

Publications for 2006

Books

1. Dwyer, L., Forsyth, P., Fredline, L., Jago, L., Deery, M., Lundie, S. (2006). Concepts of Tourism Yield and their Measurement. Published by the CRC for Sustainable Tourism, ISBN9781920965181, Melbourne
2. Bixio, D., *Weemaes, M., *Thoeve, C., *Ravazzini, A., *Miska, V., *De Koning, J., *Cikurel, H., *Aharoni, A., *Muston, M., Khan, S., *Dillon, P., *Schäfer, A., *Joksimovic, D., *Savic, D., *Wintgens, T., *Tings, A., *Kazner, C., *Lyko, S. and *Melin, T. (2006). Water Reuse System Management Manual. European Commission, Luxembourg (ISBN 92 79 01934 1). 646 pages.

Book Chapters

1. Ashbolt, N.J., Petterson, S.R., Roser, D.R., *Westrell, T., *Ottoson, J. and *Stenström, T.A. (2006). Microbial risk assessment tool to aid in the selection of sustainable urban water systems. In 2nd IWA Leading-Edge on Sustainability in Water-Limited Environments. (Eds MB Beck and A Speers). IWA Publishing, London.
2. Ashbolt, N., Petterson, S., * Westrell, T., *Ottoson, J., * Schönning, C. and *Stenström T.A. (2006). Chapter 3, Assessment: hygiene and health, 3.1 Microbial Risk Assessment (MRA) Tool to aid in the selection of sustainable urban water systems. In "Strategic Planning of Sustainable Urban Water Management" (P.-A. Malmqvist, G. Heinicke, E. Kärrman, T. A. Stenström and G. Svensson, eds.), pp. 43-62. IWA Publishing, London.
3. Dwyer, L., Forsyth, P., Fredline, L., Jago, L., Deery, M., Lundie, S. (2006). Concepts of Tourism Yield and their Measurement. Published by the CRC for Sustainable Tourism, ISBN9781920965181, Melbourne
4. Khan, S. J. (2006). Chapter 12: The Role of Reuse and Technology. In: Water Policy in Australia (Ed, Crase, L.) Resources for the Future Press, Washington, DC. (Accepted for Publication Dec 2006).
5. Khan, S. J. and *Gerrard, L. E. (2006). Chapter 6: Consultation and Communication. In: National Guidelines for Water Recycling - Managing Health and Environmental Risks (Phase 1). National Water Quality Management Strategy - Natural Resource Management Ministerial Council, Environment Protection and Heritage Council, National Health Ministers Conference. Canberra (ISBN 1 921173 06 6), 177-186.

Journal Articles (Reviewed)

1. *Avoscan L., Collins, R., *Carrière, M., *Gouget, B and *Covès, J. (2006). Seleno-L-methionine is the predominant organic form of selenium in *Cupriavidus metallidurans* CH34 exposed to selenite

or selenate. *Appl. Environ. Microbiol.* 72: 6414-6416. AMER SOC MICROBIOLOGY, 1752 N ST NW, WASHINGTON, DC 20036-2904 USA, ISSN: 0099-2240. EDITOR IN CHIEF: L. Nicholas Ornston.

2. *Bakkaus E, Collins, R.N., *Morel, J.L. and *Gouget, B. (2006). Anion exchange liquid chromatography-inductively coupled plasma-mass spectrometry detection of the Co²⁺, Cu²⁺, Fe³⁺ and Ni²⁺ complexes of mugineic and deoxymugineic acid. *J. Chromatogr. A* 1129(2): 208-215. ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS, ISSN: 0021-9673. EDITOR: J G Dorsey.
3. *Barbosa V.L., *Atkins S.D., *Pereira Barbosa V. and Stuetz R.M. (2006). Characterisation of *Thiobacillus thioparus* isolated from an activated sludge bioreactor used for hydrogen sulphide treatment. *Journal of Applied Microbiology* 101, 1269-1281
4. *Barbosa V.L., *Hobbs P.J., *Sneath, R.W., *Callen J. and Stuetz R.M. (2006). Investigating the capacity of an activated sludge process to reduce odour emissions. *Water Environment Research*, 78(8), 842-851
5. *Brookes, J.D., Davies, C., *Hipsey, M., and *Antenucci, J. (2006). Association of *Cryptosporidium* with bovine faecal particles and implications for risk reduction by settling within supply reservoirs. *Journal of Water and Health*, 4(1), 87-98.
6. Chang, S., Fane, A.G. and Waite, T.D. (2006). Analysis of constant permeate flow filtration using dead-end hollow fiber membranes. *Journal of Membrane Science* 268, 132-141.
7. Collins R.N., *Tran, N.D., *Bakkaus, E., *Avoscan, L. and *Gouget, B. (2006). Assessment of isotope exchange methodology to determine the sorption coefficient (K_d) and isotopically exchangeable concentration (E value) of selenium in soils and sediments. *Environ. Sci. Technol.* (in press, to be published 15th December 2006). AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036 USA, DOI: 10.102/es061528s. EDITOR: Laura Sigg.
8. Davies, C.M., *Logan, M.R., *Rothwell, V.J., *Krogh, M., *Ferguson, C.M., *Charles, K., *Deere, D.A., and Ashbolt, N.J. (2006). Soil inactivation of DNA viruses in septic seepage. *Journal of Applied Microbiology* 100(2):365.
9. Duesterberg, C. and Waite, T.D. (2006). Process optimization of Fenton oxidation using kinetic modeling. *Environ. Sci. Technol.* 40 (13), 4189 -4195.
10. Dwyer, L., Forsyth, P., Fredline, L., Jago, L., Deery, M., Lundie, S. (2006). Concepts of Tourism Yield and their Measurement – Executive Summary. Published by the CRC for Sustainable Tourism, Melbourne.
11. *Ferguson, C.M., Davies, C.M., Kaucner, C., *Krogh, M., *Rodehutsors, J., *Deere, D.A. and Ashbolt, N.J. (2006) Field scale quantification of microbial transport from bovine faeces under simulated rainfall events. *Journal of Water and Health* 5(1), 83-95.
12. *Fernando D.R., *Bakkaus, E.J., *Perrier, N., *Baker, A.J.M., *Woodrow, I.E., *Batianoff, G.N. and Collins, R.N. (2006). Manganese accumulation in the leaf mesophyll of four tree species: a PIXE/EDAX localization study. *New Phytol.* 171(4): 751-758. BLACKWELL PUBLISHING, 9600 GARSINGTON RD, OXFORD OX4 2DQ, OXON, ENGLAND, ISSN: 0028-646X. EDITOR: Ian Woodward.
13. *Fujii, M., Rose A. L., Waite, T. D. and *Omura, T. (2006). Superoxide-mediated dissolution of amorphous iron oxyhydroxide in seawater. *Environmental Science and Technology* 40: 880-887. American Chemical Society, ISSN 0013-936X.
14. Genkin, G., Waite, T.D., Fane, A.G. and Chang, S. (2006). Hybrid coagulation-submerged vibrating hollow fibre systems: theoretical analysis and experimental study. *Journal of Membrane Science* 281, 726-734.

15. Green, R., Macdonald, B.C.T., Melville, M.D. and Waite, T.D. (2006). The Hydrochemistry of Episodic Drainage Water Discharged from an Acid Sulfate Soil Catchment. *Journal of Hydrology* 325, 356-375.
16. Green, R., Macdonald, B.C.T., Waite, T.D. and Melville, M.D. (2006). Characteristics of the acidity in acid sulfate soil surface waters. *Environmental Chemistry* 3, 225-232.
17. Green, R., Waite, T.D. and Melville, M.D. (2006). Treatment of acid sulfate soil drainage by direct application of alkaline reagents. *Water, Air, and Soil Pollution* 178, 59-68.
18. Guan, J. and Waite, T.D. (2006). Impact of Aggregate Size and Structure on Biosolids Settleability, *Drying Technology*, 24, 1209-1215.
19. Jiang, Y., Petrier, C. and Waite, T.D. (2006). Sonolysis of 4-Chlorophenol in Aqueous Solution: Effects of Substrate Concentration, Aqueous Temperature and Ultrasonic Frequency. *Ultrasonics Sonochemistry* 13, 415-422.
20. *Kay, D., Ashbolt, N., *Wyer, M. D., *Fleisher, J. M., *Fewtrell, L., *Rogers, A., and *Rees, G. (2006). Reply to comments on "Derivation of numerical values for the World Health Organization guidelines for recreational waters". *Water Research* 40(9):1921-1925.
21. Khan, S. J., *Weinberg, H. S. and *Bedford, E. C. (2006). Aqueous-phase aminolysis: Approach for the analysis of epoxides in water. *Analytical Chemistry*, 78(8), 2608-2616.
22. Khan, S. J. and *Gerrard, L. E. (2006). Stakeholder communications for successful water reuse operations. *Desalination*, 187, 191-202.
23. Le-Clech, P., Chen, V. and Fane, A.G. (2006). Fouling in membrane bioreactors used for wastewater treatment - A review. *J. Memb. Sci.* 284, 17-53.
24. Le Clech P., Marselina Y., Stuetz R.M. and Chen V. (2006). Fouling visualisation of solution modelling soluble microbial products in membrane bioreactors. *Desalination* 199, 477-479
25. +Murphy K.R., *Ruiz, G.M., *Dunsmuir, W.T.D. & Waite, T.D. (2006). Optimized parameters for fluorescence-based verification of ballast water exchange by ships. *Environmental Science and Technology* 40: 2357-2362.
26. +Pham, A. N., Rose, A. L., *Feitz, A. J. and Waite, T. D. (2006). Kinetics of ferric iron precipitation in aqueous solutions at pH 6.0-9.5 and 25°C. *Geochimica et Cosmochimica Acta* 70: 640-650. Elsevier, ISSN 0016-7037.
27. Rose, A. L. and Waite, T. D. (2006). Role of superoxide in the photochemical reduction of iron in seawater. *Geochimica et Cosmochimica Acta* 70(15): 3869-3882. Elsevier, ISSN 0016-7037.
28. Roser, D.J., Davies, C.M., Ashbolt, N.J., and *Morison, P. (2006). Microbial exposure assessment of an urban recreational lake: a case study of the application of new risk-based guidelines. *Water Science and Technology* 54(3):245-252.
29. +Salmon, T. P., Rose, A. L., Neilan, B. A. and Waite, T. D. (2006). The FeL model of iron acquisition: Nondissociative reduction of ferric complexes in the marine environment. *Limnology and Oceanography*, 51(4): 1744-1754. American Society of Limnology and Oceanography, ISSN 0024-3590.
30. +Seelsaen N., *McLaughlan R., Moore S., Ball J. and Stuetz R.M. (2006). Pollutant removal efficiency of alternative media in stormwater treatment. *Water Science & Technology* 54 (6-7), 299-305.

31. +Signor, R.S., and Ashbolt, N.J. (2006). Pathogen monitoring offers questionable protection against drinking-water risks: a QMRA (Quantitative Microbial Risk Analysis) approach to assess management strategies. *Water Science and Technology* 54(3):261-268.
32. *Stanger, M., *Agutter, P.A., *Lake, R.C., Ashbolt, N.J., and Roser, D.J. (2006). Microbial risk and removal—a utility perspective. *Water Science and Technology* 54(3):253-259.
33. +Stenekes, N., Colebatch, H.K., Waite, T.D., and Ashbolt, N.J. (2006). Risk and governance in water recycling: 'Public acceptance' revisited. *Science, Technology & Human Values* 31(2):107-134.
34. +Tangsubkul, N., +Parameshwaran, K., Lundie, S., Fane, A.G., Waite, T.D. (2006). Environmental Life Cycle Assessment of the Microfiltration Process. In: *Journal of Membrane Science*. Volume 284, Issues 1-2, 1 November 2006, 214-226.
35. Waite, T.D. and Santiwong, S.R. (2006). Membrane fouling in water treatment: effect of solution composition on resistance and compressibility of gel-forming filter cakes. *Water Science and Technology: Water Supply* 6(1), 157-164.
36. *Weber, S., Khan, S. J. and *Hollender, J. (2006). Human risk assessment of organic contaminants in reclaimed wastewater used for irrigation. *Desalination*, 187, 53-64.
37. *Wood, R., *Lenzen, M., *Dey, C., Lundie, S. (2006). A comparative study of some environmental impacts of conventional and organic farming in Australia. In: *Journal of Agricultural Systems*, Volume 89, Issues 2-3, September 2006, 324-348.

Journal Articles (Not Reviewed)

1. *Lestari, F., *Hayes, A. J., *Green, A. R. and Chattopadhyay, G. *Toxicity assessment of smoke derived from PMMA (Polymethyl Methacrylate) combustion on human cells using exposure methods: impinger and passive direct exposure..* *Journal of applied Toxicology*, Volume 26, Issue 2, Date: March/April 2006, Pages: 99-114
2. *Lestari, F., *Green, A. R., Chattopadhyay, G. and *Hayes, A. J.. *An Alternative Method for Fire Smoke Toxicity Assessment Using Human Lung Cells.* *Fire Safety Journal*, Vol41, Issue 8, Pages 605 - 615
3. +Livingston, D., Colebatch, H.K. and Ashbolt, N.J. (2006). Institutional barriers to decentralised systems. *Water, Journal of the Australian Water Association* 33(3):84-86.
4. Lundie, S., Peters, G., Ashbolt, N., +Lai, E. and +Livingston, D., 2006, 'A sustainability framework for the Australian water industry', *Water*, 33 (7), Australian Water Association, Sydney, pp 83-88, ISSN 0310-0367, November 2006.
5. +Seelsaen, N., *McLaughlan, R., Ball, J.E., Moore, S., and Stuetz, R.M. (2006), Pollutant removal efficiency of alternative filtration media in stormwater treatment, *Water Science and Technology*, **54**: 299-305.

Conference Papers (reviewed)

1. *Barnes, R. and Ashbolt, N. (2006). Review of decision tools and trends for water and sanitation development projects. Fisher, J. (ed), pp. 488-495, Water, Engineering and Development Centre, Loughborough University, Leicestershire, UK.
2. *Georgaki G., Stuetz R.M. and *Jefferson B. (2006). Mass transfer modelling of H₂S in odour treatment technologies. *Proceeding 4th CIWEM Annual Conference, Newcastle, 12pp.*
3. Khan, S.J. (2006). Managing trace chemical contaminants for water reuse in an Australian context. ENVIRO2006, Melbourne, VIC, Australia.
4. Peters, G.M., Rowley, H.V., Lundie, S., *Flint, M., 2006 'Challenges and opportunities in LCA - the water industry example', 5th Australian Conference on Life Cycle Assessment, Melbourne, 22-25 November 2006.

Conference Papers (Not Reviewed)

1. *Bakkaus, E., Collins, R.N., *Gaudry, A., *Morel, J.L. and *Gouget, B. (2006). Estimation of the potential phytoavailability of cobalt in soils using isotope dilution methodology. *SETAC Europe 16th Annual Meeting, The Hague, The Netherlands, May 2006.*
2. *Bakkaus E., Collins, R.N., *Carrière, M., *Ouerdane, L., *Mariet, C., *Morel, J.L. and *Gouget, B. (2006). Determination of the root-to-shoot transfer of cobalt from hydroponic solution in wheat plants: influence of cobalt speciation and iron supply. SETAC Europe 16th Annual Meeting, The Hague, The Netherlands, May 2006.
3. Chattopadhyay, G, Wang, W. and Stuetz, R.M., Assessment of volatile Organic Compounds (VOC) and odours using passive sampling and olfactory-GC-MS. paper e6323, Proceedings of the Enviro 06, Melbourne May 9 – 11, 2006.
4. Collins, R.N., +Alvarez, F., Waite, T.D. and Melville, M.D. (2006). Isotopically exchangeable Fe in coastal acid sulfate soils – insights into reducing the off-site transport of Fe? Australian Society of Soil Science Inc and the Australasian Soil and Plant Analysis Council Inc Conference, Adelaide, Australia, December 2006.
5. Collins, R.N., *Bakkaus, E., *Tran, N.D. and *Gouget, B. (2006). Use of isotope exchange methodology to determine the potential phytoavailability of selenium – an element existing in numerous oxidation states in the environment. SETAC Europe 16th Annual Meeting, The Hague, The Netherlands, May 2006.
6. Davies, C.M., Roser, D.J., Feitz, A.J., and Ashbolt, N.J. (2006). Solar and photocatalytic inactivation rates of microorganisms in drinking water. Proceedings of the IWA World Water Congress and Exhibition. 10-14 Sept 2006, Beijing, China.
7. Dever, S.A., Swarbrick, G.E., Stuetz, R.M., Kaucner C., and Every, E., (2006). Factors that Affect the Performance of Passive Landfill Gas Drainage and Biofiltration Systems in the Field. 4th Intercontinental Landfill Research Symposium, 14-16 June, Gallivare, Sweden.
8. *Fernando, D.R., *Batianoff, G.N., *Woodrow, I.E., *Bakkaus, E.J., Collins, R.N. and *Baker, A.J.M. (2006). A populational perspective of the Mn-hyperaccumulative trait in the eastern Australian tree, *Gossia bidwillii* (Myrtaceae). Fifth International Conference on Serpentine Ecology, Siena, Italy, May 2006.

9. +Jones, A., Collins, R.N., Waite, T.D. and Melville, M.D. (2006). Transformation and transport of aluminium species generated in acid sulfate soils environments. Australian Society of Soil Science Inc and the Australasian Soil and Plant Analysis Council Inc Conference, Adelaide, Australia, December 2006.
10. Khan, S. J. (2006). A new environmental toxicology paradigm for Australian water management. In: Challenges in Environmental Toxicology in Australasia Australian Centre for Human Health Risk Assessment (ACHHRA), Melbourne, VIC, Australia.
11. Khan, S. J., Murphy, K. and Jones, A. (2006). Fluorescence identification of anthropogenic substances in recycled water. In: Water Fluorescence: Novel Techniques, New Applications NERC Knowledge Transfer network 'Fluorescence for the Water Sciences' and British Hydrological Society.
12. Lai, E., Lundie, S., Ashbolt, J.N. (2006). Assessing inter-relationships and decision support systems for integrated urban water sustainability assessment. Proceedings of IWA's 1st Young Water Professional Conference, UNSW, Sydney, 15-17th Feb.
13. Le-Clech, P., Chen, V. and Fane, A. (2006). Fouling in submerged membrane bioreactors for wastewater treatment - Current trends and future directions. Proc. ENVIRO 06, May 2006, Melbourne, Australia.
14. Metzger, U., Le-Clech, P., Stuetz, R. and Chen, V. (2006). Membrane Bioreactor Cleaning and its Effects on Polymeric Fouling. Eurombra workshop, Bio-fouling in membrane systems, Trondheim, Norway
15. Seelsaen N., McLaughlan R., Stuetz R. M. and Moore, S. (2006). Copper Flow Analysis in Urban Stormwater Runoff Case Study: The Upper Parramatta River Catchment, Sydney, Australia. In: Towards the City Surface of Tomorrow, Vienna. 6pp.

Technical Reports

1. Collins, R. and +Jones, A. (2006). Report on field measurements: Black's Drain, Tweed River, October 2006. *Report 2006/19, Centre for Water and Waste Technology, The University of New South Wales, Sydney, NSW 2052, Australia. pp. 9.*
2. Collins R., +Jones, A., +Hue, L.T.M., +Nejem, J. and Waite, T.D.W. (2006). Report on field measurements: Black's Drain, Tweed River, December 2005. Report 2006/18, Centre for Water and Waste Technology, The University of New South Wales, Sydney, NSW 2052, Australia. pp. 11.
3. Collins R., +Jones, A., +Hue, L.T.M., Melville, M. and Waite, T.D.W. (2006). 2nd interim project report to the Tweed Shire Council for the ARC Linkage Project LP0455697. Report 2006/17, Centre for Water and Waste Technology, The University of New South Wales, Sydney, NSW 2052, Australia. pp. 11.
4. Collins R., +Jones, A., +Hue, L.T.M., *Hancock M., Melville, M. and Waite, T.D.W. (2006). 1st interim project report to the Tweed Shire Council for the ARC Linkage Project LP0455697. Report 2006/16, Centre for Water and Waste Technology, The University of New South Wales, Sydney, NSW 2052, Australia. pp.10.
5. Collins R., +Jones, A., *Hancock M., Melville, M. and Waite, T.D.W. (2006). Examination of chemical processes involved in 'black water' formation in coastal environments. Report

- 2006/8, Centre for Water and Waste Technology, The University of New South Wales, Sydney, NSW 2052, Australia. pp. 9.
6. Feitz, A., Guan, J. and Waite, T.D. (2006). CWA Simulant Decontamination Using ZVI – Report on Stage 2 Activities. CWWT Report, 2006/13, CWWT School of Civil and Environmental Engineering, UNSW, Sydney.
 7. Guan, J. and Chattopadhyay, G. (2006). Method Development For Determination Of Unreacted Residual Monomer In Finished Polyer Coated Flat Products. CWWT Technical Report, January 2006, CWWT School of Civil and Environmental Engineering, UNSW, Sydney.
 8. Guan, J., Wang, XG., Feitz, A. and Stuetz, R. (2006). Ozonation Assessment for Odour Destruction in Bayer Refinery Digestion Condensate (Stage 2) - Determination of Effectiveness of Ozonation for Removal Odorants in Alumina Refinery Condensate. CWWT Report, 2006/10, CWWT School of Civil and Environmental Engineering, UNSW, Sydney.
 9. Guan, J., Wang, XG., Feitz, A. and Stuetz, R. (2006). Greensand/ozonation for odour removal from Wagerup digestion condensate (Stage 2). CWWT Report, 2006/11, CWWT School of Civil and Environmental Engineering, UNSW, Sydney.
 10. Khan, S. J., Waite, T. D., Leslie, G. and Cox, R. (2006). Management of Concentrate Waste Streams from Desalination and Water Recycling Membrane Treatment Systems, Report CWWT2006/3, Centre for Water & Waste Technology, UNSW, Sydney.
 11. Medema, G., Loret, J.-C., Stenström, T. A., and Ashbolt, N. (eds) (2006). Quantitative Microbial Risk Assessment in the Water Safety Plan. Final Report on the EU MicroRisk Project. European Commission, Brussels.
 12. Peters G., Ashbolt N.J., Davies C., Khan S., Roser D., (2006). 'Review of Contaminants in Feedlot Wastes', CWWT report no 2006/23, 21 August 2006.
 13. Peters, G., Lundie, S. and Rowley, H. (2006). 'Environmental Life Cycle Assessment of Biosolids Applications: Milestone 1 Report - System Definition and Literature Review', CWWT report no 2006/22, 2 August 2006.
 14. Peters, G. and Rowley, H. (2006). 'Life cycle analysis of the Australian red meat industry - Milestone 2', report for Meat and Livestock Australia, project code COMP.094, CWWT report no 2006/5, 14 March 2006.
 15. Peters, G. and Rowley, H. (2006). 'Life cycle analysis of the Australian red meat industry - Milestone 3', report for Meat and Livestock Australia, project code COMP.094, CWWT report no 2006/15, 30 August 2006.
 16. Peters, G. and Rowley, H. (2006). 'Life Cycle Assessment for Christies Beach WWTP Upgrade: Draft Report', CWWT report number 2006/21, 17 November 2006.
 17. Roser, D., Khan, S., Davies, C., Signor, R., Petterson, S. and Ashbolt, N. (2006). Screening Health Risk Assessment for the Use of Microfiltration-Reverse Osmosis Treated Tertiary Effluent for Replacement of Environmental Flows, Centre for Water & Waste Technology, Sydney, pp. 253.
 18. Wiedemann, S.G.*, Tucker, R.W.*, Rowley, H.V. & Peters, G.M. (2006). 'Natural Resource Management Issues', research paper for Meat and Livestock Australia, project code COMP.094, 18 August 2006.