

Accelerator Science Project Publications 2014-15

Books and Book Chapters

Proceedings of International Conference on Processing & Manufacturing of Advanced Materials, December 2-6, 2013, Las Vegas, USA, B. Mishra, M. Ionescu, T. Chandra, Materials Science Forum, Volumes 706 – 709, (ISBN 978-3-03795-768-4), and Advanced Materials Research, Volume 922, (ISBN 978-3-03795-769-1), Published by Trans Tech Publications, Switzerland (2014)

Journals

Internally Driven Research

Z. Pastuovic, I. Capan, R. Siegele, R. Jacimovic, J. Forneris, D.D. Cohen, E. Vittone. Generation of vacancy cluster-related defects during single MeV silicon ion implantation of silicon. *Nucl. Instr. and Methods in Phys. Res. B* 332 (2014) 298-302. <http://dx.doi.org/10.1016/j.nimb.2014.02.082>.

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Craig Woodward, James Shulmeister; Dorothy Bell; Robert Haworth; Geraldine Jacobsen; Atun Zawadzki.. A high resolution record of Holocene climate and hydrological changes from Little Llangothlin Lagoon, south eastern Australia. *The Holocene*. (2014). 24, 1665-1674. DOI: 10.1177/0959683614551218

C. Woodward, J. Shulmeister, J. Larsen, G. E. Jacobsen, A. Zawadzki. The hydrological legacy of deforestation on global wetlands. *Science* (2014). 346, 844-847.

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Journals

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Tatjana Ivosevic, Luka Mandic; Ivica Orlic; Eduard Stelcer; David D Cohen, Comparison between XRF and IBA techniques in analysis of fine aerosols collected in Rijeka, *Nucl. Instrum. and Methods* B337 (2014) 83-89.

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Eleanor Hoble, Garry R. Willgoose, Silvia Frisia, Geraldine Jacobsen. Vertical distribution of charcoal in a sandy soil: evidence from DRIFT spectra, FESEM and radiocarbon dating. *European Journal of Soil Science*. 65, (2014), 751–762.

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Conferences

Internally Driven Research

M.A.C. Hotchkis (invited), D.P. Child, T.E. Payne, M.P. Johansen, E. Davis, J.J. Harrison, S. Thiruvoth and K.L. Wilsher. Use of Accelerator Mass Spectrometry (AMS) to study the migration and bioaccumulation of actinides in the environment, Heavy Ion Accelerator Symposium on Fundamental and Applied Science (HIAS), ANU, Canberra, 30 June – 2 July 2014.

Eduard Stelcer, David D. Cohen, Armand J. Atanacio. PM_{2.5} Sources at Mayfield, Newcastle. 10th Australia and New Zealand Aerosol Workshop, Wellington, New Zealand, 10-11 July 2014.

Željko Pastuović, Ivana Capan, Rainer Siegele, Takeshi Ohshima, Naoya Iwamoto, Jacopo Forneris, Ettore Vittone, David Cohen. Radiation Hardness of n-type SiC Schottky Diodes. 14th International Conference on Nuclear Microprobe Technology and Applications, 7-11 July 2014, Padua, Italy.

Andreas Markwitz (invited), Perry Davy, David D. Cohen. Air particulate matter pollution monitoring in Australasia - experiences and results. 8th International BioPIXE Conference, Bled, Slovenia, 14-19 September 2014.

David Cohen. The Centre for Accelerator Science at ANSTO. Technical Meeting on Management Strategies for Accelerator Facilities, Saint Aubin, France, 15-19 September 2014.

Michael Hotchkis, Klaus Wilcken, David Child, David Fink, Vladimir Levchenko, Andrew Smith, Thilo Hauser, Richard Kitchen. Performance of the ANSTO 1MV AMS system, 13th International Conference on Accelerator Mass Spectrometry, 24–29 August 2014, Aix en Provence, France.

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Brodie Smith, David P. Child, Daniela Fierro, Jack Goralewski, Jennifer J. Harrison, Henk Heijnis, Michael A. C. Hotchkis, Mathew P. Johansen, Samuel Marx, Timothy E. Payne, Sangeeth Thiruvoth, Atun Zawadzki. Baseline measurements of fallout radionuclides in the Sydney Basin. 13th South Pacific Environmental Radioactivity Association (SPERA) Conference, Darwin, Australia, 1-4 September 2014.

M.P. Johansen, D.P. Child, E. Davis, J.J. Harrison, M.A.C. Hotchkis, L. Mokhber-Shahin, T.E. Payne, A. Ikeda-Ohno, S. Thiruvoth, and E. Caffrey. Uptake of Particulate Plutonium in Mammals. 13th South Pacific Environmental Radioactivity Association (SPERA) Conference, Darwin, Australia, 1-4 September 2014.

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M.P. Johansen, D.P. Child, E. Davis, M.A.C. Hotchkis, A. Ikeda-Ohno, T.E. Payne, and J.R. Twining. Accumulation of plutonium in mammalian wildlife tissues: comparison of recent data with ICRP distribution models, International Conference on Radioecology and Environmental Radioactivity, 7-12 September 2014, Barcelona, Spain.

M.A.C. Hotchkis (invited). Recent Developments using Accelerator Mass Spectrometry (AMS) at ANSTO, IAEA Technical Meeting on Bulk Analysis of Environmental Samples for Safeguards, 4-6 November 2014, Vienna, Austria.

M. Ionescu, ANSTO possible contributions to education and training of staff from Malaysian Nuclear Agency and students from Malaysian universities, Australian-Malaysian Workshop on Education, 2 March 2014, Sydney, Australia
Daniel J. Gregg, Eric R. Vance, Inna Karatchevtseva, Kylie Olufson, M. Ionescu, Leaching and Ion-Beam Irradiation of a Natural Sodalite, $\text{Na}_4\text{Al}_3\text{Si}_3\text{O}_{12}\text{Cl}$, MRS 2014 Fall Meeting, 30 November-5 December 2014, Boston, Massachusetts, USA

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M.A.C. Hotchkis, D.P. Child, V. Levchenko, K.M. Wilcken, R. Kitchen. Actinides and ^{129}I -Iodine Analysis by AMS on a New 1MV System, 10th International Conference on Methods and Applications of Radioanalytical Chemistry (MARC-X), Kailua-Kona, Hawaii, USA, April 12-17, 2015.

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Zeljko Pastuovic, David Button, David Cohen, David Fink, David Garton, Mike Hotchkis, Mihail Ionescu, Shane Long, Vlad Levchenko, Mick Mann, Rainer Siegele, Andrew Smith, Klaus Wilcken, A new 6 MV Accelerator System for IBA and AMS at ANSTO, International Conference on Ion Beam Analysis, IBA2015, 15-19 June 2015, Opatija, Croatia

Conferences

Externally Driven Research

Fryirs, K., Freidman, B., Williams, R., Jacobsen, G. & Hose, G. Developing a model of upland swamp structure, function and evolution for biodiversity conservation and rehabilitation: the case of threatened Temperate Highland Peat Swamps on Sandstone (THPSS), in Vietz, G; Rutherford, I.D, and Hughes, R. (editors), Proceedings of the 7th Australian Stream Management Conference. Townsville, Queensland, Pages 262-267. **Refereed Abstract.**

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C F Isley, F Nelson, M P Taylor, D D Cohen, G Jacobsen, E Stelcer and A Antanacio. Use of IBA and AMS techniques for source apportionment of ambient and indoor airborne particulate in Suva Fiji. 13th South Pacific Environmental Radioactivity Association (SPERA) Conference, Darwin, Australia, 1-4 September 2014.

Anton Wallner, Tamas Belgya, Max Bichler, Kathrin Buczak, Marcus Christl, Iris Dillmann, Keith Fifield, Mike Hotchkis, Franz Kappeler, Antonin Krasa, Johannes Lachner, Jorg Lippold, Arjan Plompen, France Quinto, Semkova Valentina, Michaela Srncik, Peter Steier, Laszlo Szentmiklosi, Steve Tims, Stephan Winkler. A novel method for studying neutron-induced reactions on actinides, 13th International Conference on Accelerator Mass Spectrometry, 24–29 August 2014, Aix en Provence, France.

Terry Hamilton, David Child, Carlos Sancho Llerandi, Brit Salbu, Antonio Aragón, Maria Paz Antón, Thomas Brown, Michael Hotchkis, Steven Kehl, Ole Christian Lind, Roger Martinelli, Scott Tumey and Sergey Fesenko. IAEA Interlaboratory Performance Test Exercise on Low-Level Plutonium Isotope Measurements in Bioassay Samples Using Accelerator Mass Spectrometry (AMS), 10th International Conference on Methods and Applications of Radioanalytical Chemistry (MARC-X), Kailua-Kona, Hawaii, USA, April 12-17, 2015.

Jon Knight, Sam Marx, David Child, Michael Hotchkis. Independent dating of ²¹⁰Pb mangrove sediment chronology using Pu concentration and isotopic ratios, 1st Australian Mangrove and Saltmarsh Network Conference, Wollongong, February 23-25, 2015.

Stefan Pavetich, Keith Fifield, Michaela Fröhlich, Michael Hotchkis, Silke Merchel, Georg Rugel, Anton Wallner and René Ziegenrucker. Heavy ions at the DREAMS facility, Spring Meeting of the German Physical Society, Heidelberg, Germany, 23 - 27 March 2015.

Reports

Mark F. Hibberd (CSIRO), Melita D. Keywood (CSIRO), David D. Cohen (ANSTO), Ed Stelcer (ANSTO), Yvonne Scorgie (OEH), Scott Thompson (OEH), and Kelly Rivett (OEH), Lower Hunter Particle Characterisation Study, 1st Progress Report, 2 July 2014, pp1-22.

Armand Atanacio, David Cohen. PMF2-DOS Instructions for Fine Particle analysis, September 2014, pp1-11.

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