

# News from Australia

## Australian X-Ray Analytical Association Branch Meeting

**Tony Raftery, Regional Correspondent**

*Victoria Branch : contributor Don Williams*

A major one day meeting was held in Melbourne, Victoria on 17 February 1988 with the title 'Review of Radiation Techniques for Materials Analysis'. Updating information on a couple of old techniques like X-ray residual stress analysis, synchrotron analysis and neutron scattering (even though they are getting old, we've barely started using them) was very useful.

However, those attending were on the edge of their seats to hear about thermoelastic residual stress measurement where temperature changes of 0.001°C due to stress are measured, to see into telegraph poles and other objects with computerised X-ray tomography and to hear of the Nobel Prize winning development of Scanning Tunnelling Microscopy.

Speakers were:

Residual Stress Analysis Using X-ray and Neutron Diffraction

Dr. T. Finlayson, Physics, Monash University, Melbourne, Victoria.

Review of Neutron Scattering Facilities in Australia

Dr. T. Hicks, Monash University, Physics.

Thermoelastic Measurement of Residual Stress

Dr. J. Sparrow, Aeronautical Research Laboratories, Melbourne.

Industrial Applications of Computerized Tomography

Dr. J. Davis, Chisholm Institute of Technology, Melbourne.

Scanning Tunnelling Microscopy

Dr. S. Myhra, Griffith University, Brisbane, Queensland.

Applications of Synchrotron Radiation

Dr. B. O'Connor, Curtin University, Perth, Western Australia.

*Western Australia Branch : contributor Brian O'Connor*

The Fourth Annual School and Conference of the Western Australia branch was held from November 20-22, 1987.

Some 40 registrants attended the one-day School on 'Sampling and Sample Preparation in X-ray Analysis' which was held on November 20 at Curtin University of Technology, Western Australia. The Royal Australian Chemical Institute Analytical Group jointly administered the School. Topics and Speakers were:

Sampling Theory

Errors in Sampling

Particle Size and Representative Samples

G C Kerrigan

J Dunn

Applications

Sampling and Sample Preparation

1 Mineral Exploration

Preparation of Geological Material G Moore

2 Mineral Processing:

Sample Preparation for X-ray Powder Diffraction

G Roach

3 Sampling and Sample Preparation Forensic Applications

B Lynch

4 Sampling of Metals

G C Kerrigan

5 Applications:

Environmental and Occupational

a) Identification of Asbestos by SEM/EDS

A Greenfield

b) Sampling and Sample Preparation:

Airborne Particulates

B O'Connor

The two-day conference component on the theme 'Using X-rays' was held at the Lord Forrest Hotel in Bunbury. It was an excellent technical programme and the social sessions were up to the high standard set in recent years. Topics and Presenters were:

Total Reflection X-ray Analysis

G C Kerrigan

Backscatter Electron Imaging  
An Essential Prerequisite for Efficient X-ray Microanalysis of Pathological Specimens

T A Robertson

Quantitative X-ray Diffraction in the Minerals Processing Industry - Fact or Fantasy

G I D Roach  
*et al*

Variations in the Spacings and Shapes of Basal Reflections of Kaolinite from Deeply Weathered Soils, Boddington Gold Mine.

M P Nelson  
*et al*

The Effect of Grinding on the Semi-Quantitative X-ray Diffraction Analysis of Lateritic Materials

A E M Koning  
*et al*

X-ray and Electron Microscopic Study of Iron Oxides in Darling Range Lateritic Bauxites

T M Armitage  
*et al*

The Clay Mineralogy of Soils in South Western Australia : A Preliminary Study

B. Singh *et al*

X-ray Diffraction Analysis of Thin Layer Samples

B Jordan

The Effects of Pretreatments upon the Clay Mineralogy of Soils

G J Churchman

Mineralogical Analysis of Indonesian Andosols : X-ray, TGA and Selective Dissolution Techniques

S Sjarif *et al*

From Bauxite to Alumina : XRFS Control

J S Fletcher

Copies of the School notes and Conference papers may be purchased for A\$15 and A\$25, respectively, from : Allen Thomas, AXAA (WA Branch) Secretary, PO Box 479, Claremont, WA 6100 AUSTRALIA.