



Experimental and Numerical Investigation of the Hydrodynamics of Microfiltration Processes Using a Multi-Scale Approach

By Steffen Bütehorn

Shaker Verlag Mai 2011, 2011. Buch. Book Condition: Neu. Neuware - Submerged membrane bioreactor (MBR) processes for treating municipal or industrial wastewater are one of the most promising applications of microfiltration membranes. Previous studies were spread over various fields of research including water science, microbiology, chemical engineering, material science and process control. All of the above research societies contributed comprehensively to a further improvement of the technology. Nevertheless, it is known that higher operational expenses compared to conventional water treatment strategies weaken the competitiveness of MBRs. More precisely, recent energy efficiency analyses identified the coarse bubble aeration of the membrane unit to consume the biggest proportion of the overall energy input. Therefore, hydrodynamic conditions in submerged microfiltration processes were investigated experimentally and numerically on three different scales in the framework of this study. The overall objective was to evaluate the impact of operating parameters, feed characteristics and module design features on the efficiency of air bubbling to control cake layer formation. On a micro-scale, local phenomena such as permeate flow, particle deposition and cake removal were non-invasively visualised with nuclear magnetic resonance (NMR) imaging. Complementary filtration experiments were conducted by applying a number of test facilities equipped

Reviews

If you need to adding benefit, a must buy book. This really is for all who statte that there had not been a well worth reading. It is extremely difficult to leave it before concluding, once you begin to read the book.

-- Claud Bernhard

It is an remarkable pdf which i have ever go through. Of course, it can be play, nonetheless an interesting and amazing literature. I realized this pdf from my dad and i suggested this book to discover.

-- Dr. Gerda Bergnaum

Other PDFs



Programming in D

Ali Cehreli Dez 2015, 2015. Buch. Book Condition: Neu. 264x182x53 mm. This item is printed on demand - Print on Demand Neuware - The main aim of this book is to teach D to readers who are new to computer programming. Although...



Edge] the collection stacks of children's literature: Chunhyang Qiuyun 1.2 --- Children's Literature 2004(Chinese Edition)

paperback. Book Condition: New. Ship out in 2 business day, And Fast shipping, Free Tracking number will be provided after the shipment. Paperback. Pub Date: 2005 Pages: 815 Publisher: the Chinese teenager Shop Books all book. the genuine special part of the spot...



Index to the Classified Subject Catalogue of the Buffalo Library; The Whole System Being Adopted from the Classification and Subject Index of Mr. Melvil Dewey, with Some Modifications.

Rarebooksclub.com, United States, 2013. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book ***** Print on Demand *****. This historic book may have numerous typos and missing text. Purchasers can usually download a free scanned copy of the...



The Frog Tells Her Side of the Story: Hey God, I m Having an Awful Vacation in Egypt Thanks to Moses! (Hardback)

Broadman Holman Publishers, United States, 2013. Hardback. Book Condition: New. Cory Jones (illustrator). 231 x 178 mm. Language: English. Brand New Book. Oh sure, we ll all heard the story of Moses and the ten plagues of Egypt a hundred times....



TJ new concept of the Preschool Quality Education Engineering: new happy learning young children (3-5 years old) daily learning book Intermediate (2) (Chinese Edition)

paperback. Book Condition: New. Ship out in 2 business day, And Fast shipping, Free Tracking number will be provided after the shipment. Paperback. Pub Date :2005-09-01 Publisher: Chinese children before making Reading: All books are the Youth Pre-employment Training software download generated pictures...



TJ new concept of the Preschool Quality Education Engineering the daily learning book of: new happy learning young children (3-5 years) Intermediate (3)(Chinese Edition)

paperback. Book Condition: New. Ship out in 2 business day, And Fast shipping, Free Tracking number will be provided after the shipment. Paperback. Pub Date :2005-09-01 Publisher: Chinese children before making Reading: All books are the Youth Pre-employment Training software download generated pictures...