suspected that the incorporation of oxygen leads to expansion of the material lattice constant, with an effect which leads to misleading XRD results when trying to determine aluminium compositions in the AlGaAs system in which the results could be in error by as much as 10-20%. In this study, the wafer is grown using Molecular Beam Epitaxy (MBE) techniques and x-ray diffraction (XRD) as a main tool to analyse the impact of oxygen concentration on the measurement of Al content in AlGaAs epilayers.

