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## **Water recycling in Australia – during and after the drought**

John C. Radcliffe

Australia responded to drought with water reform and the use of alternative water sources to ensure security of water supply, but at a cost.

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## **International research agency perspectives on potable water reuse**

Jo Burgess,\* Melissa Meeker, Julie Minton  
and Mark O'Donohue

This paper summarises the technical, social and political issues regarding direct potable reuse in the USA, Australia, and South Africa.

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## **The osmotic membrane bioreactor: a critical review**

Ryan W. Holloway, Andrea Achilli and Tzahi Y. Cath\*

The osmotic membrane bioreactor (OMBR) is a hybrid biological-physical treatment process for wastewater treatment and water reuse.

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## **Bioanalytical tools: half a century of application for potable reuse**

Frederic D. L. Leusch\* and Shane A. Snyder

*In vitro* bioassays are often thought as novel tools by water stakeholders. They have, however, been used for over half a century in assessment of recycled water quality.

**Closing the urban water loop: lessons from Singapore and Windhoek**

M. Lafforgue\* and V. Lenouvel

More and more cities are dealing with the concurrent trends of water scarcity and growth in water demand. This paper presents the operational solutions developed by Singapore and Windhoek to address this problem.

**Rapid direct injection LC-MS/MS method for analysis of prioritized indicator compounds in wastewater effluent**

Tarun Anumol, Shimin Wu, Mauricius Marques dos Santos, Kevin D. Daniels and Shane A. Snyder\*

Trace organic compounds (TOrcs) have been detected in drinking water sources for several years, raising concerns due to their potential risks to public health.

**Triple bottom line costs for multiple potable reuse treatment schemes**

L. J. Schimmoller,\* M. J. Kealy and S. K. Foster

Select appropriate potable reuse treatment technologies to meet the need while minimizing the sum of financial, environmental and social costs.

**Target screening of chemicals of concern in recycled water**

F. Buseti,\* M. Ruff and K. L. Linge

The results of a characterisation study of water samples collected from an Advanced Water Recycling Plant (AWRP) operating in Perth, Western Australia are presented.

**Effects of molecular ozone and hydroxyl radical on formation of *N*-nitrosamines and perfluoroalkyl acids during ozonation of treated wastewaters**

Aleksey N. Pisarenko,\* Erica J. Marti, Daniel Gerrity, Julie R. Peller and Eric R. V. Dickenson\*

This study performed experiments to isolate the effects of molecular ozone and hydroxyl radical to gain better understanding of the formation of nitrosamines and PFAAs during ozonation.

**Human health risk associated with direct potable reuse – evaluation through quantitative relative risk assessment case studies**

J. A. Soller,\* M. H. Nellor, C. J. Cruz and E. McDonald

Two hypothetical quantitative relative risk assessment (QRRRA) case study evaluations illustrate how QRRRA can inform risk management decisions for direct potable reuse.

**Online fluorescence monitoring of RO fouling and integrity: analysis of two contrasting recycled water schemes**

Sachin Singh, Rita K. Henderson, Andy Baker, Richard M. Stuetz and Stuart J. Khan\*

Underperformance in RO membranes were detected using fluorescence spectroscopy.

**Modeling approaches to predict removal of trace organic compounds by ozone oxidation in potable reuse applications**

Minkyu Park, Tarun Anumol and Shane A. Snyder\*

Realized and potential threats of water scarcity due in part to global climate change have increased the interest in potable reuse of municipal wastewater.

**Applying the water safety plan to water reuse:  
towards a conceptual risk management framework**

D. Goodwin, M. Raffin, P. Jeffrey and H. M. Smith\*

The Water Safety Plan (WSP) is receiving increasing attention as a recommended risk management approach for water reuse through a range of research programmes, guidelines and standards.