

## **Recent publications that cite Wastewater Treatment, as per May 1<sup>st</sup>**

### **[Advantages and disadvantages of techniques used for wastewater treatment](#)**

G Crini, [E Lichtfouse](#) - Environmental Chemistry Letters, 2019 - Springer

During the last 30 years, environmental issues about the chemical and biological contaminations of water have become a major concern for society, public authorities and the industry. Most domestic and industrial activities produce wastewaters containing ...

### **[Plant-wide model-based analysis of iron dosage strategies for chemical phosphorus removal in wastewater treatment systems](#)**

[CK Mbamba](#), E Lindblom, [X Flores-Alsina](#), S Tait... - Water research, 2019 - Elsevier

Stringent phosphorus discharge standards (ie 0.15–0.3 g Pm<sup>-3</sup>) in the Baltic area will compel wastewater treatment practice to augment enhanced biological phosphorus removal (EBPR) with chemical precipitation using metal salts. This study examines control of iron ...

### **[Determining stoichiometry and kinetics of two thermophilic nitrifying communities as a crucial step in the development of thermophilic nitrogen removal](#)**

TGL Vandekerckhove, [FM Kerckhof](#), C De Mulder... - Water research, 2019 - Elsevier

Nitrification and denitrification, the key biological processes for thermophilic nitrogen removal, have separately been established in bioreactors at 50° C. A well-characterized set of kinetic parameters is essential to integrate these processes while safeguarding the ...

### **[Fate of veterinary antibiotics during animal manure composting](#)**

M Zhang, LY He, YS Liu, JL Zhao, WR Liu... - Science of the Total ..., 2019 - Elsevier

Antibiotics are widely used in animals for disease treatment and prevention. After use, these antibiotics end up in manure. Here we investigated the fate of veterinary antibiotics in animal manure during composting and their residues in manure-applied soils. The results showed ...

### **[The importance of sewage effluent discharge in the export of dissolved organic carbon from United Kingdom rivers](#)**

[F Worrall](#), [NJK Howden](#), [TP Burt](#)... - Hydrological ..., 2019 - Wiley Online Library

The flux of fluvial carbon from the terrestrial biosphere to the world's oceans is known to be an important component of the global carbon cycle but within this pathway the flux and return of carbon to the river network via sewage effluent has not been quantified. In this ...

### **[Micro-TiO<sub>2</sub> coated glass surfaces safely abate drugs in surface water](#)**

G Cerrato, [CL Bianchi](#), [F Galli](#), [C Pirola](#)... - Journal of hazardous ..., 2019 - Elsevier

The ingredients of Pharmaceuticals and Personal Care Products (PPCPs) persist in water and conventional treatment plants are not able to remove them efficiently. Sonochemical treatment is insufficient to mineralize organics such as ibuprofen into CO<sub>2</sub> and H<sub>2</sub>O. TiO<sub>2</sub> ...

### **[13C incorporation as a tool to estimate biomass yields in thermophilic and mesophilic nitrifying communities](#)**

TGL Vandekerckhove, S Bodé, C De Mulder... - Frontiers in ..., 2019 - ncbi.nlm.nih.gov

Current methods determining biomass yield require sophisticated sensors for in situ measurements or multiple steady-state reactor runs. Determining the yield of specific groups of organisms in mixed cultures in a fast and easy manner remains challenging. This study ...

### **Potential methane production and molecular characterization of bacterial and archaeal communities in a horizontal subsurface flow constructed wetland under cold ...**

[D López](#), M Sepúlveda-Mardones, N Ruiz-Tagle... - Science of the total ..., 2019 - Elsevier  
Organic matter removal in a horizontal subsurface flow constructed wetland (HSSF) treating wastewater is associated with the presence of bacteria and archaea. These organisms perform anaerobic microbial processes such as methanogenesis, which can lead to ...

### **Salinity affects nitrate removal and microbial composition of denitrifying woodchip bioreactors treating recirculating aquaculture system effluents**

M von Ahnen, [SL Aalto](#), S Suurnäkki, [M Tiirola](#)... - Aquaculture, 2019 - Elsevier  
This study investigated the effect of salinity on microbial composition and denitrification capacity of woodchip bioreactors treating recirculating aquaculture system (RAS) effluents. Twelve laboratory-scale woodchip bioreactors were run in triplicates at 0, 15, 25, and 35 ppt ...

### **Ca (II) and Mg (II) significantly enhanced the nitrogen removal capacity of Arthrobacter arilaitensis relative to Zn (II) and Ni (II)**

T He, D Xie, J Ni, Z Li - Journal of hazardous materials, 2019 - Elsevier  
This study investigated the impacts of alkaline-earth metals [Ca (II), Mg (II)] and heavy metals [Zn (II), Ni (II)] on the nitrogen removal capacity of *Arthrobacter arilaitensis* Y-10. Strain Y-10 was able to tolerate 20 mg/L Ca (II) and its ammonium removal efficiency was 100%. 0.5 ...

### **Determination of the intrinsic kinetic parameters of ammonia-oxidizing and nitrite-oxidizing bacteria in granular and flocculent sludge**

[AV del Rio](#), [JL Campos](#), C Da Silva, A Pedrouso... - Separation and ..., 2019 - Elsevier  
The different oxygen affinities of ammonia-oxidizing (AOB) and nitrite-oxidizing bacteria (NOB) are often used to define the operational strategy to achieve partial nitrification (PN) required before the anammox (AMX) process. For this purpose, apparent kinetic parameters ...

### **Separation of perchlorates from aqueous solution using functionalized graphene oxide nanosheets: a computational study**

P Ansari, [J Azamat](#), [A Khataee](#) - Journal of Materials Science, 2019 - Springer  
In this research, separation of perchlorate ion from aqueous solutions is investigated using functionalized graphene oxide nanosheet (GONS) membrane. Due to the ultrathin thickness of GONS, it was expected to have good water permeability of this membrane. At the same ...

### **Effects of abrupt salinity increase on nitrification processes in a freshwater moving bed biofilter**

JPH Kinyage, PB Pedersen, LF Pedersen - Aquacultural Engineering, 2019 - Elsevier  
The nitrification process is a widely used biological approach responsible for ammonia and nitrite removal in recirculating aquaculture system (RAS) biofilters. Given this pivotal role, the influence of different water quality parameter on nitrification efficiency is important ...

### **Removal of emerging contaminants from wastewater using reverse osmosis for its subsequent reuse: Pilot plant**

AEC Lopera, SG Ruiz, JMQ Alonso - Journal of Water Process Engineering, 2019 - Elsevier  
The presence in natural watercourses of different types of emerging contaminants (including stimulants and antibiotics) from different sources constitutes a serious environmental issue. The problem is aggravated in regions where water is scarce and its reuse should form part ...

### **Influence of Pre-Hydrolysis on Sewage Treatment in an Up-Flow Anaerobic Sludge BLANKET (UASB) Reactor: A Review**

R Rajagopal, MR Choudhury, N Anwar, B Goyette... - Water, 2019 - mdpi.com  
The up-flow anaerobic sludge blanket (UASB) process has emerged as a promising high-rate anaerobic digestion technology for the treatment of low-to high-strength soluble and complex wastewaters. Sewage, a complex wastewater, contains 30–70% particulate ...

### **Coupling Syntrophic Acetate Oxidation and Anaerobic Ammonium Oxidation When Treating Nitrogen-Rich Organic Wastes for Energy Recovery and Nitrogen ...**

A Magrí, B Fernández, FX Prenafeta-Boldú... - Improving Biogas ..., 2019 - Springer  
There is high interest in applying anaerobic digestion to organic wastes for the recovery of biogas as a renewable energy source. In the case of protein-rich residues, the performance of anaerobic digesters might be affected by the accumulation of ammonia and volatile fatty ...