

### IBA Affinity Area Publications 2003-04

#### Journals

1. Iwan M. Cornelius, Anatoly B. Rosenfeld, Rainer Siegele and David D. Cohen. LET dependence of the Charge Collection Efficiency of Silicon Microdosimeters. IEEE TRANSACTIONS ON NUCLEAR SCIENCE, VOL. 50, NO. 6, DECEMBER 2003.
2. David D. Cohen, Ed Stelcer, Olga Hawas, David Garton, IBA Methods for Characterisation of Fine Particulate Atmospheric Pollution: A local, regional and global research problem. Nucl. Instr. and Methods B219-220 (2004) 145-152.
3. I. Orlic, R. Siegele, D.D. Cohen, K. Hammerton, R. A. Jeffre, Nuclear Microprobe Analysis of Lead Profiles in Crocodile Bones. Nucl. Instr. And Methods B210 (2003) 330-335
4. Cornelius, Iwan M.; Orlic, Ivo; Siegele, Rainer; Rosenfeld, Anatoly B.; Cohen, David D. Ion beam induced charge collection time imaging of a silicon microdosimeter Nucl. Instr. and Methods B210 (2003) 191-195.
5. Naveen P. Bhatia, Ivo Orlic, Rainer Siegele, Nanjappa Ashwath, Alan J. M. Baker and Kerry B. Walsh Studies on spatial distribution of nickel in fruit of the metal hyperaccumulator *Stackhousia tryonii* Bailey using micro-PIXE and EDXS techniques, New Phytologist, 160 (2003) 479-488.

#### Prizes:

Iwan M. Cornelius: Paul Phelps Continuing Education Grant of the Nuclear and Plasma Sciences Society.

#### Conferences:

1. D. D. Cohen, E. Stelcer, O. Hawas, D. Garton, IBA Methods for Characterisation of Fine Particulate Atmospheric Pollution: A local, regional and global research problem. 16<sup>th</sup> International Conference on Ion Beam Analysis, Albuquerque, New Mexico, USA, 29 June to 4 July 2003.
1. M. Cornelius, R. Siegele, A. B Rosenfeld, D. D. Cohen, Application of the GEANT4 Monte Carlo Toolkit to IBIC Studies of Silicon Microdosimeters. 16<sup>th</sup> International Conference on Ion Beam Analysis, Albuquerque, New Mexico, USA, 29 June to 4 July 2003.
2. R. Siegele, K. Hammerton, W. Sirdochan, R. Jeffree and D. Cohen, Distribution of Trace Elements in Environmental Samples. 16<sup>th</sup> International Conference on Ion Beam Analysis, Albuquerque, New Mexico, USA, 29 June to 4 July 2003.
3. David D. Cohen, David Garton, Eduard Stelcer, Olga Hawas, ACCELERATOR BASED STUDIES OF ATMOSPHERIC POLLUTION PROCESSES. 9<sup>th</sup> International Symposium on Radiation Projection, Capetown, South Africa, 27-31 October 2003
4. Olga Hawas, Eduard Stelcer, David Cohen, David Button, Adam Sarbutt and David Garton. Elemental Composition of Fine Aerosols during the Summer of 2002-03 Bushfire Events in Eastern Australia. Proceedings of National Clean Air Conference CASN03, 24-27 November 2003, Newcastle, Australia.
5. Olga Hawas, Eduard Stelcer, David Cohen, David Button, Lyn Denison, Neil Wong, Andrew Chan, Rod Simpson, Elizabeth Christensen, Gary Golding, Mary Hodge, John Kirkwood, Chris Powell, David Wainwright, and Fred Ardern. Fine Particle Composition in Four Major Australian Cities – Elemental Composition of Aerosols. Proceedings of National Clean Air Conference CASN03, 24-27 November 2003, Newcastle, Australia.
6. D. D. Cohen, D. Garton, E. Stelcer, O. Hawas, W. Zahorowski, S. Chambers, A. Sarbutt, D. Button, T. Wang, S. Poon, J. Kim, S. Nam Oh, H. Shin, M. Y. Ko, F. Santos, L. Esquerra, V. Bac, P. D. Hien, M. Uematsu. Accelerator Based Analytical Methods for ACE-Asia Climate Forcing Studies. Proceedings 13<sup>th</sup> Nuclear Techniques of Analysis Conference, Lucas heights, NSW, Australia, 26-28 November 2003, pp8-12.

7. David Garton, David Cohen, Adam Sarbutt, David Button, Ron McCann, Dennis Mather. STAR – a small Tandatron accelerator for applied research at ANSTO. Proceedings 13<sup>th</sup> Nuclear Techniques of Analysis Conference, Lucas heights, NSW, Australia, 26-28 November 2003, pp59-63.
8. Iwan Cornelius, Rainer Siegele, Michael Lerch, Anatoly Rosenfeld, Ivo Orlic, David Cohen, Characterising novel silicon radiation detectors using the ANSTO heavy ion microprobe. Proceedings 13<sup>th</sup> Nuclear Techniques of Analysis Conference, Lucas heights, NSW, Australia, 26-28 November 2003, pp72.
9. W Sridochan, R Siegele, S. Markich and P. Visoottiviseth, Arsenic distribution in hyperaccumulating fern, Proceedings 13<sup>th</sup> Nuclear Techniques of Analysis Conference, Lucas heights, NSW, Australia, 26-28 November 2003, pp82-85.
10. A Markwitz, N Dytlewski, V Kennedy, P Pelicon, IC Vickridge. Depth profiling of light elements in CVD and PECVD Si<sub>3</sub>N<sub>4</sub> films and anodically oxidised tantalum with heavy ion time of flight elastic recoil detection. Proceedings 13<sup>th</sup> Nuclear Techniques of Analysis Conference, Lucas heights, NSW, Australia, 26-28 November 2003, pp164-167.
11. Greg Cooke, Adam Sarbutt, David Button, Steve Gatt, David Garton, Ed Stelcer, Olga Hawas, Dr. David Cohen. 3MV Van de Graaff Accelerator Gets New Lease of Life. Proceedings 13<sup>th</sup> Nuclear Techniques of Analysis Conference, Lucas heights, NSW, Australia, 26-28 November 2003, pp120-123.
12. Ivo Orlic, Tim Payne, Kath Smith, Rainer Siegele, Scott Markich, John Twining, Kathryn Prince, Natalie Chapman, Peter McGlinn, Racheal Trautman, Anton Stampfl, David Cohen. Applications of complementary microanalytical techniques for analysis of environmental samples. Proceedings 13<sup>th</sup> Nuclear Techniques of Analysis Conference, Lucas heights, NSW, Australia, 26-28 November 2003, pp182.
13. A J Reynolds P C Duncan, S Hinckley, N Dytlewski, K Short. Analysis of substrate effects on chemically deposited CdS thin films. Proceedings 13<sup>th</sup> Nuclear Techniques of Analysis Conference, Lucas heights, NSW, Australia, 26-28 November 2003, pp189-191.
14. R Siegele, W Sridochan, K M Hammerton, R A Jeffree and D D Cohen. Micro-PIXE analysis of heavy metal uptake in the environment. Proceedings 13<sup>th</sup> Nuclear Techniques of Analysis Conference, Lucas heights, NSW, Australia, 26-28 November 2003, pp201-203.
15. R Siegele, J van Moort D D Cohen. Fluid inclusions in quartz. Proceedings 13<sup>th</sup> Nuclear Techniques of Analysis Conference, Lucas heights, NSW, Australia, 26-28 November 2003, pp204-206.
16. K L Smith, M G Blackford, R Giere, H Li, P J McGlinn, R Siegele, I Orlic, T E Payne, A Stampfl, J Twining. Characterisation of particulate atmospheric emissions from power plant combustion coal and coal + tyre derived fuel. Proceedings 13<sup>th</sup> Nuclear Techniques of Analysis Conference, Lucas heights, NSW, Australia, 26-28 November 2003, pp207-209.
17. Eduard Stelcer, Olga Hawas, David Cohen, David Garton, David Button and Adam Sarbutt. Elemental composition of fine aerosols during the October 2002 dust storm in eastern Australia. Proceedings 13<sup>th</sup> Nuclear Techniques of Analysis Conference, Lucas heights, NSW, Australia, 26-28 November 2003, pp228-231.
18. D. D. Cohen, D. Garton, E. Stelcer, O. Hawas, W. Zahorowski, Air Pollution Modelling and Source Characterisation Using Nuclear Techniques of Analysis. International Atomic Energy Agency Thematic Planning Conference on Air Pollution, Vienna, Austria, 7-11 June 2004.

#### Reports:

1. Hawas, O., Stelcer, E., Cohen, D. (2003) "Fine Particle Composition in Four Major Australian Cities". 3<sup>rd</sup> Progress Report to Environment Australia. Reference 50282, September 2003.
2. Hawas, O., Stelcer, E., Cohen, D. (2004) "Fine Particle Composition in Four Major Australian Cities". 4<sup>th</sup> Progress Report to Environment Australia. Reference 50282, June 2004.