

MacDiarmid Access Grid Seminar

“Nanowhiskers – Past, Present and Future”

Andreas Markwitz and Vivian Fang

GNS

12.15pm

Thursday 5 March 2009

Abstract

Silicon nanowhiskers are a major research area at GNS Science. Since the discovery of these little but fascinating structures in 1994, research has focused on understanding why they appear (they don't appear by vacuum oven annealing, only under the bombardment of the electron beam under high vacuum conditions) and what we can use them for. The overview talk will give a short summary of the discovery and will then outline what we are currently using them for and what we may be also doing with them in the near future.

Examples will be given on (1) how to produce them, (2) why they grow, (3) how we can control their height and spacing, (4) field emission, (5) simple diode and triode devices we've made, (6) a two pixel display, (7) and new research into magnetic ion implantation into the nanowhiskers for spin-dependent field emission.

The talk will be given jointly by Andreas and Vivian.

Venues

Victoria University of Wellington, Room RB 106

University of Canterbury, Level 1 Psychology Building

University of Otago, Teaching Facilities, Information Services Building

University of Auckland, 23 Symonds St, Rm 411, Chemistry Building 301



The MacDiarmid Institute

for Advanced Materials and Nanotechnology