

Accelerator Science Project Publications 2015-16

Prizes

Books and Book Chapters

Wright, D. & Jacobsen, G. (2015). Convergence of ceremonial and secular: The archaeology of Dabangai village on Mabuyag in Western Torres Strait. Pp 477-495. In McNiven, I. & Hitchcock, G. (eds) *Goemulgaw Lagal: Cultural and Natural Histories of the Island of Mayuyag, Torres Strait. Memoirs of the Queensland Museum, Cultural Heritage Series 8(2)*. 477-495: (Queensland Museum, South Brisbane). ISSN 1440-4788.

Journals

Internally Driven Research

Pastuovic, Z., Capan, I., Cohen, D., Forneris, J., Iwamoto, N., Ohshima, T., Siegele, R., Hoshino, N., Tsuchida, H. Radiation hardness of n-type SiC Schottky barrier diodes irradiated with MeV He ion microbeam, *Nucl. Instr. and Methods in Phys. Res. B* 348 (2015) 233-239. <http://dx.doi.org/10.1016/j.nimb.2014.12.064>. [B] JIF:1.186.

Wei, T., Zhu, H., Ionescu, M., Dayal, P., Davis, J., Carr, D., Harrison, R., Edwards, L. (2015) Radiation Effects on Microstructure and Hardness of a Titanium Aluminide Alloy Irradiated by Helium Ions at Room and Elevated Temperatures, *J. Nuclear Mat.* 459, 284, (2015)

K.M. Wilcken, M. Hotchkis, V. Levchenko, D. Fink, T. Hauser, R. Kitchen. 1MV Accelerator Mass Spectrometer at ANSTO, *Nuclear Instruments and Methods in Physics Research B* 361 (2015) 133–138.

Ashley Reichardt, Mihail Ionescu, Joel Davis, Lyndon Edwards, R.P. Harrison, Peter Hosemann, Dhriti Bhattacharyya, In-situ micro tensile testing of He⁺² ion irradiated and implanted single crystal nickel film, *Acta Materialia* 100, 147–154, (2015)

Janusz Nowotny, Mohammad Abdul Alim, Tadeusz Bak, Mohammad Asri Idris, Mihail Ionescu, Kathryn Prince, Mohd Zainizan Sahdan, Kamaruzzaman Sopian, Mohd Asri Mat Teridi and Wolfgang Sigmund, Defect chemistry and defect engineering of TiO₂-based semiconductors for solar energy conversion, *Chemical Society Reviews*, DOI: 10.1039/c4cs00469h, (2015)

Robert R. Robinson, Mihail Ionescu and Mark Reinhard, Physics at the Australian Nuclear Science and Technology Organisation, *AAPS Bulletin*, vol. 25 no. 3 (2015) 41.

David D. Cohen, Jagoda Crawford, Rainer Siegele, K, L and M shell datasets for PIXE spectrum fitting and analysis, *Nucl. Instr. and Meth.*, B 363 (2015) 7-18.

Jagoda Crawford, Scott Chambers, David Cohen, Alastair Williams, Alan Griffiths. Assessing the impact of atmospheric stability on locally and remotely sourced aerosols at Richmond, Australia, using Radon-222. *Atmos. Environ.*, 127 (2016) 107-117.

Zeljko Pastuovic, David Button, David Cohen, David Fink, David Garton, Michael Hotchkis, Mihail Ionescu, Shane Long, Vladimir Levchenko. Michael Mann, Rainer Siegele, Andrew Smith, Klaus Wilcken. SIRIUS – A new 6MV accelerator system for IBA and AMS at ANSTO. *Nucl. Instr. and Methods in Phys. Res.*, B371 (2016) 142-147.

Jagoda Crawford, Alan Griffiths, David D. Cohen, Ningbo Jiang, Eduard Stelcer. Particulate pollution in the Sydney region: Source diagnostics and synoptic controls. *Aerosol and Air Quality Research*, 16 (2016) 1055-1066.

T. Bak, W. Li, J. Nowotny, A. J. Atanacio, J. Davis. Photocatalytic Properties of TiO₂: Evidence of the Key Role of Surface Active Sites in Water Oxidation. *J. Phys. Chem. A* (2015), 119, 9465-9473

J. Nowotny, M. A. Alim, T. Bak, A. J. Atanacio, A. Malik. Electrical properties and defect chemistry of indium-doped TiO₂, Thermoelectric power. *Ionics* (2015), 21 [7], 2019-2029.

W. Li, T. Bak, A. J. Atanacio, J. Nowotny. Photocatalytic properties of TiO₂: Effect of niobium and oxygen activity on partial water oxidation. *Applied Catalysis B: Environmental* (2016), 198, 243-253.

A. J. Atanacio and Y. Ikuma. Surface Segregation of Niobium and Tantalum in Titanium Dioxide. Overview. *J. Am. Ceram. Soc.* 99[5], 1512-1519 (2016).

Vladimir A. Levchenko, A. Alan Williams. Time History of A Human Kidney Stone Determined By Bomb-Pulse Dating, *Radiocarbon*, (2016), p. 1–5, DOI:10.1017/RDC.2015.12

Alec Deslandes, Mathew C. Guenette, Lars Thomsen, Mihail Ionescu, Inna Karatchevtseva, Gregory Lumpkin, Retention and damage in 3C- β SiC irradiated with He and H ions, *Journal of Nuclear Materials* 469, 187, (2016)

Journals

Externally Driven Research

Kirillova, I.V., Tiunov, A.V. Levchenko, V.A., Chernova, O.F., Yudin, V.G., Bertuch, F., Shidlovskiy, F.K. (2015) On the discovery of a cave lion from the Malyi Anyui River (Chukotka, Russia) *Quaternary Science Reviews* Vol 117, 1 pp135-151 [A*] JIF: 4.076

Jim Specht, Carol Lentfer, Chris Gosden, Geraldine Jacobsen and Sue Lindsay. Pre-Lapita decorated wood from Apalo, West New Britain, Papua New Guinea. *Archaeology in Oceania*, Vol. 50 (2015): 105–110.

G. Saiz, M. Bird, C. Wurster, C. A. Quesada, P. Ascough, T. Domingues, F. Schrodtt, M. Schwarz, T. R. Feldpausch, E. Veenendaal, G. Djagbletey, G. Jacobsen, F. Hien, H. Compaore, A. Diallo, and J. Lloyd. The influence of C3 and C4 vegetation on soil organic matter dynamics in contrasting semi-natural tropical ecosystems. *Biogeosciences*, 12, 5041-5059, 2015. doi:10.5194/bg-12-5041-2015.

Jaime Swift, Matthew L Cupper, Alan Greig, Michael C Westaway, Chris Carter, Calogero M Santoro, Rachel Wood, Geraldine E Jacobsen, Fiona Bertuch. (2015). Skeletal Arsenic of the Pre-Columbian Population of Caleta Vitor, Northern Chile. *Journal of Archaeological Science*. 58,31–45.

M. Raiber, J.A. Webb, D.I. Cendón, P.A. White, G.E. Jacobsen. (2015) Environmental isotopes meet 3D geological modelling: Conceptualising recharge and structurally-controlled aquifer connectivity in the basalt plains of south-western Victoria, Australia. *Journal of Hydrology*, 527, 262–280.

Denis Shine, Melissa Marshall, Duncan Wright, Tim Denham, Peter Hiscock, Geraldine Jacobsen and Sean-Paul Stephens. (2105). The archaeology of Bindjarran rockshelter in Manilikarr Country, Kakadu National Park, Northern Territory. *Australian Archaeology*, 80, 104-111.

Cottrill, D. A., Ribbe, J., Maron, M., & Jacobsen, G. (2015) A palaeoclimatic rainfall history from Lake Broadwater, Southeast Queensland, Australia. *Proceedings of the Royal Society of Queensland*. 119, 35-43.

A. Ellis, R. Edwards, M. Saunders, R. K. Chakrabarty, R Subramanian, A. Van Riessen, A. M. Smith, Dionisia Lambrinidis, Laurie J. Nunes, Paul Vallelonga, Characterizing black carbon in rain and ice cores using coupled tangential flow filtration and transmission electron microscopy, *Atmos. Meas. Tech.*, 8, 3959–3969, 2015.

Bin Yang, A.M. Smith and S. Long, Second generation laser-heated microfurnace for the preparation of microgram-sized graphite samples, *Nuclear Instruments and Methods in Physics Research B* 361 (2015) 363–371.

A.B.Yates, A.M. Smith, F. Bertuch, Residue radiocarbon AMS dating review and preliminary sampling protocol suggestions, *Journal of Archaeological Science*, 61 (2015) 223-234.

A.B. Yates, A.M. Smith, F. Bertuch, B. Gehlen, B. Gramsch, M. Heinen, R. Joannes-Boyau, A. Scheffers, J. Parr, A. Pawlik, Radiocarbon-dating adhesive and wooden residues from stone tools by Accelerator Mass Spectrometry (AMS): challenges and insights encountered in a case study, *Journal of Archaeological Science*, 61 (2015) 45-58, <http://dx.doi.org/10.1016/j.jas.2015.04.022>.

Matthew C McDowell; Gavin J Prideaux; Keryn E Walshe; Fiona Bertuch; Geraldine E Jacobsen. (2015) Re-evaluating the Late Quaternary fossil mammal assemblage of Seton Rockshelter, Kangaroo Island, South Australia, including the evidence for late-surviving megafauna. *Journal of Quaternary Science*. 30 (4), 355-364.

Patrick Moss, Lydia Mackenzie, Sean Ulm, Craig Sloss, Daniel Rosendahl, Lynda Petherick, Lincoln Steinberger, Lynley Wallis, Henk Heijnis, Fiona Petchey and Geraldine Jacobsen. (2105) Environmental Context for Late Holocene Human Occupation of the South Wellesley Archipelago, Gulf of Carpentaria, Northern Australia. *Quaternary International*. 385,136-144.

Daniel Rosendahl, Sean Ulm, Craig Sloss, Lincoln Steinberger, Fiona Petchey, Geraldine Jacobsen, Errol Stock, Richard Robins. (2015). Mid-Holocene Aboriginal occupation of offshore islands in northern Australia? A reassessment of Wurdukanhan, Mornington Island, southern Gulf of Carpentaria, Australia *Quaternary International*, 385, 145-153

Michael Kristo, Elizabeth Keegan, Michael Colella, Ross Williams, Rachel Lindvall, Gary Eppich, Sarah Roberts, Lars Borg, Amy Gaffney, Jonathan Plaue, Kimberly Knight, Elaine Loi, Michael Hotchkis, Kenton Moody, Michael Singleton, Ian Hutcheon. Nuclear Forensic Analysis of Uranium Oxide Powders Interdicted in Victoria, Australia, *Radiochimica Acta* 103 (2015) 487-500..

Yan Zhang, Natalie Mahowald, Rachel Scanza, Emilie Journet, Karine Desboeufs, Samuel Albani, Jasper F. Kok, Guoshun Zhuang, Ying Chen, David D. Cohen, Adina Paytan, Matt D. Patey, Eric P. Achterberg, Johann P. Engelbrecht, Khanneh Wadinga Fomba. Modeling the Global Emission, Transport and Deposition of Trace Elements associated with Mineral Dust. www.biogeosciences.net/12/1/2015/, *Journal of Biogeosciences* 12 (2015) 1-22.

Daniel S. Grant, Kateryna Bazaka, Rainer Siegele, Stephen A. Holt, Mohan V. Jacob, Ion irradiation as a tool for modifying the surface and optical properties of plasma polymerised thin films. *Nucl. Instr. Meth. B* 360 (2015) 54-59.

D. Pope, D. Cutajar, S. George, S. Guatelli, J. Bucci, E. Enari, S. Miller, R. Siegele, A. Rosenfeld, The Study of the Dosimetric Effect of Prostatic Calcifications in Low Dose Rate Brachytherapy Treatments using Geant4. *Phys. Med. Bio.* **60** (2015) 4335-4353.

Mark Hackett, Jade Aitken, Fatima El Assaad, James Mcquillan, Elizabeth Carter, Helen Ball, Mark Tobin, David Paterson, Martin de Jonge, Rainer Siegele, David Cohen, Stefan Vogt, Georges Grau, Nicholas Hunt. Mechanisms of Cerebral Malaria: Multi-Modal Imaging of Altered Cerebral Metabolism and Protein Oxidation at Hemorrhage sites. *Sci. Adv.* 1 (2015) e1500911. <http://advances.sciencemag.org>.

Tatjana Ivosevic, Eduard Stelcer, Ivica Orlic, Iva Bogdanovic Radovic, David Cohen. Characterization and source apportionment of fine particulate sources at Rijeka, Croatia from 2013 to 2015. *Nucl. Instr. Meth. B* 371 (2016) 376-380. <http://dx.doi.org/10.1016/j.nimb.2015.10.023>.

O.F. Chernova, I.V. Kirillova, B. Shapiro, F.K. Shidlovskiy, A.E.R. Soares, V.A. Levchenko, F. Bertuch. Morphological and genetic identification and isotopic study of the hair of a cave lion (*Panthera spelaea* Goldfuss, 1810) from the Malyi Anyui River (Chukotka, Russia). *Quaternary Science Reviews* 142 (2016) p. 61-73 <http://dx.doi.org/10.1016/j.quascirev.2016.04.018>

Vasilii V. Petrenko, Jeffrey P. Severinghaus, Hinrich Schaefer, Andrew M. Smith, Tanner Kuhl, Daniel Baggenstos, Quan Hua, Edward J. Brook, Paul Rose, Robb Kulin, Thomas Bauska, Christina Harth, Christo Buizert, Anais Orsi, Guy Emanuele, James E. Lee, Gordon Brailsford, Ralph Keeling and Ray F. Weiss, Measurements of ¹⁴C in ancient ice from Taylor Glacier, Antarctica constrain in situ cosmogenic ¹⁴CH₄ and ¹⁴CO production rates, *Geochimica et Cosmochimica Acta* 177 (2016) 62–77.

Conferences

Internally Driven Research

D.P.Child, M.A.C. Hotchkis. Post Detonation Debris Analysis At An Australian Nuclear Test Site Using Accelerator Mass Spectrometry, 13th Australasian Environmental Isotope Conference, 8-10 July 2015, Sydney, NSW.

D.P.Child, J.M.Knight, M.A.C. Hotchkis. Fallout Plutonium And Uranium Isotope Ratio Signatures Using Accelerator Mass Spectrometry For Environmental Chronometry In Eastern Australia, 13th Australasian Environmental Isotope Conference, 8-10 July 2015, Sydney, NSW.

David Cohen, Invited session chair, 11th National Aerosol Workshop, Newcastle University, NSW, 22-24 July 2015.

Eduard Stelcer, David Cohen, Armand Atanacio, Recent 15 Year History of PM_{2.5} at Mayfield-Newcastle, 11th National Aerosol Workshop, Newcastle University, NSW, 22-24 July 2015.

Eduard Stelcer, David Cohen, Shaun Kozanic, Armand Atanacio, Development of 7-Wavelength LED Integrated Plate Method Instrument, 11th National Aerosol Workshop, Newcastle University, NSW, 22-24 July 2015.

D.T. Button, D.B. Garton, M.C. Mann, and S. Yan, "Advancements in the Management Measurements & Visualisation of NEC Beam Profile Monitors", in Proc. 4th International Beam Instrumentation Conference, Melbourne, Australia, September 2015, paper TUPB005, pp. 298-301, ISBN: 978-3-95450-176-2, doi:10.18429/JACoW-IBIC2015-TUPB005, <http://accelconf.web.cern.ch/AccelConf/IBIC2015/papers/tupb005.pdf>, 2016.

D.T.Button (Oral Presentation), Teaching an Old Dog New Tricks, Advancements in the Visualisation and Measurements of BPMs, 49th SNEAP 2015, Sandia National Laboratories, Albuquerque, New Mexico USA,, September 28-October 1, 2015.

D.T. Button (Invited Oral), "Ion Beam Accelerator Techniques at ANSTO", AINSE Winter School, ANSTO Sydney Australia, 18th August 2015.

D.T. Button (Invited Oral), "Ion Beam Accelerator Techniques at ANSTO", AINSE Roadshow, University of Melbourne, 18th August 2015.

D.T. Button (Invited Oral), "Ion Beam Accelerator Techniques at ANSTO", AINSE Roadshow, Monash University, 20th August 2015.

D.T. Button (Invited Oral), "Overview of Accelerator Techniques @ ANSTO", AINSE Adelaide Roadshow, University of Adelaide, 16 -17 March 2016

D.T. Button (Invited Oral), "Recommended Software: Comparison Between Latest Versions of Acrobat and Pitstop", JACoW Team Meeting, Padova, Italy, 15-20 November, 2015. (Funded by Australian Light Source)

D.T. Button (Invited Oral), "Workflow in Conference Proceedings Office: for Editors", JACoW Team Meeting, Padova, Italy, 15-20 November, 2015. (Funded by Australian Light Source)

D.T. Button, M. Boland, (Poster Presentation), "IBIC 2015, Melbourne Australia", JACoW Team Meeting, Padova, Italy, 15-20 November, 2015. (Funded by Australian Light Source)

K. Riches, D.T. Button, L. Corvetti, (Poster Presentation), "ICALEPCS 2015, Melbourne Australia", JACoW Team Meeting, Padova, Italy, 15-20 November, 2015. (Funded by Australian Light Source)

D.T. Button (Invited Oral), "Future Team Meeting: Feedback and Proposals", JACoW Team Meeting, Padova, Italy, 15-20 November, 2015. (Funded by Australian Light Source)

Karina Meredith, Suzanne Hollins, Dioni Cendón, Geraldine Jacobsen, Robert Chisari, Vladimir Levchenko. Tracing carbon dynamics of groundwater in an evaporative environment. Australasian Isotopes in the Environment Conference. Sydney, Australia, 8th – 10th July 2015.

D.T. Button, D.B. Garton, M.C. Mann, and S. Yan, "Advancements in the Management Measurements & Visualisation of NEC Beam Profile Monitors", in Proc. 4th International Beam Instrumentation Conference, Melbourne, Australia, September 2015, paper TUPB005, pp. 298-301, ISBN: 978-3-95450-176-2, doi:10.18429/JACoW-IBIC2015-TUPB005, <http://accelconf.web.cern.ch/AccelConf/IBIC2015/papers/tupb005.pdf>, 2016.

D.T.Button (Oral Presentation), Teaching an Old Dog New Tricks, Advancements in the Visualisation and Measurements of BPMs, 49th SNEAP 2015, Sandia National Laboratories, Albuquerque, New Mexico USA,, September 28-October 1, 2015.

D.T. Button (Invited Oral), "Ion Beam Accelerator Techniques at ANSTO", AINSE Winter School, ANSTO Sydney Australia, 18th August 2015.

D.T. Button (Invited Oral), "Ion Beam Accelerator Techniques at ANSTO", AINSE Roadshow, University of Melbourne, 18th August 2015.

D.T. Button (Invited Oral), "Ion Beam Accelerator Techniques at ANSTO", AINSE Roadshow, Monash University, 20th August 2015.

D.T. Button (Invited Oral), "Overview of Accelerator Techniques @ ANSTO", AINSE Adelaide Roadshow, University of Adelaide, 16 -17 March 2016

M. Ionescu, (invited, fully funded) D. Bhattacharyya, D. Gregg, T. Wei, R. Aughterson, A. Reichardt, J. Davis, I. Karatchevseva, In-situ and ex-situ characterisation of radiation induced modifications in materials, SIP-IMASIM Workshop, 29 September-2 October, Tsukuba, Japan

T.E. Payne, M.J. Comarmond, J.J. Harrison, M.A.C. Hotchkis, C.E. Hughes, M.P. Johansen. Migration Mechanisms Of Plutonium, Other Actinides And Fission Products At The Little Forest Legacy Site, 15th International Conference on the Chemistry and Migration Behaviour of Actinides and Fission Products in the Geosphere (Migration 2015), September 13-18 2015, Santa Fe, USA.

Armand Atanacio, David Cohen, Jagoda Crawford and Eduard Stelcer. Joining the dots-preliminary spatial interpolation on PM2.5 data from 7 eastern NSW coastline sites. CASANZ 22nd Clean Air and Environment Conference, Melbourne, 20-23 September 2015.

Hibberd, Mark, Cohen, David, Keywood, Melita¹, Riley, Matthew, Scorgie, Yvonne, Selleck Paul¹, Stelcer, Eduard. Analysis tools for particle characterisation and source apportionment in the Lower Hunter. CASANZ 22nd Clean Air and Environment Conference, Melbourne, 20-23 September 2015.

Armand Atanacio, Markwitz, Andreas, Davy, Perry, Cohen, David, Santoso, Muhayatun⁴, Begum, Bilkis, Shagijamba, Dagva, Waheed, Shahida, Vuong, Bac Asia-Pacific aerosol database (APAD), a unique air particulate matter resource covering the greater Asian region. CASANZ 22nd Clean Air and Environment Conference, Melbourne, 20-23 September 2015.

David Cohen, Keith Craig, Ann-Louise Crotty, Leanne Graham, Judy Greenwood, Mark Hibberd, Melita Keywood, John Kirkwood, Matthew Riley, Kelly Rivett, Yvonne Scorgie, Wayne Smith, Eduard Stelcer, Scott Thompson,. Particle Characterisation Study Design to Address Policy Needs and Community Questions. CASANZ 22nd Clean Air and Environment Conference, Melbourne, 20-23 September 2015.

D.J. Kok (invited talk), V. Levchenko, W.P.A. Boellaard. Stone Growth Time-Line (The Stone Age). 3rd Meeting of the EAU Section of Urolithiasis EULIS15, Alicante, Spain, 10-12 September 2015

David Cohen (invited talk and Workshop session chair), The Australian Centre for Accelerator Science its Facilities and Drivers, Technical Meeting on Formulating Strategies for Keeping Accelerator Based Technologies at the Forefront of Scientific Endeavours, Lisbon, Portugal, 19-23 October 2015.

Vladimir A. Levchenko, Tristen Jones, Alan Williams, Penelope King, Ulrike Troitzsch, Rock art dating through oxalate crusts: further studies on chemical pre-treatment. 22nd International Radiocarbon Conference, Dakar, Senegal, November 16 - 20, 2015.

David Cohen (invited, fully funded). IAEA/ RCA Fine Particle Air Pollution Database. IAEA/ RCA7023 Final Coordination Meeting and Symposium, on Supporting Sustainable Air Pollution Monitoring Using Nuclear Analytical Technology, Rotorua, New Zealand, 9 to 13 November 2015.

Armand Atanacio (fully funded). Final Coordination Meeting Australia's 3 year activities for the IAEA/ RCA Project in Asia. IAEA/ RCA7023 Final Coordination Meeting and Symposium, on Supporting Sustainable Air Pollution Monitoring Using Nuclear Analytical Technology, Rotorua, New Zealand, 9 to 13 November 2015.

Rainer Siegele (invited, fully funded). IAEA CRP (F11019) 2nd Coordination Meeting on Development of Molecular Concentration Mapping Techniques Using MeV Focussed Ion Beams, Kyoto, Japan, 16.-20. Nov 2015.

David Cohen (invited talk), Centre for Accelerator Science at ANSTO, Australian Collaboration for Accelerator Science School for Accelerator Physics 2016, Australian Synchrotron, Clayton, VIC, Australia, 18-29 January 2016.

Retention of He and H in irradiated SiC (invited, partially funded), M. Ionescu, A. Deslandes, R. Holmes, M. C. Guenette, I. Karatchevseva, L. Thomsen, G. R. Lumpkin, International Conference on Processing and manufacturing of Advanced Materials, 30 May-3 June 2016, Graz, Austria

Revealing climate secrets in polar ice sheets with ANSTO's accelerators, Andrew Smith, 'science paper' for the ANSTO Board meeting, 23/06/16, AINSE Board Room, ANSTO.

Conferences

Externally Driven Research

- Fedrico, M., Levchenko, V., Nitschke, C. (2015) Tree fern growth rates as drivers of stand dynamics in Southeastern Australian temperate forests. 13th Australasian Environmental Isotope Conference, Sydney, Australia, 8-10 July 2015, Programme and Abstracts, p. 60.
- Damien Maher, Mitchell Call, Isaac Santos, Christian Sanders, Kai Schulz, Andrew Jenkinson and Geraldine Jacobsen. Are mangrove carbon exports old or modern? A multiple radio- and stable isotope analysis. Australasian Isotopes in the Environment Conference. Sydney, Australia, 8th – 10th July 2015.
- Wendy Timms, Adam Hartland, Geraldine Jacobsen, Dioni Cendón, Richard Crane, Dayna McGeeney. 14C Activity Of DIC And DOC within a Clayey-Silt Aquitard. Australasian Isotopes in the Environment Conference. Sydney, Australia, 8th – 10th July 2015.
- Scott Wilson, Debashish Mazumder, Geraldine Jacobsen, Linda Barry. You Are What You Eat. Examination of Isotopes in Determining Plastic Ingestion by Fish. Australasian Isotopes in the Environment Conference. Sydney, Australia, 8th – 10th July 2015.
- Pascale Eisenmann, Brian Fry, Susan Bengtson Nash, Debashish Mazumder, Geraldine Jacobsen. Using Radiocarbon to Study Southern Hemisphere Humpback Whale Feeding Ecology and Migration. Australasian Isotopes in the Environment Conference. Sydney, Australia, 8th – 10th July 2015.
- Cameron Barr; Meredith-Maya Legras Dharmarajah; Patrick Moss; John Tibby; Geraldine Jacobsen; Patricia Gadd; Henk Heijnis. A high-resolution record of millennial-scale climate variability and landscape change over the past 70,000 years from sub-tropical eastern Australia. XIX INQUA 2015, Nagoya, Japan, 26 Jul-2 Aug, 2015.
- Bianca Petruzzelli, Amy Roberts, F. Donald Pate, Ian Moffat, Calogero M. Santoro^{3,4}, Patricio Galarce, Gabriela Santander and Geraldine Jacobsen. MID-LATE HOLOCENE POPULATIONS AT FÉNIX, VALPARAÍSO REGION OF CENTRAL CHILE: AN INVESTIGATION INTO DIET AND MOBILITY. XIX INQUA 2015, Nagoya, Japan, 26 Jul-2 Aug, 2015.
- C. Woodward, J. Shulmeister, J. Larsen, G. E. Jacobsen, A. Zawadzki. The hydrological legacy of deforestation on global wetlands. XIX INQUA 2015, Nagoya, Japan, 26 Jul-2 Aug, 2015. Beer, J., Chagué-Goff, C., Andrew, A., Barry, L. 2015. Insights from stable isotopes for evaluating weed invasion in urban bushland. 13th Australasian Environmental Isotope Conference, Sydney, Australia, 8-10 July 2015, Programme and Abstracts, p. 26.
- Barry, L., Fairbairn, A., Ustunkaya, M. (2015) Integrating stable isotope analysis and archaeobotany: Investigating the contribution of climate change to the collapse of the Hittite Empire during the Late Bronze Age period. XIX INQUA 2015, NAGOYA, JAPAN 26 Jul-2 Aug, 2015.
- Tristen Jones (invited talk), Vladimir A. Levchenko, Painting the Pleistocene? Re-visiting calcium oxalate AMS 14C methodologies at Red Lily Lagoon, Western Arnhem Land, N.T. AURA Meeting, November 2015, Darwin.
- Tristen Jones, Penelope King, Ulrike Troitzsch, Vladimir Levchenko, The Northern Running Figures of the East Alligator River region, western Arnhem Land – radiocarbon age determinations for a geographically bounded rock art style. Australian Archaeology Association 2015 Conference, Fremantle WA, 2-4 December 2015
- M. Minackshi, R. Ramkumar, M. Ionescu (invited), A biopolymer gel decorated cobalt molybdate nanowafers with improved energy storage: In-situ cross-linked electrode from Chitosan, 40th International Conference and Exposition on Advanced Ceramics and Composites (ICACC 2016), 24-29 January 2016, Daytona Beach, FL, USA
- David Cohen (invited), Rail Coal Dust Emissions Expert Workshop, Office of the NSW Chief Scientist, MLC Centre, Sydney, NSW, 2000, 8 February 2016.
- David Cohen (invited session chair), National Air Quality and Health Workshop, Graduate House, University of Melbourne, Melbourne, VIC, 3053, 16 February 2016.

Reports

- David D. Cohen Armand J. Atanacio, The IAEA/ RCA Fine and Coarse Particle Ambient Air Database, Contract Report to IAEA, Vienna, Austria, pp1-34, 31 July 2015.

Armand Atanacio, David Cohen, Eduard Stelcer, Sydney Particle Characterisation Study -Methods Paper, Contract report for the NSW EPA, ANSTO Report, pp1-16, November 2105.

Zeljko Pastuovic, Rainer Siegele, David Cohen, David Garton. Focused ion beam induced radiation defects in semiconductor and insulating materials used for manufacturing of electronic devices. IAEA/CRP#F11-16 report on Utilization of ion accelerators for studying and modelling of radiation induced defects in semiconductors and insulators, pp1-52, February 2016.

M. F. Hibberd, M. D. Keywood, P. W. Selleck, D. D. Cohen, E. Stelcer, Y. Scorgie, L. Chang. Lower Hunter Particle Characterisation Study, report by CSIRO, ANSTO for NSW Office of Environment and Health, NSW EPA and NSW Health, pp1-209, February 2016

Patents