

Accelerator Science Project Publications 2016-17

Prizes

Ed Stelcer, Armand Atanacio and David Cohen received the Clean Air of Australia and New Zealand (CASANZ) award for major contribution to the characterisation and understanding of fine particle air pollution in the Sydney Basin over the past 15 years. The award was presented at the CASANZ annual general meeting at the NSW EPA Headquarters in Goulbourn St, Sydney on 25 November.

Books and Book Chapters

C. Sommitsch, M. Ionescu, B. Mishra, E. Kozeschnik, T. Chandra, Proceedings of International Conference on Processing & Manufacturing of Advanced Materials, May 30-June 3, Graz, Austria, Materials Science Forum, Volume 879, (ISBN 978-3-0357-2129-4), Published by Trans Tech Publications, Switzerland (2016)

Journals

Internally Driven Research

K. T. Meredith, L.F. Han, S.E. Hollins, D. I. Cendón, G. E. Jacobsen, A. Baker. (2016). Evolution of chemical and isotopic composition of inorganic carbon in a complex semi-arid zone environment: consequences for groundwater dating using radiocarbon. *Geochimica et Cosmochimica Acta* (2016), pp. 352-367. DOI information: 10.1016/j.gca.2016.06.011

Jagoda Crawford, Scott Chambers, David D. Cohen, Alastair Williams, Alan Griffiths, Eduard Stelcer, Leisa Dyer. Impact of meteorology on fine aerosols at Lucas Heights, Australia. *Atmos. Environ.* 145 (2016) 135-146.

C. F. Isley, P. F. Nelson, M.P. Taylor, F.S. Mani, M. Maata, A. Atanacio, E. Stelcer and D. D. Cohen. PM_{2.5} and aerosol black carbon in Suva, Fiji. *Atmos. Environ.* 150 (2016) 55-66.

D. I. Cendón, S. I. Hankin, J. P. Williams, M. Van der ley, M. Peterson, C. E. Hughes, K. Meredith, I. T. Graham, S. E. Hollins, V. Levchenko, R. Chisari. Groundwater residence time in a dissected and weathered sandstone plateau: Kulnura–Mangrove Mountain aquifer, NSW, Australia. *Australian Journal of Earth Sciences* 61(3):1-25 · April 2016 DOI: 10.1080/08120099.2014.893628

Armand J. Atanacio, David D. Cohen, Bilkis A. Begum, Bangf Nic, Gauri Girish Pandit, Muhayatun Santoso, Jong Myoun Limf, Shamsia Abdul Rahmang, Dagva Shagjambah, Andreas Markwitz, Naila Siddique, Preciosa Corazon B. Pabroak, Lakmali Handagiripathiri, Wanna Wimlattanapun, Thu Bac Vuong, Andreas Karydas. The APAD and ASFID: Long-Term Fine and Coarse Atmospheric Ambient Particulate Matter and Source Fingerprint Databases for the Asian Region. *Air Quality and Climate Change* 50 (2016) 41-49.

Mathew Johansen, David P Child, Emily A Caffrey, Emma Davis, Jennifer J Harrison, Michael A Hotchkis, Timothy E Payne, Atsushi Ikeda-Ohno, Sangeeth Thiruvoth, John R Twining, Nicholas A Beresford. Accumulation of plutonium in mammalian wildlife tissues following dispersal by accidental-release tests, *Journal of Environmental Radioactivity* (2016), pp. 387-394 DOI information: 10.1016/j.jenvrad.2015.03.031

Vladimir A. Levchenko · A. Alan Williams. Time History of a Human Kidney Stone Determined by Bomb-Pulse Dating. *Radiocarbon* 58(2):437-441 · June 2016 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)

Brodie S Smith, Jennifer Harrison, David P Child, Daniela Fierro, Henk Heijnis, Michael A C Hotchkis, Mathew P Johansen, Sam Marx, Timothy E Payne, Atun Zawadzki. Measurement of fallout radionuclides, ^{239,240}Pu and ¹³⁷Cs, in soil and creek sediment: Sydney Basin, Australia, *Journal of Environmental Radioactivity*, (2016), pp. 579-586 DOI information: 10.1016/j.jenvrad.2015.06.015..

Jennifer J. Harrison, Timothy E. Payne, Kerry L. Wilsher, Sangeeth Thiruvoth, David P. Child, Mathew P. Johansen, Michael A.C. Hotchkis. Measurement of ²³³U and ²³⁴/²³³U ratios in contaminated groundwater using alpha spectrometry, *Journal of Environmental Radioactivity*, (2016), pp. 537-541 DOI information: 10.1016/j.jenvrad.2015.08.013

Craig Woodward, James Shulmeister, Atun Zawadzki, David Child, Linda Barry, Michael Hotchkis. Response of an Australian wetland to a major hydrological regime shift following 19th century deforestation, *Hydrobiologica*, (2017), pp 337-358 DOI 10.1007/s10750-016-2942-0

A.J. Atanacio, M.A. Alim, T. Bak, M. Ionescu, J. Nowotny, X.D. Zhou. Segregation in Titanium Dioxide Co-Doped with Indium and Niobium. *Journal of the American Ceramic Society*, 100 (2017) 419-428.

Z. Pastuovic, R. Siegele, D.D. Cohen, M. Mann, M. Ionescu, D. Button, S. Long. The new confocal heavy ion microprobe beamline at ANSTO: The first microprobe resolution tests and applications for elemental imaging and analysis. *Nucl. Instr. Meth. Phys. Res. B404* (2017) 1-8. DOI: <http://dx.doi.org/10.1016/j.nimb.2017.01.059>.

Journals

Externally Driven Research

Melinda S. Allen, Alex E. Morrison, Andrew M. Lorrey, Jian-xin Zhao and Geraldine E. Jacobsen. Archaeological Timing, magnitude and effects of late Holocene sea level drawdown on island habitability, Aitutaki, Cook Islands. *Archaeology in Oceania*, Volume 51(2), July 2016, 108–121. DOI: 10.1002/arco.5102

H.C. Oskierski, B.Z. Dlugogorski, T.K. Oliver and G. Jacobsen. Chemical and isotopic signatures of waters associated with the carbonation of ultramafic mine tailings, Woodsreef Asbestos Mine, Australia. *Chemical Geology*. (2016), 436, 11–23.

Rachel Martin Kim Dowling, Dora C. Pearce, Singarayer Florentine, Stafford McKnight, Eduard Stelcer, David Cohen, Attila Stopic, John Bennett. Trace metal content in inhalable particulate matter (PM10 and PM2.5 collected from historical mine waste deposits using a laboratory-based approach, *Environmental Geochemistry & Health*, (2016), pp 1-15, DOI 10.1007/s10653-016-9833-1

Michael I. Bird, Anna, V. McBeath, Philippa L. Ascough, Vladimir A. Levchenko, Christopher M. Wurster, Niels C. Munksgaard, Ronald J. Smernik, Alan Williams., Loss and gain of carbon during char degradation. *Soil Biology and Biochemistry*, *Soil Biology and Biochemistry* 106:80-89 · March 2017, DOI: 10.1016/j.soilbio.2016.12.012

Giles Hamm, Peter Mitchell, Lee J. Arnold, Gavin J. Prideaux, Daniele Questiaux, Nigel A. Spooner, Vladimir A. Levchenko, Elizabeth C. Foley, Trevor H. Worthy, Birgitta Stephenson, Vincent Coulthard, Clifford Coulthard, Sophia Wilton, Duncan Johnston., Cultural innovation and megafauna interaction in the early settlement of arid Australia. *Nature* 539(7628):280-283 · November 2016, DOI: 10.1038/nature20125.

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* Volume 142, 15 June 2016, Pages 61–73. <http://dx.doi.org/10.1016/j.quascirev.2016.04.018>

Justin Maxwell, Jamie Howarth, Marcus Vandergoes, Geraldine Jacobsen, Ian Barber. Timing and importance of arboriculture and agroforestry in a temperate East Polynesia Society, the Moriori, Rekohu (Chatham Island). *Quaternary Science Reviews* 149, (2016), 306-325

Anna Lintern; Paul Leahy; Henk Heijnis; Atun Zawadzki; Patricia Gadd; Geraldine Jacobsen; Ana Deletic; David McCarthy. Identifying heavy metal levels in historical flood water deposits using sediment cores. *Water Research* (2016), pp. 34-46. DOI: 10.1016/j.watres.2016.08.041

Monks, C., Dortch, J., Jacobsen, G., Baynes, A., 2016. Pleistocene occupation of Yellabidde Cave in the northern Swan Coastal Plain, southwestern Australia. *Austral. Archaeol.* 82, 275-279.

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

J. Nowotny, T. Hoshino, J. Dodson, A.J. Atanacio, M. Ionescu, V. Peterson, K.E. Prince, M. Yamawaki, T. Bak, W. Sigmund, T.N. Veziroglu, M.A. Alim. Towards sustainable energy. Generation of hydrogen fuel using nuclear energy. *International Journal of Hydrogen Energy*, 41 (2016) 12812-12825.

Kok D. J., Boellaard W., R. Y. Ridwan, Levchenko V. A. Timelines of the "free-particle" and "fixed-particle" models of stone-formation: theoretical and experimental investigations. *Urolithiasis* (2017) 45: 33. doi:10.1007/s00240-016-0946-x

Tristen Jones, Vladimir A. Levchenko, Penelope L. King, Ulrike Troitzsch, Daryl Wesley, A. Alan Williams, Alfred Nayingull. Radiocarbon age constraints for a Pleistocene–Holocene transition rock art style: The Northern Running Figures of the East Alligator River region, western Arnhem Land, Australia. *Journal of Archaeological Science: Reports* 11 (2017) 80–89. DOI: 10.1016/j.jasrep.2016.11.016

Claire L. Kain, Catherine Chagué-Goff, Patricia Gadd, James Goff, Daniela Fierro, Geraldine E. Jacobsen, Atun Zawadzki. Geochemical signatures and source material of marine incursion deposits. (*Earth Surface Processes and Landforms*, 201642(5) (2017), 763-780. DOI: 10.1002/esp.4020

Ángel Puga-Bernabéu, Robin J. Beaman, Jody M. Webster, Alex L. Thomas, Geraldine Jacobsen. Gloria Knolls Slide: A prominent submarine landslide complex on the Great Barrier Reef margin of north-eastern Australia. *Marine Geology* 385 (2017) 68–83

Christopher Wurster, Rafai Hamdi, Jordahna Haig, Jupiri Titin, Geraldine Jacobsen, Michael Bird. Stable isotope composition of cave guano from Eastern Borneo reveal tropical environments over the past 15,000 cal BP. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 473 (2017) 73–81.

Kristen Beck, Michael-Shawn Fletcher; Patricia Gadd; Henk Heijnis; Geraldine Jacobsen. An early onset of ENSO influence in the extra-tropics of the southwest Pacific inferred from a 14, 600 year high resolution multi-proxy record from Paddy's Lake, northwest Tasmania. *Quaternary Science Reviews*, 157, (2107), 164-175.

Jim Specht, Chris Gosden, Carol Lentfer, Geraldine Jacobsen, Peter Matthews, Sue Lindsay. A pre-Lapita stilt structure at Apalo, Arawe Islands, Papua New Guinea. *Journal of Island & Coastal Archaeology*. (2017) 12, 151-172.

Conferences

Internally Driven

Klaus Wilcken, David Fink, Michael Hotchkis, David Garton, David Button, Michael Mann, Richard Kitchen. Accelerator Mass Spectrometry on SIRIUS: new 6MV spectrometer at ANSTO, 12th European Conference on Accelerators in Applied Research and Technology (ECAART12), Jyväskylä, Finland, 3 - 8 July 2016.

Michael Hotchkis, David Child, Klaus Wilcken, Richard Kitchen. Actinides isotopic analysis using a 1MV AMS system, 12th European Conference on Accelerators in Applied Research and Technology (ECAART12), Jyväskylä, Finland, 3 - 8 July 2016.

M.A.C. Hotchkis (invited, fully funded). Recent experiences using Accelerator Mass Spectrometry (AMS) at ANSTO, IAEA Technical Meeting on Bulk Analysis of Environmental Samples for Safeguards, Vienna, Austria, 30 August - 3 September 2016.

David D. Cohen (invited, fully funded), Eduard Stelcer, Shaun Kozanic, Armand J. Atanacio. Development of 7-Wavelength LED Integrated Plate Method Instrument. IAEA/ RCA Regional Workshop on Identifying Transboundary Air Pollution Events across Asia-Pacific. Manila, Philippines, 1 July 2016

Armand Atanacio, David D. Cohen, Eduard Stelcer, Andreas Markwitz. The APAD and ASFID, two long term particulate matter databases for sampling sites across the greater Asia-Pacific region. 12th Australian New Zealand Aerosol assembly (ANAA), Queensland University of Technology, Brisbane, QLD, Australia, 4-5th August 2016.

Mark Hibberd, Melita Keywood, Paul Selleck, David D. Cohen, Eduard Stelcer, Yvonne Scorgie, Lisa Chang. Lower Hunter Particle Characterisation Study. 12th Australian New Zealand Aerosol assembly (ANAA), Queensland University of Technology, Brisbane, QLD, Australia, 4-5th August 2016.

David D. Cohen (invited, fully funded), Black carbon sources and measurement. IAEA/ RCA Regional Workshop on supporting operational procedures and developing capability for new participating countries to expand the regional sampling network. Bandung, Indonesia, 5-9 September 2016.

David D. Cohen (invited, fully funded), Ion Beam Methods for fine particle characterisation. IAEA/ RCA Regional Workshop on supporting operational procedures and developing capability for new participating countries to expand the regional sampling network. Bandung, Indonesia, 5-9 September 2016.

David D. Cohen (invited, fully funded) Eduard Stelcer, Armand Atanacio, IAEA/ RCA fine particle air pollution databases. IAEA/ RCA Regional Workshop on supporting operational procedures and developing capability for new participating countries to expand the regional sampling network. Bandung, Indonesia, 5-9 September 2016.

Mathew P. Johansen, David P. Child, Richard Collins, Michael A.C. Hotchkis, Nicholas Howell, Timothy E. Payne, Atsushi Ikeda-Ohno, L. Mokhber-Shahin. Analysis of hot particle characteristics affecting environmental fate and interaction with living organisms, 14th SPERA conference, Bali September 5-9, 2016

David Cohen, Eduard Stelcer, Armand Atancio (invited). Sydney Particle Characterisation Study 2000-14. Clean Air Society of Australia and New Zealand, NSW EPA and NSW Office of Environment and Heritage, Sydney, NSW, Australia, 25 November 2016.

Mathew P. Johansen, Emily Caffrey, David P. Child, Richard Collins, Michael A.C. Hotchkis, Nicholas Howell, Timothy E. Payne, Atsushi Ikeda-Ohno, L. Mokhber-Shahin. Particles as concentrated sources related to uptake and radiological dose in mammals, Second International conference on Radioecological Processes, Seville November 6-9, 2016.

Michael Hotchkis, David Child. Using the high sensitivity of Accelerator Mass Spectrometry in research using fallout plutonium and uranium from nuclear tests, International Nuclear Physics Conference, Adelaide September 11-16, 2016.

Tao Wei, Alan Xu, Dhriti Bhattacharyya, Hanliang Zhu, Mihail Ionescu (invited), Titanium Aluminide Alloy Implanted with Helium Ions and its Compressive Behaviour Investigated by Micromechanical Testing, International Conference on Ion Beam Modification of Materials (IBMM 2016), 30 OCT- 4 Nov 2016, Wellington, New Zealand

C. Davey, D. Saunders, V. Luzin, J. Bevitt, J. Webb, J. Donlon, M. Ionescu A non-destructive investigation of two Cypriot Bronze Age knife blades using neutron diffraction residual stress analysis, Materials Research Proceedings 2, 515, (2016)

Matthew Johansen, David Child, Atsushi Ikeda-Ohno, Tim Payne, Nicholas Howell, Emily Caffrey, Richard Collins, Radioactive Particles as concentrated sources related to uptake and dose in mammals, Melbourne November 24-25 2016.

David Cohen (invited, fully funded), Megavolt accelerator systems for ion beam analysis, Workshop on utilization of ion beam accelerators, Faculty of Science, Kasetsart University, Bangkok, Thailand, 14-15 February 2017.

David Cohen (invited, fully funded), Fine particle – What are they and should we better understand them, Workshop on utilization of ion beam accelerators, Faculty of Science, Kasetsart University, Bangkok, Thailand, 14-15 February 2017.

S. Bakr, D. Cohen, R. Siegele, S. Incerti, V. Ivanchenko, a. Mantero, S. Guatelli. Inclusion of novel proton and alpha ionization cross sections into GEANT4. Innovation in Radiation Applications, Wollongong University, Wollongong, NSW, Australia, 20-22 April 2017.

David Cohen (invited, fully funded), Databases for fine particle characterisation and quantification. IAEA Middle Eastern Country Regional Workshop on Database Development, Vienna, Austria, 24-28 April 2017.

Conferences

Externally Driven Research

RSB Greene, KM Scott, C Strong, E Stelcer and D D Cohen. The importance of IBA in characterizing source-sink relationships in Australian aeolian dust research: examples from case studies. 9th International Conference on Aeolian Research, Mildura, Australia, July 3-8 2016.

Kirillova, I., Yanina, T., Levchenko, V., Ippolitov, A., Shishlina, N. The origin of objects of biological descent from the Khvalynsk Eneolithic cemeteries (Northern Caspian region). IGCP 610 Fourth Plenary Conference, Tbilisi, Georgia, 2-9 October 2016. Proceedings pp. 89-92

Kristen K. Beck, Michael-Shawn Fletcher, Linda Barry, Patricia Gadd, Henk Heijnis, Geraldine Jacobsen, Giri Kattel, Krystyna Saunders. Terrestrial-aquatic ecosystems responses to ENSO in Tasmania. 2016. Australasian Quaternary Association Conference, University of Auckland, New Zealand, 5-9 December 2016.

Helen Bostock, Bryn Taiapa, Lionel Carter, Patricia Gadd, Geraldine Jacobsen, Vladimir Levchenko, Helen Neil, Lisa Northcote. 2016. Millennial scale events from marine sediment cores in the SW Pacific during Marine Isotope Stage 3. Australasian Quaternary Association Conference, University of Auckland, New Zealand, 5-9 December 2016.

Helen Bostock, Bryn Taiapa, Lionel Carter, Patricia Gadd, Ian Schipper, Geraldine Jacobsen, Vladimir Levchenko. 2016. Using Micro-XRF to identify crypto-tephra in marine sediment Cores. Australasian Quaternary Association Conference, University of Auckland, New Zealand, 5-9 December 2016.

Briony Chamberlayne, Jonathan Tyler, Christopher Izzo, Bronwyn Gillanders, Deborah Haynes, Geraldine Jacobsen, John Tibby. 2016. Geochemical signals in bivalve shells as evidence of hydroclimate variability in the Coorong Lagoon, South Australia. Australasian Quaternary Association Conference, University of Auckland, New Zealand, 5-9 December 2016.

Reka-Hajnalka Fulop, David Fink, Alexandru T. Codilean, Bin Yang, Tibor J. Dunai. 2016. Status of the new in-situ C-14 extraction scheme at ANSTO. Australasian Quaternary Association Conference, University of Auckland, New Zealand, 5-9 December 2016.

Georgina Falster, Jonathan Tyler, John Tibby, Peter Kershaw, Cameron Barr, Katherine Grant, Geraldine Jacobsen, Chris Turney. 2016. Coherent millennial-scale hydroclimate variability in southern Australasia during the last glacial period. Australasian Quaternary Association Conference, University of Auckland, New Zealand, 5-9 December 2016.

Emily Field, Jordahna Haig, Jan-Hendrik May, Sam Marx, Geraldine Jacobsen, Atun Zawadzki, David Child, Henk Heijnis, Hamish McGowan, Patrick Moss. 2016. Using multiple dating methods to understand controls on geochronological complexity in organic spring deposits. Australasian Quaternary Association Conference, University of Auckland, New Zealand, 5-9 December 2016.

Greer Gilmer, Chris Moy, Marcus Vandergoes, Christina Riesselman, Geraldine Jacobsen. 2016. Southern Hemisphere Westerly Winds and climate change at the Subantarctic Auckland Islands since the Late Glacial. Australasian Quaternary Association Conference, University of Auckland, New Zealand, 5-9 December 2016.

Greer Gilmer, Christina R. Riesselman, Kyu Cheul Yoo, Jae Il Lee, Min Kyung Lee, Geraldine Jacobsen. 2016. Holocene changes in ocean circulation and climate at Moubray Bay, Northern Victoria Land, Antarctica. Australasian Quaternary Association Conference, University of Auckland, New Zealand, 5-9 December 2016.

Christopher Kemp, John Tibby, Lee Arnold, Cameron Barr, Patricia Gadd, Geraldine Jacobsen, Henk Heijnis. 2016. A new > 100,000 year Australian palaeoclimate record: Fern Gully Lagoon. Australasian Quaternary Association Conference, University of Auckland, New Zealand, 5-9 December 2016.

Peter, Kershaw, Chris Turney, Bert Roberts, Henk Heijnis, Geraldine Jacobsen, Simon Connor, Nick Walsh. 2016. Lake Wangoom - unfinished business. Australasian Quaternary Association Conference, University of Auckland, New Zealand, 5-9 December 2016.

Mariani, M., Connor S., Theuerkauf, M., Fletcher, M.-S., Kunes P., Saunders, K., Zawadzki, A., Jacobsen, G. 2016. Quantifying land-cover changes from pollen in Tasmania: a Southern Hemisphere first. Australasian Quaternary Association Conference, University of Auckland, New Zealand, 5-9 December 2016.

Craig Woodward, Robert Chisari, Brodie Cutmore, Patricia Gadd, Henk Heijnis, Geraldine Jacobsen, Patrick Moss, Krystyna Saunders, James Shulmeister, Adrian Slee, Atun Zawadzki. 2016. The effect of Maori deforestation on wetland hydrology, catchment erosion and eutrophication: a case study from the South Island. Australasian Quaternary Association Conference, University of Auckland, New Zealand, 5-9 December 2016.

Gilmer, G., Moy, C., Riesselman, C., Vandergoes, M., Jacobsen, G., Gadd, P., Wilson, G (2016); High-resolution fjord sedimentary records of Holocene and Late Glacial climate change from the subantarctic Auckland Islands. Abstracts, VIII Southern Connections Conference 2016, Punta Arenas, p.86. □

Gilmer, G., Moy, C., Riesselman, C., Vandergoes, M., Wilson, G., Nichols, J., Jacobsen, G. (2016); Evolution of a fjord depositional environment: Insights into climate change at the subantarctic Auckland Islands, New Zealand. In: Abstract Book, Scientific Committee on Antarctic Research: Biennial Meetings and Open Science Conference 2016, Kuala Lumpur, ISBN 978-0-948277-32-0., p.923.

Emily Field, Geraldine Jacobsen, Henk Heijnis, Atun Zawadzki, David Child, Jordahna Haig, Hamish McGowan, Patrick Moss, Sam Marx. Implications for gaining high-resolution palaeo-environmental information from water limited environments: Dating the “un-dateable” of cores, Australian Earth Science Convention, Adelaide June 26-30, 2016.

Mariani M., Fletcher M.-S, Connor S.E., Bowman D.M.J.S, Cadd H., Haberle S., Hopf F., Jacobsen G., Saunders K., Zawadzki A . A regional synthesis of climate and fire-driven land cover changes from western Tasmania. PAGES Conference, Spain May 2017

A. Wallner, N. Kinoshita, J. Feige, M. Froehlich, M. Hotchkis, L.K. Fifeld, R. Golser, M. Honda, U. Linnemann, H. Matsuzaki, S. Merchel, S. Pavetich, M. Paul, G. Rugel, D. Schumann, S.G. Tims, P. Steier, T. Yamagata, S.R. Winkler. ^{60}Fe and ^{244}Pu in deep-sea archives - a link to nearby supernova activity and r-process sites, Nuclear Physics in Astrophysics International Conference (NPA8), Catania, Italy, 18-23 June 2017.

Reports

Armand Atanacio, David D. Cohen, Eduard Stelcer. The IAEA/RCA Fine and Coarse PMF Receptor Fingerprint Database. ANSTO External Report E-783, ISBN 1 921268 24 7, pp1-45, February 2016

David D. Cohen, Armand J. Atanacio, Eduard Stelcer, David Garton. Sydney Particle Characterisation Study. Prepared for NSW EPA and NSW office of Environment and Heritage, pp 1-157, ANSTO External Report ER???, July 2016.

David Child, Michael Hotchkis, Mat Johansen, Atsushi Ikeda, Emily Caffrey. Investigation of radioactive particle contamination at the former British nuclear weapon test sites in Australia, 2nd CRM IAEA CRP K41013: Environmental behaviour and potential biological impact of radioactive particles, Vienna, Austria, 31 August – 4 September 2015.

Mathew Johansen, Richard Banati, Nicholas Howell, David Child, Michael Hotchkis, Jennifer Harrison, Fukushima impact on the Pacific, ANSTO research Highlights 2016

Zeljko Pastuovic, Rainer Siegele, David Cohen, Mick Mann, Mihail Ionescu, David Button, Shane Long, Phillip Chatfield, Andrew Downes, Peter Drewer, Oliver Evans, David Garton : The new Confocal Heavy Ion Micro-Probe (CHIMP) beamline on the SIRIUS accelerator, Tech Rep for Commissioning of the CHIMP, 22 June 2016.

Ivana Capan, Zeljko Pastuovic, Jose Coutinho, Takeshi Ohshima, Luka Snoj. SPS MYP Engineering silicon carbide for enhanced borders and ports security (E-SiCure), Progress Report, 14 March 2017.

Catherine Chagué-Goff, David Edwards, Jason Ruszczyk, Patricia Gadd, Atun Zawadzki, Geraldine Jacobsen, Daniela Fierro, Jack Goralewski, Lachlan Clement, Alberto Albani. Late Holocene environmental changes in Dee Why Lagoon, New South Wales. Report to Northern Beaches Council, Sydney, NSW. February 2017, 68pp.

Patents