TECHNICAL PAPERS
1 Influence of Sorption Intensity on Solute Mobility in a Fractured Formation / G. Suresh Kumar
8 Comparison of Stratified Sand Filters and Percolation Trenches for On-Site Wastewater Treatment / Laurence W. Gill, Cormac O'Sulleabhain, Bruce D. R. Misstear, Paul M. Johnston
17 GA-QP Model to Optimize Sewer System Design / Tze-Chin Pan, Jehng-Jung Kao
25 Including Source-Specific Phosphorus Mobility in a Nonpoint Source Pollution Model for Agricultural Watersheds / Zachary M. Easton, M. Todd Walter, Elliot M. Schneiderman, Mark S. Zion, Tammo S. Steenhuis
36 Transport of Colloids and Associated Hydrophobic Organic Chemicals through a Natural Media Filter / Aiman Q. Jaradat, K. Fowler, Stefan J. Grimberg, Thomas M. Holsen
46 Urban Battery Litter / Aaron A. Jennings, Sara Hise, Bryant Kiedrowski, and Caleb Krouse
58 Sorption Behavior and Mechanism of Pb(II) on Chinese Loess / Zhenze Li, Xiaowu Tang, Yunmin Chen, Van Wang
TECHNICAL PAPERS
69 Sorptive and Reactive Scavenger-Containing Sandwich Membranes as Contaminant Barriers / Erin M. Surdo, E. L. Cussler, William A. Arnold
77 CFD Modeling of Participate Matter Fate and Pressure Drop in a Storm-Water Radial Filter / Subbu-Srikanth Pathapati, John J. Sansalone
86 Municipal Wastewater Treatment Using a UASB Coupled with Cross-Flow Membrane Filtration / YingYu An, FengLin Yang, Benjamin Bucciali, FookSin Wong
92 Modeling Nonpoint Source Pollutant Losses from a Small Watershed Using HSPF Model / Ashok Mishra, S. Kar, N. S. Raghuwanshi

TECHNICAL NOTES
105 Energy Concept for Predicting Hydraulic Jump Aeration Efficiency / S. Kucukali, S. Cokgor
TECHNICAL PAPERS


118 Sampling Issues in Urban Runoff Monitoring Programs: Composite versus Grab / Jiun-Shiu Ma, Joo-Hyon Kang, Masoud Kayhanian, Michael K. Stenstrom

128 Seasonal Performance Variations for Storm-Water Management Systems in Cold Climate Conditions / Robert M. Roseen, Thomas P. Ballestero, James J. Houle, Pedro Avellaneda, Joshua Briggs, George Fowler, Robert Wildey

138 Influence of High-Permeability Layers for Enhancing Landfill Gas Capture and Reducing Fugitive Methane Emissions from Landfills / Yoojin Jung, Paul T. Imhoff, Don C. Augenstein, Ramin Yazdani

147 Temporal and Spatial Variations in Bulk Chlorine Decay within a Water Supply System Benjamin / J. Courtis, John R. West, John Bridgeman

153 Simultaneous Nitrogen and Phosphorus Removal from High-Strength Industrial Wastewater Using Aerobic Granular Sludge / N. Kishida, S. Tsuneda, J. H. Kim, R. Sudo

159 Treatment of Aluminum Plant Hazardous Wastes Containing Fluorides and PAH / Ghislain Bongo, Guy Mercier, Myriam Chartier, Aurelie Dhenain, Jean-Francois Blais


176 Evaluation of Preaeration with V-Notch Weir and Cascade Structures in Clarifiers / Tamer Bagatur

185 Image Analyses-Based Nondisruptive Method to Quantify Algal Growth on Concrete Surfaces / A. Alum, B. Mobasher, A. Rashid, M. Abbaszadegan
TECHNICAL PAPERS
191 CFD Modeling of a Storm-Water Hydrodynamic Separator Subbu-Shkanth Pathapati, John J. Sansalone
203 Bacteria Load Estimator Spreadsheet Tool for Modeling Spatial Escherichia coli Loads to an Urban Bayou / Christina M. Petersen, Hanadi S. Rifai, Ronald Stein
218 Cost-Effective Approach for Continuous Major Ion and Nutrient Concentration Estimation in a River / M. Iwanyshyn, M. C. Ryan, A. Chu
225 Georadiological Barrier Gamma Attenuation Model for Waste Containment. I: Model Formulation / Hilary I. Inyang, Paul R. Wachsmuth, Gustavo B. Menezes
234 Georadiological Barrier Gamma Attenuation Model for Waste Containment. II: Model Implementation / Hilary I. Inyang, Paul R. Wachsmuth, Gustavo B. Menezes
250 Removal of Copper Ions from Waters Using Surfactant-Enhanced Hybrid PAC/MF Process / Canan Akmil Basar, Coskun Aydiner, Serdar Kara, Bulent Keskinler
266 Effect of Increasing Nitrobenzene Loading Rates on the Performance of AMBR and Sequential AMBR/CSTR Reactor System / Ozlem Selguk Kuscu, Delia Teresa Sponza
279 Kinetics of Pentachlorophenol Degradation in Soil Using Heme and Peroxide / Shyi-Tien Chen, David K. Stevens, Guyoung Kang, Jia-Chin Hsu, Shuo-Jye Wu
**TECHNICAL PAPERS**


291 Segregation of the PAH-Contaminated Fraction of Hydraulically Dredged Sediment / **Xiuhong Zhao, Laura Drumm, Ke Yin, Karl J. Rockne**

299 Comparison of Enzyme Activities in Vegetated and Nonvegetated Sediments / **Jung Hyun Choi, Hojeong Kang, Seok Soon Park**

306 Effect of Mixing on Suspended Particle-Size Distribution / **Rajat Kanti Chakraborti, Joseph F. Atkinson, Jagjit Kaur**


325 Dosage Control of the Fenton Process for Color Removal of Textile Wastewater Applying ORP Monitoring and Artificial Neural Networks / **Ruey-Fang Yu, Ho-Wen Chen, Wen-Po Cheng, Peng-Han Hsieh**

333 Capacity of Activated Carbon Derived from Peach Stones by K$_2$CO$_3$ in the Removal of Acid, Reactive, and Direct Dyes from Aqueous Solution / **Ozgul Gercel, Adnan Ozcan, A. Safa Ozcan, H. Ferdi Gercel**

341 Removal of Zn$^{2+}$ from Electroplating Wastewater Using Modified Wood Sawdust and Sugarcane Bagasse / **Flaviane V. Pereira, Leandro V. A. Gurgel, Sergio F. de Aquino, Laurent F. Gil**

351 Comparative Study between a Hybrid System and a Biofilm System for the Treatment of Ammonia and Organic Matter in Wastewaters / **Vinka Oyanedel-Craver, Valentina Lazarova, Juan M. Garrido, Ramon Mendez**

359 Retrofitting of an Industrial Chemical Scrubber into a Biotrickling Filter: Performance at a Gas Contact Time below 1 s / **Oscar Jesus Prado, Rosa Maria Redondo, Javier Lafuente, David Gabriel**

**TECHNICAL NOTES**

367 Storm-Water Filter Media Pollutant Retention under Aerobic versus Anaerobic Conditions / **Shirley Clark, Robert Pitt**

nr 6

SPECIAL ISSUE: RECENT DEVELOPMENTS IN CO₂ EMISSION CONTROL TECHNOLOGY / EDITORS: MAOHONG FAN, RADISAV VIDIC

INTRODUCTION
377 Recent Developments in CO₂ Emission Control Technology / Maohong Fan, Radisav D. Vidic, Dionysios (Dion) D. Dionysiou, Raymond A. Ferrara

TECHNICAL PAPERS
378 Liquid-Impregnated Clay Solid Sorbents for CO₂ Removal from Postcombustion Gas Streams / Ranjani Siriwardane, Clark Robinson
386 Flue Gas Carbon Dioxide Sequestration during Water Softening with Ion-Exchange Fibers / John E. Greenleaf, Arup K. SenGupta
397 Effects of Steam Addition on the Properties of High Temperature Ceramic CO₂ Acceptors / Esther Ochoa-Fernandez, Tiejun Zhao, Magnus Ronning, De Chen
404 Sintering and Reactivity of CaCO₃-Based Sorbents for In Situ CO₂ Capture in Fluidized Beds under Realistic Calcination Conditions / Dennis Y. Lu, Robin W. Hughes, Edward J. Anthony, Vasilije Manovic
411 Two-Stage Clathrate Hydrate/Membrane Process for Precombustion Capture of Carbon Dioxide and Hydrogen / Rajnish Kumar, Praveen Linga, John A. Ripmeester, Peter Englezos
418 CO₂ Capture from Flue Gases Using Three Ca-Based Sorbents in a Fluidized Bed Reactor / Zhen-shan Li, Fan Fang, Ning-sheng Cai
426 Different Approaches for the Development of Low-Cost CO₂ Adsorbents / M. G. Plaza, C. Pevida, B. Arias, M. D. Casal, C. F. Martin, J. Fermoso, F. Rubiera, J. J. Pis
433 Mechanisms of Neutralization of Bauxite Residue by Carbon Dioxide / Sameer Khaitan, David A. Dzombak, Gregory V. Lowry
439 Carbon and Nitrogen Isotopic Measurements from Southern Appalachian Soils: Assessing Soil Carbon Sequestration under Climate and Land-Use Variation / J. Elliott Campbell, James F. Fox, Charles M. Davis, Harold D. Rowe, Nathan Thompson
449 Flexible Operation of Coal Fired Power Plants with Postcombustion Capture of Carbon Dioxide / Hannah Chalmers, Mathieu Lucquiaud, Jon Gibbins, Matt Leach
459 Modification of CaO by Organic Alumina Precursor for Enhancing Cyclic Capture of CO₂ Greenhouse Gas / Yi-Tsen Chen, Mani Karthik, Hsunling Bai
465 Potential for Carbon Dioxide Absorption in Concrete / Liv Haselbach
473 Effect of Reaction Temperature on CO₂ Capture Using Potassium-Based Solid Sorbent in Bubbling Fluidized-Bed Reactor / Yongwon Seo, Sung-Ho Jo, Chong Kul Ryu, Chang-Keun Yi
TECHNICAL PAPERS

479 Storm-Water Management Using Street Sweeping / Joo-Hyon Kang, Stephanie R. Debats, Michael K. Stenstrom

490 Sediment Fingerprinting: Review of the Method and Future Improvements for Allocating Nonpoint Source Pollution / Charles M. Davis, James F. Fox

505 Effects of Road Salts on Heavy Metal Mobility in Two Eastern Washington Soils / S. S. Nelson, D. R. Yonge, M. E. Barber

511 Field Evaluation of a Proprietary Storm-Water Treatment System: Removal Efficiency and Relationships to Peak Flow, Season, and Dry Time / Ezra L. Cates, Marilyn J. Westphal, John H. Cox, Jon Calabria, Steven C. Patch

518 Comparison of Long-Term Observed Sediment Trap Efficiency with Empirical Equations for Coralville Reservoir, Iowa / Claudia O. Espinosa-Villegas, Jerald L. Schnoor

526 Resuspension of Mercury-Contaminated Sediments from an In-Lake Industrial Waste Deposit / Emmet M. Owens, Revital Bookman, Steven W. Effler, Charles T. Dhscoll, David A. Matthews, Adam J. P. Effler

535 Destruction of Trichloroethylene and Perchloroethylene DNAPLs by Catalyzed H$_2$O$_2$ Propagations / Brant A. Smith, Amy L. Teel, Richard J. Watts

544 Colloid Transport through Natural Filter Media / Aiman Q. Jaradat, Stefan J. Grimberg, Thomas M. Holsen

551 Design of Secondary Settling Tanks Using a CFD Model / Anastasios I. Stamou, Georgios Theodoridis, Konstantinos Xanthopoulos

562 Performance Evaluation of Double-Hub Paddle Wheel Aerator / Sanjib Moulick, B. C. Mai
### TECHNICAL PAPERS

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>567</td>
<td>Water Quality Improvement through Reductions of Pollutant Loads Using Bioretention</td>
<td>Houng Li, Allen P. Davis</td>
</tr>
<tr>
<td>577</td>
<td>Bioretention Impact on Runoff Temperature in Trout Sensitive Waters</td>
<td>Matthew P. Jones, William F. Hunt</td>
</tr>
<tr>
<td>586</td>
<td>Prediction of Nutrient Concentrations in Urban Storm Water</td>
<td>Daniel May, Muttucumaru Sivakumar</td>
</tr>
<tr>
<td>595</td>
<td>On Parameter Estimation of Urban Storm-Water Runoff Model</td>
<td>Pedro Avellaneda, Thomas P. Ballestero, Robert M. Roseen, James Houle</td>
</tr>
<tr>
<td>609</td>
<td>Volumetric Clarifying Filtration of Urban Source Area Rainfall Runoff</td>
<td>J. J. Sansalone, B. Liu, J.-Y. Kim</td>
</tr>
<tr>
<td>621</td>
<td>Inclined Plate Settlers to Treat Storm-Water Solids</td>
<td>Shirley E. Clark, Christopher D. Roenning, James C. Elligson, J. B. Mikula</td>
</tr>
<tr>
<td>627</td>
<td>Vortex Plate for Enhancing Particle Settling</td>
<td>Cheng He, Jiri Marsalek</td>
</tr>
<tr>
<td>636</td>
<td>Assessing the Impacts of Nutrient Load Uncertainties on Predicted Truckee River Water Quality</td>
<td>Justin Bartlett, John J. Warwick</td>
</tr>
<tr>
<td>653</td>
<td>Combined Effects of Wind and Streamflow on Gas-Liquid Transfer Rate</td>
<td>Zhiyong Duan, James L. Martin, William H. McAnally, Richard L. Stockstill</td>
</tr>
<tr>
<td>660</td>
<td>Modeling Risk of Failure in Nitrification: Simple Model Incorporating Abundance and Diversity</td>
<td>Irina Dana Ofiteru, Thomas Peter Curtis</td>
</tr>
<tr>
<td>666</td>
<td>Stimulating In Situ Hydrogenotrophic Denitrification with Membrane-Delivered Hydrogen under Passive and Pumped Groundwater Conditions</td>
<td>Brian P. Chaplin, Matthew R. Schnobrich, Mark A. Widdowson, Michael J. Semmens, Paige J. Novak</td>
</tr>
<tr>
<td>677</td>
<td>Hydraulic Conductivity of MSW in Landfills</td>
<td>Krishna R. Reddy, Hiroshan Hettiarachchi, Naveen Parakalla, Jean Bogner, Thomas Lagier</td>
</tr>
<tr>
<td>684</td>
<td>Oxygen Transfer in High-Speed Surface Aeration Tank for Wastewater Treatment: Full-Scale Test and Numerical Modeling</td>
<td>Weidong Huang, Chundu Wu, Weidong Xia</td>
</tr>
<tr>
<td>692</td>
<td>Evaluation of Bacillus Spore Survival and Surface Morphology Following Chlorine and Ultraviolet Disinfection in Water</td>
<td>Hadas Mamane, Zuzana Bohrerova, Karl G. Linden</td>
</tr>
<tr>
<td>700</td>
<td>Fluidization in an Anaerobic EGSB Reactor: Analysis of Primary Wakes and Modeling of Sludge Blanket</td>
<td>Debraj Bhattacharyya, Hengky Harmita, Kripa S. Singh, Bruce G. Wilson</td>
</tr>
<tr>
<td>708</td>
<td>Arsenite Oxidation by Batch Cultures of Thiomonas Arsenivorans Strain b6</td>
<td>Aniruddha Dastidar, Yi-Tin Wang</td>
</tr>
</tbody>
</table>

### TECHNICAL NOTES

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>716</td>
<td>Electrochemical Pretreatment of Wastewater from Bulk Drug Manufacturing Industry</td>
<td>Abhijit M. Deshpande, Shanta Satyanarayan, S. Ramakant</td>
</tr>
<tr>
<td>720</td>
<td>Choosing Pipe Diameter to Maximize Inline Storage Volume</td>
<td>Ross D. Philip</td>
</tr>
</tbody>
</table>
723 Statistical Analysis of BTEX Surface Soil Regulatory Guidance Values / Aaron A. Jennings
737 Parametric Evaluation of Batch Equilibria for Storm-Water Phosphorus Adsorption on Aluminum Oxide Media / John J. Sansalone, Jia Ma
747 Attenuation of Roadway-Derived Heavy Metals by Wood Chips / Stephanie M. Syring, Roopashree Krishnamurthy, Allison A. MacKay
758 Impact of Microbial Partitioning on Wet Retention Pond Effectiveness / Leigh-Anne H. Krometis, Patricia N. Drummey, Gregory W. Characklis, Mark D. Sobsey
768 VICAS—An Operating Protocol to Measure the Distributions of Suspended Solid Settling Velocities within Urban Drainage Samples / G. Chebbo, M.-C. Gromaire
776 CFD Modeling of Solid Separation in Three Combined Sewer Overflow Chambers / Matthieu Dufresne, Jose Vazquez, Abdelali Terfous, Abdellah Ghenaim, Jean-Bernard Poulet
788 Removal of /V-Nitrosoamines and Their Precursors by Nanofiltration and Reverse Osmosis Membranes / Yu Miyashita, Sang-Hyuck Park, Hoon Hyung, Ching-Hua Huang, Jae-Hong Kim
796 Effect of Hexavalent Chromium on Performance of Membrane Bioreactor in Wastewater Treatment / Wei Zhao, Yu-Ming Zheng, Shuai-Wen Zou, Yen Peng Ting, J. Paul Chen
815 Zinc Pollution Potential of Consumer Battery Litter / Aaron A. Jennings
824 Corrosion Deterioration in Consumer Battery Litter / Aaron A. Jennings, Bryant Kiedrowski
831 Continuous Plume Monitoring Using Wireless Sensors: Proof of Concept in Intermediate Scale Tank / Lisa Porta, Tissa H. Illangasekare, Philip Lodden, Qi Han, Anura P. Jayasumana
839 Prediction of Heavy Metals Mobility and Bioavailability in Contaminated Soil Using Sequential Extraction and Biosensors / May-Lin Almendras, Maria Carballa, Ludo Diets, Karolien Vanbroekhoven, Rolando Chamy
845 Enhanced Bioremediation of Fuel-Oil Contaminated Soils: Laboratory Feasibility Study / T. T. Tsai, C. M. Kao, Rao Y. Surampalli, H. Y. Chien
869 Solid/Liquid Separation of Pig Manure by Biological Flotation: Pilot-Scale Study / Nathalie Meunier, Myriam Chartier, Guy Mercier, Jean-Francois Blais
876 Cell Immobilized FOG-Trap System for Fat, Oil, and Grease Removal from Restaurant Wastewater / Grace M. Nisola, Eul Saeng Cho, Ho Kyong Shon, Dan Tian, Dong Jun Chun, Eun Mi Gwon, Wook Jin Chung
CASE STUDIES
885  Turbidity Model for Ashokan Reservoir, New York: Case Study / Rakesh K. Gelda, Steven W. Effler, Feng Peng, Emmet M. Owens, Donald C. Pierson

TECHNICAL NOTES
896  Solids Removal in Storm-Water Filters Modeled Using a Power Equation / Shirley E. Clark, Robert Pitt
TECHNICAL PAPERS

901 Composition of Municipal Solid Waste in the United States and Implications for Carbon Sequestration and Methane Yield / Bryan F. Staley, Morton A. Barlaz

910 Comparison of Metals Leaching from CCA- and ACQ-Treated Wood in Simulated Construction and Demolition Debris Landfills / Brajesh Dubey, Erik Spalvins, Timothy G. Townsend, Helena M. Solo-Gabriele

918 Modeling Residual Chlorine Response to a Microbial Contamination Event in Drinking Water Distribution Systems / Damian E. Helbling, Jeanne M. VanBriesen

928 Impact of Booster Chlorination on Chlorine Decay and THM Production: Simulated Analysis / Brian Carrico, Philip C. Singer

936 Enhancement of Ultraviolet Disinfection of Wastewater by High Pressure Water Jet Pretreatment: Preliminary Results and a New Approach / Cheng He

944 Water Treatment Units Residence-Time Distributions as Probabilistic Functions / Velitchko G. Tzatchkov, Steven G. Buchberger, Alejandro Martin-Dominguez

953 Experimental and Field Studies of Type I Settling for Particulate Matter Transported by Urban Runoff / John Sansalone, Hong Lin, G. Ying

964 Impact of Traffic Load Cycles on Urban Battery Litter / Aaron A. Jennings, Caleb Krouse, Ryan F. Troy

972 High Rates of Ammonia Removal in Experimental Oxygen-Activated Nitrification Wetland Mesocosms / Huckleberry Palmer, Marc Beutel, Seyoum Gebremariam

980 Conceptual Model for the Safe Withdrawal of Freshwater from Coastal Aquifers / A. Mahesha

989 Sequential Electrokinetic Remediation of Mixed Contaminants in Low Permeability Soils / Krishna R. Reddy, Kranti Maturi, Claudia Cameselle

999 Enhancing Remediation of LNAPL Recovery through a Response-Surface-Based Optimization Approach / Xiaoosheng Qin, Guohe Huang, Hui Yu

1009 Feasibility of Using In Situ FeS Precipitation for TCE Degradation / Sung Pil Hyun, Kim F. Hayes

1015 Treatment of Fuel-Oil Contaminated Soils by Biodegradable Surfactant Washing Followed by Fenton-Like Oxidation / T. T. Tsai, C. M. Kao, Rao Y. Surampalli, S. H. Liang

1025 Biodegradation of Nitroaromatics and RDX by Isolated / Rhodococcus Opacus Jennifer L. Weidhaas, Daniel P.Y. Chang, Edward Schroeder

1032 Thermal Removal of Mercury in Spent Powdered Activated Carbon from TOXECON Process / George D. O. Okwadha, Jin Li, Bruce Ramme, Dave Kollakowsky, Dave Michaud

1041 Impact of Salinity on MS-2 Sorption in Saturated Sand Columns—Fate and Transport Modeling / Haibo Cao, Frank T.-C. Tsai, Kelly A. Rusch

1051 Electrolytic Oxidation of Polynuclear Aromatic Hydrocarbons from Creosote Solution Using TI/IRO₂ and TI/SNO₂ Circular Mesh Electrodes / Lan-Huong Tran, Patrick Drogu, Guy Mercier, Jean-Francois Blais

1063 Selective Precipitation of Phosphate from Semiconductor Wastewater / Warmadewanthi, J. C. Liu
SPECIAL SECTION: Engineering the Bioeconomy / EDITORS: Steven Safferman, Wei Liao, Christopher Saffron

INTRODUCTION
1085 Engineering the Bioeconomy / Steven Safferman, Wei Liao, Christopher Saffron

TECHNICAL PAPERS
1086 Logistic Constraints in Developing Dedicated Large-Scale Bioenergy Systems in the Southeastern United States / John S. Cundiff, John H. Fike, David J. Parrish, Jeffrey Alwang
1097 Life-Cycle Analysis of Energy and Greenhouse Gas Emissions from Anaerobic Biodegradation of Municipal Solid Waste / Thomas D. DiStefano, Lucas G. Belenky
1106 Influence of Selected Operating Parameters on Fungal Biomass Production in Corn-Ethanol Wastewater / Nagapadma Jasti, Mary L. Rasmussen, Samir K. Khanal, Anthony L. Pometto HI, J. Hans van Leeuwen
1115 Algae Grown on Dairy and Municipal Wastewater for Simultaneous Nutrient Removal and Lipid Production for Biofuel Feedstock / I. Woertz, A. Feffer, T. Lundquist, Y. Nelson
1123 Water Quality Impacts of Corn Production to Meet Biofuel Demands / Mark A. Thomas, Bernard A. Engel, Indrajeet Chaubey

OTHER TECHNICAL PAPERS
1145 Monitoring of a Best Management Practice Wetland before and after Maintenance / Thomas P. O 'Connor, James Rossi
1155 Settling Velocity Grading of Particle Bound PAHs: Case of Wet Weather Flows within Combined Sewer Systems / J. Gasperi, C. Lorgeoux, R. Moilleron, M.-C. Gromaire, G. Chebbo
1161 Effects of Hydrodynamic Conditions on Sediment Oxygen Demand: Experimental Study Based on Three Methods / Tetsunori Inoue, Yoshiyuki Nakamura
1171 Optimizing the Remedial Process at a Petroleum Hydrocarbon Contaminated Site Using a Three-Tier Approach / Deyi Hou, Rong-Jin Leu
1181 Ceramic Filter for Small System Drinking Water Treatment: Evaluation of Membrane Pore Size and Importance of Integrity Monitoring / Nur Muhammad, Rajib Sinha, E. Radha Krishnan, Craig L. Patterson
1192 Synthetic Musk Fragrances in a Conventional Drinking Water Treatment Plant with Lime Softening / William D. Wombacher, Keri C. Hombuckle
1199 Predicting Minimum Carbon Usage for PAC Adsorption of Trace Organic Contaminants from Natural Water / Shaoying Qi
1206 Sludge Floe Behavior in an Elongated Rectangular Settling Tank / Qitao Yi, Youngchul Kim, Masafumi Tateda
1213 Changes in Polyhydroxy-Alkanoates (PHAs) during Enhanced Biological Phosphorus Removal with Dairy Industrial Wastewater / Chang Hoon Ahn, Jae Kwang Park, Jenchie Wang
Determination of Temperature Dependence of Electrical Conductivity and Its Relationship with Ionic Strength of Anaerobic Digester Supernatant, for Struvite Formation / M. Iqbal H. Bhuiyan, Donald S. Mavinic, Roger D. Beckie


CASE STUDIES

Case Study of Steady Oxygen Concentration Gradients in a Groundwater Plume from a Highway Infiltration Basin / David W. Ostendorf, Chul Park, Camelia Rotaru, Marina S. Pereira

TECHNICAL NOTES

Heavy Metal and PAH Concentrations in Highway Runoff Deposits Fractionated on Settling Velocities / Thomas Ruby Bentzen, Torben Larsen
 nr 12

1249  Editor's Note / Raymond A. Ferrara

INVITED PAPERS
1250  High-Frequency Diel Dissolved Oxygen Stream Data Modeled for Variable Temperature and Scale / J. V. Loperfido, Craig L. Just, Jerald L. Schnoor

TECHNICAL PAPERS
1257  Simulation of the Performance of a Storm-Water BMP / Thomas B. Wild, Allen P. Davis
1286  Predictions of Resuspension of Highway Detention Pond Deposits in Interrain Event Periods due to Wind-Induced Currents and Waves / T. R. Bentzen, T. Larsen, M. R. Rasmussen
1294  Evaluating Temporal Variability in Bacterial Indicator Samples for an Urban Watershed / Shannon L. Isovitsch Parks, Jeanne M. VanBriesen
1304  Incorporating Both Physical and Kinetic Limitations in Quantifying Dissolved Oxygen Flux to Aquatic Sediments / Ben L. O'Connor, Miki Hondzo, Judson W. Harvey
1315  Predictive Uncertainty in Water-Quality Modeling / David A. Chin
1326  Enhanced Surface Cooling as an Alternative for Thermal Discharges / Daniel G. MacDonald
1338  Tractive Force Design for Sanitary Sewer Self-Cleansing LaVere B. Merritt
1348  Effect of the Presence of Chromium (III) on the Removal of Lead (II) from Aqueous Solutions by Agricultural Wastes / F. Herndinz, M. Calero, G. Bldzquez, G. Tenorio, M. A. Martin-Lara
1357  Degradation and Mineralization of Simazine in Aqueous Solution by Ozone/Hydrogen Peroxide Advanced Oxidation / Ebru Cokay Catalkaya, Fikret Kargi
1365  Role of Reactive Oxygen Species in Determining Nitrification Inhibition by Metallic/Oxide Nanoparticles / Okkyoung Choi, Zhiqiang Hu
1371  Modeling of Adsorption and Regeneration of Volatile Organic Compounds on Activated Carbon Fiber Cloth / Meng Yao, Qiong Zhang, David W. Hand, Roy Taylor
1380  Relevance of Expression Phase in Dewatering of Sludge with Chamber Filter Presses / M. Marinetti, F. Malpei, L. Bonomo

TECHNICAL NOTES
1388  Comparison of Three Bacterial Toxicity Assays for Imidazolium-Derived Ionic Liquids / Maria A. Azimova, Samuel A. Morton III, Paul D. Frymier
1399  Effect of the Sonophotocatalytic Pretreatment on the Volume Reduction of Sewage Sludge and Enhanced Recovery of Methane and Phosphorus / Naohito Hayashi, Satoshi Koike, Ryosuke Yasutomi, Eiki Kasai
1406  Reviewers
1413  2009 Annual Index