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Guide for using green infrastructure in urban environments for stormwater management

Andrea R. McFarland, Larissa Larsen,*
Kumelachew Yeshitela, Agizew Nigussie Engida
and Nancy G. Love

Green infrastructure systems can be selected methodically considering watershed parameters, then the existing urban water network, and surrounding land uses.

PAPERS

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Capacitive deionization using symmetric carbon electrode pairs

X. Gao,* A. Omosibi, Z. Ma, F. Zhu, J. Landon,*
M. Ghorbanian, N. Kern and K. Liu*

Scenarios (a)–(c) are created to study the effect of the chemical surface charge of carbon electrodes on capacitive deionization using symmetric carbon electrode pairs.

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Tertiary treatment of secondary effluent using ultrafiltration for wastewater reuse: correlating membrane fouling with rejection of effluent organic matter and hydrophobic pharmaceuticals

Fangshu Qu, Hao Wang, Junguo He,* Gongduan Fan,
Zhihui Pan, Jiayu Tian, Hongwei Rong, Guibai Li
and Huarong Yu*

Permeability loss and the low retention efficiency of soluble organics significantly restrict the application of ultrafiltration (UF) for water reclamation.

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Air bubbling for membrane fouling control in a submerged direct forward osmosis system for municipal wastewater treatment

Yan Sun, Shanshan Gao, Jiayu Tian,* Xiujuan Hao,
Zhiquan Liu,* Wenxin Shi and Fuyi Cui

Air bubbling along the membrane improves water flux, alleviates the deposition of foulants and inhibits the formation of a fouling layer.

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Effectiveness of a copper based molluscicide for controlling *Dreissena* adults

Ian Lake-Thompson* and Ron Hofmann

Pilot scale experiments were conducted to test the copper-based EarthTec QZ molluscicide for killing adult quagga mussels.

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Opportunities for rotating belt filters in novel wastewater treatment plant configurations

Anton Taboada-Santos,* Juan M. Lema and Marta Carballa

The combination of rotating belt filters and chemically enhanced settling allowed the production of suitable effluents for further stages and to generate enough methane to reach energy autarky.

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***N*-Nitrosodimethylamine (NDMA) formation and mitigation in potable reuse treatment trains employing ozone and biofiltration**

Fernanda Bacaro, Eric Dickenson, Rebecca A. Trenholm and Daniel Gerrity*

This paper evaluates how changes in operational conditions affect NDMA formation and biodegradation in ozone-biofiltration systems, including aspects of microbial community structure and function.

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Comparing industrial and domestic discharges as sources of *N*-nitrosamines and their chloramine or ozone-reactive precursors

Yi-Hsueh Chuang, Farzaneh Shabani, Joline Munoz, Roshanak Aflaki, Slavica D. Hammond and William A. Mitch*

Analyses of domestic, commercial and industrial sewage discharges apportioned loadings of *N*-nitrosodimethylamine, its precursors and *N*-nitrosomorpholine.

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ISE-ammonium sensors in WRRFs: field assessment of their influencing factors

Francesca Cecconi, Samuel Reifsnyder, Yuichi Ito, Margil Jimenez, Reza Sobhani and Diego Rosso*

Real-time quantification of the ammonium content in water resource recovery facilities (WRRFs) has received attention in recent years for both monitoring and process control.

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Identification of the causes of drinking water discolouration from machine learning analysis of historical datasets

Vanessa L. Speight,* Stephen R. Mounce and Joseph B. Boxall

Understanding the processes and interactions occurring within complex, ageing drinking water distribution systems is vital to ensuring the supply of safe drinking water.

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Effects of substrate shock on release of AHL signals in ANAMMOX granules and properties of granules

Jing Zhang, Ya-chao Zhang, Xiu-jie Wang, Jun Li,* Rong-xuan Zhou, Jia Wei, Dong-bo Liang and Kai Zhang

This study investigated the effects of substrate shock on the release of *N*-acyl-homoserine lactones (AHLs) in ANAMMOX granules and the relationship between AHL release, extracellular polymeric substance (EPS) excretion and the properties of granules.

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Mesoporous TiO₂-BiOBr microspheres with tailorable adsorption capacities for photodegradation of organic water pollutants: probing adsorption-photocatalysis synergy by combining experiments and kinetic modeling

Wei Deng, Fuping Pan, Bill Batchelor, Bahngmi Jung, Peng Zhang, Ahmed Abdel-Wahab, Hongcai Zhou and Ying Li*

Understanding adsorption-photocatalysis synergy advances solar-driven photodegradation of organic water pollutants.

Quantifying the temperature dependence of nitrate reduction in woodchip bioreactors: experimental and modeled results with applied case-study

Brian J. Halaburka, Gregory H. LeFevre*
and Richard G. Luthy*

The temperature dependence of denitrification in woodchip bioreactors was quantified using experimental and modeled results to enhance predictive power and applied to a case study.

Modelling carbofuran biotransformation by *Novosphingobium* sp. KN65.2 in the presence of coincidental carbon and indigenous microbes

Li Liu, Damian E. Helbling,* Hans-Peter E. Kohler
and Barth F. Smets*

Interference of coincidental carbon and indigenous bacteria on pesticide removal by biodegrading strains differs in low versus high AOC waters.