

CURRICULUM VITAE

BARTH F. SMETS

TECHNICAL UNIVERSITY OF DENMARK

DEPARTMENT OF ENVIRONMENTAL ENGINEERING , www.env.dtu.dk
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EDUCATION

Ph. D. in Environmental Engineering and Science (GPA 5.0/5.0).
University of Illinois at Urbana-Champaign. 1993. *Advisors:* Bruce. E. Rittmann and David. A. Stahl

M. Sc. in Agricultural Engineering (now: Bioengineering). Biotechnology, *With Great Distinction*
Ghent University, Belgium. 1987. *Advisor:* Willy Verstraete

PROFESSIONAL & RESEARCH EXPERIENCE

TECHNICAL UNIVERSITY OF DENMARK

DEPARTMENT OF ENVIRONMENTAL ENGINEERING

Oct 11 – Now	HEAD,	INTERNATIONAL RESEARCH RELATIONS
Oct 11 – May 2013	MEMBER,	EXECUTIVE BOARD
	DEPUTY HEAD,	ENVIRONMENTAL CHEMISTRY & MICROBIOLOGY SECTION
Sept.08-Sept 11	HEAD,	URBAN WATER ENGINEERING RESEARCH THEME
Sept. 07-Dec 10	INTERIM COORDINATOR,	WASTEWATER TECHNOLOGY RESEARCH GROUP
Sept. 06- Now	COORDINATOR,	MICROBIAL ECOLOGY RESEARCH GROUP
Sept. 04 – Now	PROFESSOR	OF APPLIED ENVIRONMENTAL MICROBIOLOGY

NORTHWESTERN UNIVERSITY, IL, USA

Jan. 10 – July. 10	ESHBACH SCHOLAR & VISITING PROFESSOR	DEPARTMENT OF CIVIL & ENVIRONMENTAL ENGINEERING
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VIRGINIA POLYTECHNIC INSTITUTE & STATE UNIVERSITY, VA, USA

Sept. 04 – Dec. 07	ADJUNCT PROFESSOR,	VIA DEPARTMENT OF CIVIL & ENVIRONMENTAL ENGINEERING
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NATIONAL ENVIRONMENTAL RESEARCH INSTITUTE, DENMARK

Feb. 02- July. 02	VISITING SCIENTIST,	DEPARTMENT OF ENVIRONMENTAL CHEMISTRY & MICROBIOLOGY
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GHEENT UNIVERSITY, BELGIUM

Sept. 01 – Jan. 02	VISITING PROFESSOR,	LABORATORY FOR MICROBIAL ECOLOGY & TECHNOLOGY, FACULTY OF AGRICULTURAL & APPLIED BIOLOGICAL SCIENCES
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THE UNIVERSITY OF CONNECTICUT, CT, USA

Aug. 00 – Aug. 04	ASSOCIATE PROFESSOR,	DEPT. OF CIVIL AND ENVIRONMENTAL ENGINEERING & DEPT. OF MOLECULAR AND CELL BIOLOGY
	DIRECTOR,	GAANN ENVIRONMENTAL BIOTECHNOLOGY DOCTORAL PROGRAM
Aug. 99 – Aug. 01	CHAIR,	ENVIRONMENTAL ENGINEERING GRADUATE PROGRAM
Jan.1995 – July 00	ASSISTANT PROFESSOR,	DEPT. OF CIVIL AND ENVIRONMENTAL ENGINEERING & DEPT. OF MOLECULAR AND CELL BIOLOGY

TYNDALL AIR FORCE BASE, FL, USA

June-Aug. 1996 & 1997	FACULTY RESEARCH FELLOW,	US AIR FORCE OFFICE OF SCIENTIFIC RESEARCH, ENVIRONICS DIRECTORATE
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CLEMSON UNIVERSITY, SC, USA

Jan. 1993 - Dec. 1994	ASSISTANT PROFESSOR & RESEARCH ASSOCIATE,	DEPT. OF ENVIRONMENTAL SYSTEMS ENGINEERING
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July 1995, July 1994, May 1993	TECHNICAL EXCHANGE,	TECHNICAL UNIVERSITY OF BUDAPEST, HUNGARY, US-HUNGARIAN JOINT FUND
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UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN, IL, USA

Fall 1992 & Fall 1988	TEACHING ASSISTANT,	DEPT. OF CIVIL ENGINEERING
Spring 1988 - Summer 1992	GRADUATE RESEARCH ASSISTANT,	ENVIRONMENTAL ENGINEERING AND SCIENCE PROGRAM

RESEARCH INTERESTS

My core scientific contributions lie in the development of new approaches and technologies to manage microbial communities and processes within the context of water quality and environmental engineering: from this work a new generation of control strategies and technologies for environmental bioprocesses can be envisioned. My research spans the areas of microbial ecology and biotechnology with applications to environmental engineering. I have a special interest in biofilm science and engineering: elucidating cellular and ecological processes which occur in natural and engineered biofilms, and developing and optimizing biofilm-based reactors for water quality engineering.

PROFESSIONAL REGISTRATION Engineer-in-training. South Carolina. June 1994.

HONORS AND AWARDS

1. Full Professorships Offered (Declined): University of Washington, USA, Northwestern University, USA, Colorado School of Mines, USA, University of Copenhagen, DK, University of Glasgow, UK.
2. Isaac Newton Institute, Visiting Fellow, Cambridge University, UK, 2014
3. Eshbach Visiting Scholar, Northwestern University, USA, 2010
4. Advisor to M. Owsianak, recipient of best MSc thesis award in Environmental Engineering, DTU, 2010
5. Marie Curie Excellence Team Leader (EC-FP6), 2006-2009
6. Advisor to First and Honor Place Winners of First Annual Metcalf & Eddy Inc. Academic Environmental Engineering Design Competition, 2004.
7. Advisor to L. Waters, recipient of the Claire Berg Award (Awarded to outstanding graduating senior at the University of Connecticut using genetics-based techniques and focus in research), 2004.
8. The Plasmid Foundation, DK, Visiting Scientist Fellowship, 2002
9. The National Research Council, DK, Visiting Scientist Fellowship, 2002
10. Fund for Scientific Research, Flanders-Belgium, Visiting Senior Postdoctoral Fellowship, 2001
11. Outstanding Junior Faculty Award, School of Engineering, University of Connecticut, 1999
12. National Science Foundation, CAREER Award, 1997
13. Air Force Office of Scientific Research, Summer Faculty Research Fellow. 1996, 1997; Advisor to Graduate Student Research Associate Awardee, 1997
14. Commission of the European Communities Directorate General for Science, Research, and Development. Biotechnology Program. 1996.
15. National Research Council & Istituto Veneto di Scienze Lettere ed Arti. Venice, Italy. 1992. (Fellowship to attend Summer School on Environmental Dynamics: Biological Models)

16. Marine Biological Laboratories. Woods Hole, MA. 1990. (Fellowship to attend Microbiology Summer Course)
17. Sigma Xi, Since 1994.
18. Chi Epsilon, Since 1998.

PROFESSIONAL AND RESEARCH ORGANIZATIONS

1. Association of Environmental Engineering & Science Professors
2. International Water Association
3. Water Environment Federation
4. American Society for Microbiology
5. International Society for Microbial Ecology
6. Society for Applied Microbiology

EDITORIAL BOARDS

Biodegradation, Kluwer Academic Publishers, 2000-

Vadose Zone Journal, Soil Science Society of America, 2006 – 2008

Environmental Engineering Science, Taylor & Francis, 2010 –

Environmental Microbiology, Wiley & Society for Applied Microbiology, 2011-

Microbial Biotechnology, Wiley & Society for Applied Microbiology, 2015-

PUBLICATIONS (PEER REVIEWED JOURNAL ARTICLE), H- INDEX : 32 (OCT 2015)

1. Dechesne, A., S. Musovic, A. Palomo, V. Diwan, B. F. Smets. Underestimation of ammonia-oxidizing bacteria abundance by amplification bias in amoA-targeted qPCR. *Microb. Biotech.* *Accepted for Publication*
 2. Kinnunen, M., A. Dechesne, C. Proctor, F. Hammes, M. Q. Baluja, N. Boon, D. Daffonchio, S. Fodelianakis, D. Graham, N. Hahn, D. Johnson, B. F. Smets. 2016. A conceptual framework for invasion in microbial communities. *ISME Journal*. *Accepted for Publication*.
 3. Palomo, A., A. Gülay, S. J. Fowler, S. Rasmussen, T. Sicheritz-Ponten, B. F. Smets. 2016 Metagenomic analysis of rapid gravity filter microbial communities suggest novel physiology of *Nitrospira* spp. *ISME Journal*. *Accepted for Publication*.
 4. Zhang, D., R. Vahala, Y. Wang, B.F. Smets 2016. Microbes in biological processes for municipal landfill leachate treatment: Community, function and interaction. *Internat. Biodeterior. Biodegrad.* doi:10.1016/j.ibiod.2016.02.013
 5. Widder, S, R. Allen, T. Pfeiffer, T. P. Curtis, C. Wiuf, W. T. Sloan, O. X. Cordero, S. P. Brown, B. Momeni, W. Shou, H. Kettle, H. J. Flint, A. F. Haas, B. Laroche, J.-U. Kreft, P. B. Rainey, S. Freilich, S. Schuster, K. Milferstedt, J. R. van der Meer, T. Großkopf, J. Huisman, A. Free, C. Picioreanu, C. Quince, I. Klapper, S. Labarthe, B. F. Smets, H. Wang, Isaac Newton Institute Fellows, O. S. Soyer. Challenges in microbial ecology: building predictive understanding of community function and dynamics. *ISME Journal online* doi: 10.1038/ismej.2016.45
 6. Gülay, A., S. Musovic, H.-J. Albrechtsen, W. A. Al-Soud, S. J. Sørensen, B. F. Smets. 2016. Ecological patterns, microbial diversity and core taxa in rapid sand filters treating groundwaters. *ISME Journal*. doi:10.1038/ismej.2016.16
 7. Pedersen, L., A. Dechesne, B.F. Smets 2015. A nitrate sensitive planar optode: Performance and interferences. *Talanta* 144 933-937: 10.1016/j.talanta.2015.07.046
 8. Pedersen, L., B.F. Smets, A. Dechesne. 2015. Measuring biogeochemical heterogeneity at the micro scale in soil and sediments. *Soil Biol. Biochem.* 90 122-138 DOI: 10.1016/j.soilbio.2015.08.003
 9. Liu, L. P. J. Binning, B. F. Smets. 2015 Evaluating alternate biokinetic models for trace pollutant cometabolism. *Environ. Scie. Technol.* 49 2230–2236 DOI: 10.1021/es5035393
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10. Gülay, A. and B. F. Smets. 2015. An improved procedure to set significance thresholds for β diversity testing in microbial community comparisons. *Environ. Microbiol.* 17: 3154–3167 DOI: 10.1111/1462-2920.12748
 11. Klümper, U., L. Riber, A. Dechesne, A. Sannazzarro, L. H. Hansen, S. J. Sørensen, B. F. Smets. 2015. Broad host range plasmids can invade an unexpectedly diverse fraction of a soil bacterial community. *ISME Journal* 9: 934-945 DOI: 10.1038/ismej.2014.191
 12. Mauricio-Iglesias, M., Vangsgaard, A.K., Gernaey, K.V., Smets, B.F. & Sin, G. 2015 A novel control strategy for single-stage autotrophic nitrogen removal in SBR. *Chemical Engineering J.* 260: 64-73
 13. Valverde-Pérez, B. E. Ramin, B. F Smets, B. G Plósz. 2015. EBP2R- An innovative enhanced biological nutrient recovery activated sludge system to produce growth medium for green microalgae cultivation. *Water Res.* 68: 821-830. DOI: 10.1016/j.watres.2014.09.027
 14. Liu, L., D. Helbling, H.-P. E. Kohler, B. F. Smets. 2014. A model framework to describe growth-linked biodegradation of trace-level pesticides in the presence of coincidental carbon substrates and microbes. *Environ. Microbiol.* 48, 13358–13366 DOI: 10.1021/es503491
 15. Klümper, U., A. Droumpali, A. Dechesne, B.F. Smets. 2014. Novel assay to measure the plasmid mobilizing potential of mixed microbial communities. *Front. Microbiol.* 5: art.730. doi: 10.3389/fmicb.2014.00730
 16. Dechesne, A., N. Badawi, J. Aamand and B. F. Smets. 2014. Fine scale spatial variability of microbial pesticide degradation in soil: scales, controlling factors, and implications. *Front. Microbiol.* 5: art. 667. DOI: 10.3389/fmicb.2014.00667
 17. Gulay, A., K. Tatari, S. Musovic, Gulay, A., R.V. Mateiu, H.-J. Albrechtsen B. F. Smets. 2014 Internal porosity of mineral coating supports microbial activity in rapid sand filters for groundwater treatment. *Appl. Env. Microb.* 80: 7010-7020 DOI: 10.1128/AEM.01959-14
 18. Rusalleda, M., B. Seredynska-Sobecka, B.-J. Ni, E. Arvin, M. D. Balaguer, J. Colprim, and B. F. Smets. 2014. Spectrometric characterization of the effluent dissolved organic matter from an anammox reactor shows correlation between the EEM signature and anammox growth. *Chemosphere* 117: 271–277 DOI: 10.1016/j.chemosphere.2014.07.036
 19. Lee, C. L. R. Boe-Hansen, S. Musovic, B. F. Smets, H.J. Albrechtsen, P.J. Binning. 2014. Effects of dynamic operating conditions on nitrification in biological rapid sand filters for drinking water treatment. *Wat. Res.* 64: 226-236 DOI:110.1016/j.watres.2014.07.001
 20. Domingo-Félez C., A. G. Mutlu, M.M. Jensen, B. F. Smets. 2014. Aeration strategies to mitigate nitrous oxide emissions from single-stage nitrification/anammox reactors. *Environ. Scie. Technol.* 48: 920–929 DOI:10.1021/es501819n
 21. Yu, R., B. F. Smets, P. Gan, A. A. MacKay, J. Graf. 2014 Seasonal and spatial variations in microbial activity at various phylogenetic resolutions at a groundwater/surface water interface. *Can. J. Microbiol.* 60: 277-286 DOI:10.1139/cjm-2014-0048
 22. Gülez, G.; Altıntaş, A.; Fazli, M.; Dechesne, A.; Workman, C.; Tolker-Nielsen, T.; Smets, B. F. 2014 Colony morphology and transcriptome profiling of *Pseudomonas putida* KT2440 and its mutants deficient in alginate or all EPS synthesis under controlled matric potentials. *MicrobiologyOpen*. DOI: 10.1002/mbo3.180
 23. Pellicer-Nàcher, C. and B. F. Smets. 2014. Structure, composition, and strength of nitrifying membrane-aerated biofilms. *Wat. Res.* 57: 151-161
 24. MacKay, A. A., P. Gan, R. Yu, B. F. Smets. 2014. Seasonal arsenic accumulation in stream sediments at a groundwater discharge zone. *Environ. Scie. Technol.* 48: 920–929 DOI:10.1021/es402552u
 25. Musovic, S., U. Klümper, A. Dechesne, J. Magid, B.F. Smets. 2014. Long-term manure exposure increases soil bacterial community potential for plasmid uptake. *Environ. Microb. Rep.* 6: 125-130 DOI:10.1111/1758-2229.12138
 26. Rosenbom, A.E., P. J. Binning, J. Aamand, A. Dechesne, B. F. Smets, and A. R. Johnsen, 2013. Does microbial cm-scale heterogeneity impact pesticide degradation in and leaching from a loamy agricultural soil? *Scie. Tot. Environ.* 472:90–98 DOI:10.1016/j.scitotenv.2013.11.009
 27. Tatari, K., B. F. Smets and H.J. Albrechtsen. 2013. A novel bench-scale column assay to investigate site-
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- specific nitrification biokinetics in biological rapid sand filters. 47: 6380-6387 DOI: 10.1016/j.watres.2013.08.005
28. Pellicer-Nàcher, C., S. Franck, A. Gülay, M. Rusalleda, A. Terada, B.F. Smets. 2013. Sequentially aerated membrane biofilm reactors for autotrophic nitrogen removal: Microbial community composition and dynamics. *Microbial Biotech.* DOI: 10.1111/1751-7915.12079
 29. Ni, B.-J. B.F. Smets; Z. Yuan, C. Pellicer-Nacher. 2013. Model-based evaluation of the role of Anammox on nitric oxide and nitrous oxide productions in membrane aerated biofilm reactor. *J. Membr. Sci.* 446: 332-340 DOI: 10.1016/j.memsci.2013.06.047
 30. Pellicer-Nàcher, C., C. Domingo-Félez, S. Lackner, B. F. Smets. 2013. Microbial activity catalyzes oxygen transfer in membrane-aerated nitrating biofilm reactors. *J. Membr. Sci.* DOI: 10.1016/j.memsci.2013.06.063
 31. Pellicer-Nàcher, C., Domingo-Félez, A. G. Mutlu, and B. F. Smets. 2013. Critical assessment of methods for the extraction of extracellular polymeric substances from mixed culture biomass. *Wat. Res.* DOI: 10.1016/j.watres.2013.06.026
 32. Vangsgaard, A.K., Mauricio-Iglesias, M., Gernaey, K.V., Smets, B.F. & Sin, G. 2013. Control of a Biological Nitrogen Removal Process in an Intensified Single Reactor Configuration. *Computer Aided Chemical Engineering.* 32:769-774 DOI: 10.1016/B978-0-444-63234-0.50129-9
 33. Vangsgaard, A.-K., G. Mutlu, K. V. Gernaey, B. F Smets, G.Sin. 2013 Calibration and validation of a model describing complete autotrophic nitrogen removal in granular system. *J. Chem. Biotechn.* 88(11), 2007-2015. DOI: 10.1002/jctb.4060
 34. Mutlu, A.G., Vangsgaard, A.K., Sin, G. & Smets, B.F. 2013. An operational protocol for facilitating start-up of single-stage autotrophic nitrogen removing reactors based on process stoichiometry. *Water Sci. Technol.* 68(3): 514-521. doi: 10.2166/wst.2013.157
 35. Gilmore, K.R., A. Terada, B. F. Smets, S. Lackner, J. L. Garland, N. G. Love. 2013. Autotrophic nitrogen removal in a membrane-aerated biofilm reactor under continuous aeration: A demonstration. *Environ. Engin. Scie.* DOI: 10.1089/ees.2012.0222
 36. Smets, B.F. 2013. Spatial structuring of microbial communities – at the micro- to millimetre scale. *Microb. Biotechnol.* 6: 10-11. doi:10.1111/1751-7915.12014 (Invited, part of Crystal Ball-2013).
 37. Lackner, S., and B. F. Smets. 2012. Effect of the kinetics of ammonium and nitrite oxidation on nitrification success or failure for different biofilm reactor geometries. *Biochem. Eng. Journal.* 69: 123–129. DOI: 10.1016/j.bej.2012.09.006
 38. Vangsgaard, A.-K., M. Mauricio-Iglesias; K. V Gernaey; B. F Smets; G. 2012. Sensitivity analysis of autotrophic N removal by a granule based bioreactor: Influence of mass transfer versus microbial kinetics *Biores. Technol.* 123 : 230–241. DOI: 10.1016/j.biortech.2012.07.087.
 39. De Clippeleir, H., E. Courtens, M. Mosquera, S. E. Vlaeminck, B.F. Smets, N. Boon, W.Verstraete. 2012. Efficient total nitrogen removal in an ammonia gas biofilter through high-rate OLAND. *Environ. Scie. Technol.* 46 8826–8833. DOI: 10.1021/es301717b
 40. Ni, B.-J., M. Rusalleda and B. F. Smets. 2012. Evaluation of the microbial interactions of anaerobic ammonium oxidizers and heterotrophs in anammox biofilm. *Wat. Res.* 46: 4645-4652.DOI: 10.1016/j.watres.2012.06.016
 41. Dechesne, A. and B. F. Smets. 2012. Swarming motility in pseudomonads is restricted to a narrow range of high matric water potentials. *Appl. Environ. Microb.* 78: 2936-2940. doi: 10.1128/AEM.06833-11
 42. Gülez, G., A. Dechesne, C. Workman, B.F. Smets. 2012. Transcriptome dynamics of *Pseudomonas putida* KT2440 under water stress. *Appl. Environ. Microb.* 78:676-683 DOI: 10.1128/AEM.06150-11.
 43. Ni, B.-J., M. Rusalleda, C. Pellicer-Nàcher, B. F. Smets. 2011. Modeling Nitrous Oxide Production during Nitrogen Removal via Nitrification and Denitrification: Extensions to the General ASM Models. *Environ. Scie Technol.* 45: 7768-7776. DOI:10.1021/es201489n
 44. Martins, G.; Terada, A.; Ribeiro, D. C.; Corral, A. M.; Brito, A. G.; Smets, B. F.; Nogueira, R., 2011 Structure and activity of lacustrine sediment bacteria involved in nutrient and iron cycles. *FEMS Microbiol Ecology.* 77: 666-679. doi:10.1111/j.1574-6941.2011.01145.x
 45. Pritchina, O., C. Ely, and B. F. Smets. 2011. Effect of PAH contaminated soil on rhizosphere microbial
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- communities. *Water, Air, & Soil Pollution*. doi: 10.1007/s11270-011-0800-2
46. Merkey, B., L. Lardon, J. Seoane, J. Kreft, and B. F. Smets. 2011. Growth dependence of conjugation explains limited plasmid invasion in biofilms: an individual-based modeling study. *Environ. Microbiol.* 13: 2435-2452. doi:10.1111/j.1462-2920.2011.02535.x
 47. Seoane, J., Yankelevich, T., Dechesne, A., Merkey, B., Sternberg, C. and Smets, B.F. 2011 An individual-based approach to explain plasmid invasiveness in bacterial populations. *FEMS Microbiol. Ecology.* 75: 17-27.
 48. Lardon, L., B. Merkey, S. Martins, A. Dötsch, J. U. Kreft, C. Picioreanu, and B. F. Smets. 2011. iDynoMiCS: A New Platform For Individual-based Modelling of Biofilms. *Environ Microbiol.* 13: 2416-2434. doi: 10.1111/j.1462-2920.2011.02414.x
 49. Owsianiak, M. A. Dechesne, P. J. Binning, J. C. Chambon, S. R. Sørensen, B. F. Smets. 2010. Evaluation of bioaugmentation with entrapped cells as a soil remediation technology. *Environ. Scie Technol.* 44: 7622-7627
 50. Pellicer-Nàcher, C., Sun, S., Lackner, S., Terada, A., Schreiber, F., Zhou, Q. and Smets, B.F.2010. Sequential aeration of membrane-aerated biofilm reactors for high-rate autotrophic nitrogen removal: Experimental demonstration. *Environ. Scie Technol.* 44: 7628-7634. doi: 10.1021/es1013467
 51. Lackner, S., Terada, A., Horn, H., Henze, M. and Smets, B.F. 2010. Nitrification performance in membrane aerated biofilm reactors differs from conventional biofilm systems. *Water Res.* 44: 673-684
 52. Gülez, G., Dechesne, A. and Smets, B.F.2010 The Pressurized Porous Surface Model: An improved tool to study bacterial behavior under a wide range of environmentally relevant matric potentials. *J. Microbiological Methods* 82: 324-326.
 53. D'Alvise, P., Yankelovich, T. Sjöholm, O.R. Y. Jin, S. Wuertz and B. F. Smets. 2010. TOL plasmid carriage increases biofilm formation in *Pseudomonas putida* by production of extracellular DNA. *FEMS Microb. Letters*: 312: 84-92.
 54. Dechesne, A., G. Wang, G. Gülez, D. Or, and B. F. Smets. 2010. Hydration controlled bacterial motility and dispersal on surfaces. *Proc. Natl. Acad. Sci. USA* 107:14369-14372.
 55. Musovic, S., A. Dechesne, J. Sørensen, and B. F. Smets. 2010. A novel assay to measure the permissivity of microbial communities towards horizontal receipt of exogenous mobile elements. *Appl Environ. Microbiol.* 76: 4813-4818. doi:10.1128/AEM.02713-09
 56. Terada, A., S. Lackner, K. Kristensen, and B. F. Smets. 2010. Inoculum effects on community composition and nitrification performance of autotrophic nitrifying counter-diffusion biofilm reactors. *Environ Microbiol.* 12: 2858-2872. (Image on the cover)
 57. Dechesne, A., G. M. Owsianiak; A. Bazire, G. L. Grundmann, P. Binning and B. F. Smets. 2010. Biodegradation in partially saturated sand matrix: compounding effects of water content, bacterial spatial distribution and motility. *Environ. Scie Technol.* 44: 2386-2392.
 58. Vlaeminck, E., A. Terada, B. F. Smets, H. De Clippeleir, T. Schaubroeck, S. Bolca, L. Demeestere, J. Mast, M. Carballa, N. Boon, and W. Verstraete. 2010. Aggregate size and architecture determine biomass activity for one-stage partial nitrification and anammox. *Appl. Environ. Microb.* 76 900-909.
 59. Sun, S.-P., C. P. Nàcher, B. Merkey, Q. Zhou, S.-Q. Xia, D.-H. Yang, J.-H. Sun, A. Terada, and B. F. Smets. 2010. Effective biological nitrogen removal processes for low C/N ratio domestic wastewater treatment: A review. *Environ. Engin. Science.* 27 111-126.
 60. Attard, E., F. Poly, F. Laurent, C. Commeaux, A. Terada, B. F. Smets, S. Recous, and X. Le Roux. 2009. Shifts between Nitrospira- and Nitrobacter-like nitrite oxidizers underly the response of soil nitrite oxidizing enzyme activity to changes in tillage practices. *Environ Microbiol.* 12, 315–326.
 61. Seoane, J., G. Sin, L. Lardon, K. V. Gernaey, and B. F. Smets. 2009. A new extant respirometric assay to estimate intrinsic biokinetic growth parameters. *Biotechn. Bioeng.* 105:141-149
 62. Yu, R., P. Gan, S. Zhang, A. A. Mackay, J. Graf, and B. F. Smets. 2010. Presence, distribution, and diversity of iron oxidizing bacteria at a landfill leachate impacted groundwater surface water interface. *FEMS. Microb. Ecol.* 71: 260-271.
 63. Vlaeminck, S. E. A. Terada, B. F. Smets, D. Van der Linden, N. Boon, W. Verstraete, M. Carballa.2009. Nitrogen removal from digested black water by one-stage partial nitrification and anammox. *Environ. Sci.*
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64. Lackner, S.; Holmberg, M.; Terada, A.; Kingshott, P.; Smets, B. F. 2009. Enhancing the formation and shear resistance of nitrifying biofilms on membranes by surface functionalization. *Water Res.* 43: 3469-3478.
 65. Wang, R., A. Terada, S. Lackner, B. F. Smets, M. Henze, S. Xia, and J. Zhao. 2009. Nitrification performance and biofilm development in co- and counter-diffusion biofilm reactors: modeling and experimental comparison. *Water Res.* 43, 2699 – 2709.
 66. Harper, W. F., Terada, A., Poly, F., Le Roux, X., Kristensen, K., Mazher, M., Smets, B. F. 2009. The effect of hydroxylamine on the activity and aggregate size of autotrophic nitrifying bioreactor cultures. *Biotechn. Bioeng.* 102, 714-724
 67. Yang, H.-H., Morrow, J. B., R. T. Vinopal, D. Grasso, A. Dechesne and B. F. Smets. 2008. Antecedent growth conditions alter retention of environmental *Escherichia coli* isolates in transiently wetted porous media. *Environ. Sci. Technol.* 42, 9310-9316.
 68. Gilmore, K. R., J. C. Little, B. F. Smets, N. G. Love. 2009. Oxygen Mass Transfer in a Flow-through Hollow-fiber Membrane Biofilm Reactor. *J. Environmental Engineering ASCE.* 135: 806-814 .
 69. Dechesne A, Or D, Gülez, G., Smets BF. 2008. The Porous Surface Model: a novel experimental system for quantitative on-line observation of microbial processes under unsaturated condition. *Appl. Environ. Microb.* 74: 5195-5200
 70. Yu, R., J. Graf, and B. F. Smets. 2008. An improved cell recovery method for iron oxidizing bacterial (IOB) enrichments. *J. Microbiol. Methods* 72: 235-240
 71. Chandran K, Hu Z, Smets BF. 2008. A critical comparison of extant batch respirometric and substrate depletion assays for estimation of nitrification biokinetics. *Biotechn. Bioeng.* 101:62-72.
 72. Chandran K, Smets BF. 2008. Biokinetic characterization a of the acceleration phase in autotrophic ammonia oxidation. *Wat. Environ. Res.* 80: 732-739.
 73. Lackner, S., A. Terada, and B. F. Smets. 2008. Heterotrophic activity compromises autotrophic nitrogen removal in membrane aerated biofilms: Results of a modeling study. *Wat. Res.* 42:1102-1112
HUdoi:10.1016/j.watres.2007.08.025UH
 74. Tsonaki, A., B. F. Smets, and P. L. Bjerg. 2008. The Effects of Heat-Activated Persulfate Oxidation on Soil Microorganisms. *Wat. Res.* 42: 1013-1022. HUdoi:10.1016/j.watres.2007.09.018UH
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 137. Pellicer-Nàcher, C., E. Syron, G. Gaval, J. Ochoa, B.F. Smets Effect of surface chemistry and oxygen loading on the structural and mechanical properties of membrane-aerated biofilms for ammonium removal. IWA Biofilm Conference, Oct 27-30, 2011. Shanghai, PRC.
 138. Smets, B.F. C. Pellicer- Nàcher, B. Thamdrup, F. Schreiber. Production and mitigation of N₂O in sequentially membrane-aerated redox-stratified nitrification/anammox biofilms 2nd International Conference on Nitrification (ICoN2) July 3 - 7, 2011, Nijmegen, NL(oral)
 139. Pellicer-Nàcher, C., B. Roth , G. Gaval, J. Ochoa, B. F. Smets. Assessing the impact of physical and physiological factors on the oxygen mass transfer rates in membrane-aerated biofilm reactors. 6th IWA specialised conference on membrane technology. 4-7 October 2011. Aachen, GE.
 140. Gozdereliler, E., A. Dechesne, B.F. Smets, J. Aamand, S. R. Sørensen. 2011. Isolation of herbicide-degrading bacteria from a groundwater aquifer using novel enrichment and isolation techniques. 8th International Symposium of Subsurface Microbiology, Garmisch-Partenkirchen, GE
 141. Rosenbom, A. E., A. R. Johnsen, J. Aamand, P.J. Binning, A. Dechesne and B.F. Smets. 2011. Cm-scale Heterogeneity in Degradation - Potential Impact on Leaching of MCPA through a Variably-Saturated Macroporous Clayey Till. AGU Fall Meeting, San Francisco, USA.
 142. Smets, B.F. 2012. How should we be measuring and modelling nitrous oxide emissions from wastewater systems? WWT Mod 2012 3d IWA WEF Wastewater Treatment Modelling Seminar. Feb 26-28. Mt St. Anne, Quebec, CA. (oral, invited Workshop Participant.)
 143. Smets, B.F. Redox stratified biofilms to support completely autotrophic nitrogen removal: Principles and results IWA/ SIDISA 2012 International Symposium, June 27-29, 2012 Milano, IT(oral, invited)
 144. Smets, B.F. Micro-scale spatial expansion of microbial cells and mobile genetic elements. 14th International Symposium on Microbial Ecology (ISME-14), August 19-24, 2012, Copenhagen, DK (oral, invited)
 145. Musovic, S., Klümper, U., Lundin, L., Sørensen, J.S., & Smets B.F. Measuring the permissiveness of a microbial community for MGE uptake. 14th International Symposium on Microbial Ecology (ISME-14), August 19-24, 2012, Copenhagen, DK. (oral)
 146. Mutlu, A. G., Vangsgaard, A. K., Jensen, M. M., Smets, B. F. Architecture evolution of biomass aggregates in single stage nitrification/anammox reactors. 14th International Symposium on Microbial Ecology (ISME-14), August 19-24, 2012, Copenhagen, DK.
 147. Ni, B.-J., M. Rusalleda, C. Pellicer-Nàcher, B. F. Smets. Extensions to the General ASM Models to include nitrous oxide production via nitrification and denitrification processes. To be IWA Water Congress 2012, 16-21 September 2012, Busan, SK (oral)
 148. Gülay, A., S. Musovic, H.J. Albrechtsen and B.F. Smets. Neutrophilic Iron Oxidizing Bacteria: Relevant in Biological Drinking Water Treatment? To be IWA Water Congress 2012, 16-21 September 2012, Busan, SK. (oral)
 149. Mutlu, A.G., A.K. Vangsgaard, B.F. Smets, G. Sin. Control strategy for operational decision-making in single-stage autotrophic nitrogen removing reactors based on process stoichiometry To be IWA Water Congress 2012, 16-21 September 2012, Busan, SK. (oral)
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150. Flores-Alsina X., Guerrero J., Vangsgaard A.-K., Guisasola A., Baeza J., Jeppsson U., Smets B.F., Sin G., Gernaey K.V. Recent trends in modeling and simulation of nutrient removal systems. IWA Nutrient Removal and Recovery Conference, 23-25 September 2012, Harbin, PRC.
 151. Vangsgaard, A.K., Mutlu, A.G., Gernaey, K.V., Smets, B.F. & Sin, G. Calibration and validation of a model describing complete autotrophic nitrogen removal in granular sludge. IWA Nutrient Removal and Recovery Conference, 23-25 September 2012 Harbin, PRC. (oral)
 152. Musovic, S., A.Gulay, H.J. Albrechtsen, and B.F. Smets. Microbial abundance, distribution and diversity in Rapid Sand Filters. AWWA Water Quality Technology Conference and Exposition (WQTC), 4-8 November 2012, Toronto, ON, CA. (oral)
 153. Tatari, K., B. F. Smets and H.-J. Albrechtsen Effect of surface loading fluctuations in rapid sand-filters used to remove ammonium from drinking water. AWWA Water Quality Technology Conference and Exposition (WQTC), 4-8 November 2012. Toronto, ON, CA.
 154. Lin, K. B. F. Smets and H.-J. Albrechtsen. Biological removal of manganese and iron in rapid sand filters. AWWA Water Quality Technology Conference and Exposition (WQTC), 4-8 November 2012, Toronto, ON, CA. (oral)
 155. Lee, C., H.-J. Albrechtsen, B. F. Smets, R. Boe-Hansen, S. Lind, P. J. Binning. Relating dynamic conditions to the performance of biological rapid sand filters used to remove ammonium, iron, and manganese from drinking water. AWWA Water Quality Technology Conference and Exposition (WQTC) , 4-8 November 2012 Toronto, ON, CA. (oral)
 156. Smets, B. F. Spatially structured autotrophic N removing communities: Competition and Cooperation EU-US Environmental Biotechnology Working Group Workshop, 4-7 November 2012, St. Louis, MO USA, (invited, oral)
 157. Sæbø M, Valverde Perez B, Van Wagenen J, Angelidaki I, Smets BF, Plósz B. A Mixed Green Micro-Algal Model (MAMO) – Model Identification And Calibration Using Synthetic Medium And Nutrient Rich Carbon Depleted Wastewater. 2013. 86th Annual Water Environment Federation Technical Exhibition and Conference (WEFTEC 2013), Chicago, United States. (oral)
 158. Klümper U, Riber L, Sannazzaro A, Dechesne A, Musovic S, Hansen LH et al. Assessing the permissiveness of complex bacterial communities towards conjugal plasmids - A novel method. 2013. Danish Microbiological Society 2013, Copenhagen, Denmark.
 159. Klümper U, Riber L, Sannazzaro A, Dechesne A, Musovic S, Hansen LH et al. Assessing the permissiveness of complex bacterial communities towards conjugal plasmids – Development of a novel method. 2013. 12th Symposium on Bacterial Genetics and Ecology (BAGECO12), Ljubljana, SL.
 160. De Francisci D, Holdt SL, Van Wagenen J, Podevin M, Smets BF, Plósz B. Development of an algal wastewater treatment concept, based on the selection of microalgal strains with optimal bioextraction characteristics. 2013. International Conference on Algal Biorefinery, Kharagpur, India.
 161. Gülây A, Pellicer i Nàcher C, Mutlu AG, Jensen MM, Vlaeminck S, Lackner S et al. Diversity of total and functional microbiome of anammox reactors fed with complex and synthetic nitrogen-rich wastewaters. 2013. ICON3: 3rd International Conference on Nitrification, Tokyo, Japan.
 162. Mutlu AG, Vangsgaard AK, Chen L, Domingo Felez C, Sin G, Smets BF. Driving towards stratified aggregation in single-stage nitrification/anammox reactors by varying aeration regimes. 2013. IWA 9th international Conference on Biofilm Reactors, Paris, France. (best poster award)
 163. Tatari K, Smets BF, Lee CO, Nielsen PB, Albrechtsen H.-J. Examining biological sand filters for drinking water treatment as biofilm reactors: experimental and modeling approach. 2013. IWA 9th international Conference on Biofilm Reactors, Paris, France. (oral)
 164. Gülây A, Tatari K, Musovic S, Mateiu RV, Albrechtsen H.-J, Smets BF. Interactions between microbial activity and distribution and mineral coatings on sand grains from rapid sand filters treating groundwater. 2013. IWA 5th International Conference Microbial Ecology and Water Engineering, Michigan, United States. (oral)
 165. Gülây A, Musovic S, Albrechtsen H.-J, Smets BF. Microbial community structure and a core microbiome in biological rapid sand filters at Danish waterworks. 2013. IWA 5th International Conference Microbial Ecology and Water Engineering, Michigan, United States.
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166. Smets BF, Pellicer i Nàcher C, Jensen MM, Ramin E, Plósz B, Domingo Felez C et al. Modelling N₂O dynamics in the engineered N cycle: Observations, assumptions, knowns, and unknowns. 2013. ICON3: 3rd international conference on Nitrification, Tokyo, Japan. (oral)
 167. Pellicer i Nàcher C, Jensen MM, Petersen MS, Smets BF. N₂O production dynamics in nitrifying/denitrifying activated sludge under defined environmental conditions. 2013. ICON3: 3rd international conference on Nitrification, Tokyo, Japan.
 168. Vangsgaard AK, Mauricio Iglesias M, Mutlu AG, Gernaey K, Smets BF, Sin G. Performance of an autotrophic nitrogen removing reactor: Diagnosis through fuzzy logic. 2013. 11th IWA conference on instrumentation control and automation, Narbonne, France.(oral)
 169. Valverde Perez B, Wágner DS, Sæbø M, Van Wagenen J, Angelidaki I, Smets BF et al. A Green Micro-Algal Growth Model developed in the Activated Sludge Modeling Framework. 2014. 4th IWA/WEF Wastewater Treatment Modelling Seminar 2014, Spa, Belgium.
 170. Smets BF, Pellicer-Nàcher C, Domingo Felez C, Jensen MM, Ramin E, Plósz BG et al. Modelling N₂O dynamics in the engineered N cycle: Evaluation of alternate model structures. 2014. 4th IWA/WEF Wastewater Treatment Modelling Seminar (WWTmod2014), Spa, Belgium. (oral)
 171. Ramin E, Wágner DS, Yde L, Szabo P, Rasmussen MR, Dechesne A et al. Modelling the Impact of Filamentous Bacteria Abundance in a Secondary Settling Tank: CFD Sub-models Optimization Using Long - term Experimental Data. 2014. 4th IWA/WEF Wastewater Treatment Modelling Seminar (WWTmod2014), Spa, Belgium.
 172. Liu, L., B. F. Smets, D. E. Helbling, H.-P. E. Kohler. Biofilm model to provide in silico predictions of micropollutant biodegradation. Biofilms 6. International Conference on Biofilms, May 11-13, 2014, Vienna AU. (oral)
 173. Gülay A, Tatari K, Musovic S, Mateiu RV, Albrechtsen H-J, Smets BF. Mineral coating creates internal porosity and supports microbial activity in rapid sand filters treating groundwaters. Biofilms 6. International Conference on Biofilms, May 11-13, 2014, Vienna AU. (oral)
 174. Wágner DS, Valverde Perez B, Sæbø M, Van Wagenen J, Angelidaki I, Smets BF et al. An Activated Sludge Model for Mixed Green Microalgae (ASM-A): model identification and calibration. 2014. YAS2014 : Young Algaeneers Symposium, Montpellier-Narbonne, FR.
 175. Liu, L., D. E. Helbling, B. F. Smets, H.-P. E. Kohler Experimental validation of a novel biokinetic model framework for modeling trace pollutant biodegradation in natural waters. 15th International Symposium on Microbial Ecology (ISME-15), August 24-29, 2014, Seoul, SK. (oral)
 176. Klümper U, Riber L, Dechesne A, Sannazzaro A, Hansen LH, Sørensen SJ et al. Deep sequencing of soil transconjugal pools reveals unexpected phylogenetic diversity of bacteria receiving broad host range plasmids. 15th International Symposium on Microbial Ecology (ISME-15), August 24-29, 2014, Seoul, SK. (oral)
 177. Klümper U, Brandt KK, Dechesne A, Riber L, Sørensen SJ, Smets BF. Metal stress alters a bacterial community's permissiveness towards plasmids. 2015. 15th International Symposium on Microbial Ecology (ISME-15), August 24-29, 2014, Seoul, SK
 178. Gülay A, Musovic S, Albrechtsen H-J, Waleed AA, Sørensen SJ, Smets BF. Microbial diversity and identification of core taxa in rapid sand filters treating groundwaters. 15th International Symposium on Microbial Ecology (ISME-15), August 24-29, 2014, Seoul, SK
 179. Gülay A, Tatari K, Musovic S, Mateiu RV, Albrechtsen H-J, Smets BF. Mineral coating supports microbial activity in rapid sand filters for drinking water production. (ISME-15), August 24-29, 2014, Seoul, SK
 180. Valverde Perez B, Ramin E, Smets BF, Plósz BG. An Innovative Activated Sludge System for Enhanced Nutrient Recovery via Downstream Cultivation of Green Microalgae. 2014 IWA World Water Congress & Exhibition, Lisbon, Portugal.
 181. Wágner DS, Ramin E, Szabo P, Dechesne A, Smets BF, Plósz BG. Effects of Filamentous Bulking on Activated Sludge Rheology and Compression Settling Velocity. 2014. IWA World Water Congress & Exhibition, Lisbon, Portugal.(oral)
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182. Wágner DS, Valverde Perez B, Sæbø M, Van Wagenen J, Angelidaki I, Smets BF, Plosz BG. The Effect Of Light On Mixed Green Micro-Algal Growth: Experimental Assessment And Modelling. 2014. IWA World Water Congress & Exhibition, Lisbon, Portugal.
183. Albrechtsen H-J, Gülay A, Smets BF, Lee CO, Wagner FB, Tatari K et al. Diagnostics in biological rapid sand filters treating groundwater – governing factors for nitrification. 2014. AWWA Water Quality Technology Conference & Exposition, New Orleans, LA, USA. (oral)
184. Kinnunen M, Dechesne A, Albrechtsen H-J, Smets BF. A novel high-throughput drip-flow system to grow autotrophic biofilms of contrasting diversities. 2015. 13th Symposium on Bacterial Genetics and Ecology (BAGECO 13, Milan, Italy).
185. Klümper U, Dechesne A, Riber L, Gülay A, Brandt KK, Sørensen SJ, Smets BF. Metal stress modulates the immediate plasmid uptake potential of soil microbes. 2015. 13th Symposium on Bacterial Genetics and Ecology (BAGECO 13), 2015, Milan, IT (oral)
186. Valverde Perez B, Wágner DS, Cecchin F, Jensen CK, Smets BF, Plósz BG. Impact of operational conditions and reactor configuration on process performance and microbial community in short solid retention time EBPR systems. 2015. 1st IWA Resource Recovery Conference, Ghent, Belgium.
187. Wágner DS, Valverde Perez B, Sæbø M, Bregua de la Sotilla M, van Wagenen JM, Smets BF, Plosz BG. Wastewater resource recovery with green microalgae – modelling the microalgal growth, nutrient uptake and storage using ASM-A. 2015. 1st IWA Resource Recovery Conference, Ghent, Belgium.
188. Klümper U, Dechesne A, Riber L, Droumpali A, Brandt KK, Sørensen S et al. Magnitude and determinants of plasmid transfer from exogenous donor strains to complex microbial communities. 2015. 3rd International Symposium on the Environmental Dimension of Antibiotic Resistance (EDAR 3), Wernigerode, DE. (oral)
189. Klümper U, Brandt KK, Dechesne A, Riber L, Sørensen S, Smets BF. Metal specific modulation of community permissiveness towards broad host range plasmids through stress. 2015. 6th Congress of European Microbiologists (FEMS 2015), Maastricht, NL. (oral)
190. Palomo A., Rasmussen S, Sicheritz-Pontén T, Smets BF. Metagenomic analysis of microbial communities in rapid sand filter treating groundwater. Community diversity and metabolic potential. 2015. 6th Congress of European Microbiologists (FEMS 2015), Maastricht, NL.
191. Domingo-Félez C, Pellicer-Nàcher C., Petersen MS, González-Combarros R, Jensen MM, Sin G, Smets BF. Challenges encountered calibrating N₂O dynamics from mixed cultures. 2015. ICON4: 4th International Conference on Nitrification, Edmonton, Alberta, CA
192. Tatari K, Musovic S, Albrechtsen HJ, Smets BF. Density and distribution of nitrifying guilds in rapid sand filters for groundwater treatment. 2015. ICON4: 4th International Conference on Nitrification, Edmonton, Alberta, CA
193. Palomo A, Gülay A, Rasmussen S, Sicheritz-Pontén T, Smets BF. Taxonomic and metagenomic profiling of rapid sand filter microbiome reveals a high *Nitrospira* incidence 2015. ICON4: 4th International Conference on Nitrification, Edmonton, Alberta, CA (oral)
194. Gülay A, Musovic S, Albrechtsen H-J, Smets BF. A comprehensive 454 survey provides insights into microbial diversity and community structure in rapid sand filters. 2015. IWA Specialized Conference 'Biofilms in drinking water systems from treatment to tap'. Arosa, CH. (oral)

PUBLICATIONS (BOOKS & MONOGRAPHS)

Bioavailability of contaminants in soils and sediments. Processes, tools, and applications. 2003. Committee on bioavailability of contaminants in soils and sediments (member), National Research Council of the National Academies, National Academies Press, Washington DC. 420 pp

PUBLICATIONS (CHAPTERS)

1. Smets, B. F., K. Chandran, and R. G. Riefler 2001. Biodegradation of Individual Organic Contaminants, p. Sec. 3-3-1. In S. E. Powers (ed.), AEESP Environmental Engineering Processes Laboratory Manual.
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2. Smets, B. F., K. Chandran, and R. G. Riefler 2001. Estimation of Biokinetic Parameters, p. Sec. 3-3-2. In S. E. Powers (ed.), AEEESP Environmental Engineering Processes Laboratory Manual.
3. Smets, B. F. and L. Lardon. 2009. Describing extant horizontal transfer of mobile plasmidic elements with mass action models: inferences and limitations In Horizontal Gene Transfer: Genomes in Flux, Humana Press (M.B. Gogarten et al., eds)
4. Martins, G., Ribeiro, D.C., Terada, A., Smets, B.F., Brito, A.G., Nogueira, R., (2010). Phylogeny and Activity of Proteobacteria in lake sediments. In Proteobacteria: Phylogeny, Metabolic Diversity and Ecological Effects; Sezena., M.L., Ed.; Nova Science Publishers, Inc.
5. Rusalleda Beylier, M., M.D. Balaguer, C. Pellicer i Nacher, B.F. Smets, S.-P. Sun, and R.-C. Wang, 2011. Biological Nitrogen removal from domestic wastewater. In Comprehensive Biotechnology, M. Moo-Young, ed; Elsevier Science.

PUBLICATIONS (EDITED CONTRIBUTIONS)

1. Nikolaidis, N. C. Erkey, & B. F. Smets. 1999. Editors. Proceedings of the 31st Mid Atlantic Industrial and Hazardous Waste Conference, Storrs, CT: Technomic, Lancaster PA.
2. Grasso, D., Smets, B. F. 2002. Theme Editors, Hazardous Waste, in Encyclopedia of Life Support Systems (EOLSS), Eolss Publishers, Oxford ,UK, <http://www.eolss.net>

OTHER PUBLICATIONS

1. Chandran, K., J. V. Accashian, and B. F. Smets. 1996. Discussion of “Li, K.Y. and Y.B. Zhang. 1996. Oxygen transfer limitation of a respirometer. Wat. Environ. Res. 68, 36-41”. Wat. Environ. Res. **68** (6): 1084-1086.
2. Smets, B. F., R. T. Vinopal, D. Grasso, K. A. Strevett, and B.-J. Kim. 1995. Nitroglycerin biodegradation: Theoretical thermodynamic considerations. J. Energ. Mat. 13 (3/4): 385-398.
3. Menzie C, Burke AM, Grasso D, Harnois M, Magee B, McDonald D, Montgomery C, Nichols A, Pignatello J, Price B, Price R, Rose J, Shatkin JA, Smets B, Smith J, Svirsky. 2000. An approach for incorporating information on chemical availability in soils into risk assessment and risk-based decision making. Human Ecol. Risk Assess. **6**: (3) 479-510.
4. Pennisi, E. 2004. Researchers trade insights about gene swapping. Science. **305**:334-335 (This article reports on the Horizontal Gene Transfer Workshop that I co-organized)
5. Ni, B.-J., M. Rusalleda, C. Pellicer-Nàcher, B. F. Smets. **2013**. Reply to Comment on “Modeling Nitrous Oxide production during nitrogen removal via nitrification and denitrification: Extensions to the General ASM Models”. Environ. Scie Technol. DOI: 10.1021/es404125v

DOCTORAL STUDENT ADVISEES (PRIMARY AND CO ADVISOR)

1. Kartik V. Chandran, (BS University of Roorkee, India) Biokinetic characterization of ammonium and nitrite oxidation by a mixed nitrifying culture using extant respirometry, Ph.D. Environmental Engineering, University of Connecticut, 1999. *currently*: Professor, Columbia University, New York City, NY, USA.
 2. R. Guy Riefler, (BS Cornell University, MS University of Connecticut) Mechanistic studies on enzymatic nitroarene reduction and implications for the fate of nitroarene mixtures in redox-stratified biofilm, Ph.D. Environmental Engineering, University of Connecticut, 1999. *currently*: Associate Professor, Ohio University, OH, USA.
 3. Zhiqiang Hu, (MS Zhejiang Agricultural University, PR China), Nitrification inhibition by heavy metals and chelating agents, Ph.D. Environmental Engineering, University of Connecticut, 2002. *currently*: Professor, University of Missouri, Columbia, MO, USA.
 4. Jayne B. Morrow, (BS Montana State University) Ph.D Environmental Engineering, University of Connecticut, topic: Molecular biology and physical chemistry of microbial adhesion, *GAANN fellow*, 2004. *currently*: Senior Research Associate, National Institutes of Standards & Technology, Md, USA
 5. Hsiao-Hui Yang, (BS National Taiwan University, Taiwan) Ph.D. Microbiology, University of Connecticut, topic: Ecology and surface chemistry of microbial pathogens, 2004.
-

6. Olga Zelennikova, (MS St. Petersburg State University, Russia) Ph.D. Microbiology, University of Connecticut, topic: Rhizosphere microbial ecological processes, 2009. **currently:** Researcher, University of Washington, Seattle, USA.
 7. Hong Yin, (BS & MS Southeast University, PR China) Ph.D. Environmental Engineering, University of Connecticut, topic: Metabolic engineering for nitroarene catabolism, 2005. **currently:** Process Engineer, Metcalf&Eddy, AECOM, USA.
 8. Ran Yu, (BS & MS Southeast University, PR China) Ph.D. Environmental Engineering, University of Connecticut, topic: Microbial iron oxidation at the groundwater/surface water interface, 2007. **currently:** Assistant Professor, Southeast University, Nanjing, PRC.
 9. Cairn Ely, (MS Univ. of Virginia) Ph.D. Environmental Engineering, University of Connecticut, topic: Rhizoremediation, 2009. **currently:** Assistant Professor, Central Connecticut State University, USA.
 10. Katerina Tsitonaki (BS Univ. Crete, GR). PhD Environmental Engineering, Technical University of Denmark, topic: Integrated treatment trains combining advanced oxidation/bioremediation for groundwater remediation, 2008. **currently:** Process Engineer, COWI, DK.
 11. Susanne Lackner, (BS & MS University of Stuttgart, DE). PhD Environmental Engineering, Technical University of Denmark, topic: Redox stratification controlled biofilm reactors, 2009, **currently:** Professor, Technische Universität Darmstadt, GE.
 12. Sanin Musovic, (MS Univ. of Copenhagen, DK), PhD Environmental Engineering, Technical University of Denmark, topic, The mobile gene pool and gene transfer in agricultural soils, 2010, **currently:** Senior Researcher, DTI, Århus, DK
 13. José Seoane, (MS Univ. Autonoma Madrid, ES & INRA, FR), PhD Environmental Engineering, topic: Validation and identification of an individual-based model describing horizontal gene transfer in biofilms, 2010 **currently:** Senior Researcher, REPSOL, ESP
 14. Gamze Gülez, (MS NC State University, USA), PhD Environmental Engineering, topic: Responses of *Pseudomonas putida* KT2440 to mild water stress, Nov. 2010. **currently:** Senior Researcher, EPFL, CH.
 15. Carles Pellicer, (MS Polytechnica Valencia, ESP), PhD Environmental Engineering, topic: Physical and physiological properties of membrane aerated biofilms, April. 2013. **currently:** Process Manager R&D, Hydrotech AB, SE.
 16. Katrine Vangsgaard, (MS Technical Univ. Denmark, DK), co-advisor, PhD Chemical Engineering, Oct. 2013 **currently:** Process Engineer, Kruger A/S, DK
 17. Karolina Tatari, (MS Technical Univ. Denmark, DK), co-advisor, PhD Environmental Engineering, March. 2014 **currently:** Postdoctoral Researcher, DTU, DK
 18. Chen Lu (MS Hohai University, enrolled at Jilin University, PRC), guest PhD, June 2014 **currently:** Assistant Professor, Jilin Jianzhu University, PRC
 19. Arda Gülay, (MS Istanbul Technical Univ., TU), PhD Environmental Engineering, Oct. 2014 **currently:** Postdoctoral Researcher, DTU, DK
 20. Carson Odell Lee (MS Univ. of New Mexico, USA), co-advisor, PhD Environmental Engineering, Oct 2014 **currently:** Postdoctoral Researcher, DTU, DK
 21. Ayten Gizem Mutlu, (MS Middle East Technical Univ., TU), PhD Environmental Engineering April 2015
 22. Uli Klumper (MS Univ. Duisburg – Essen, GE), PhD Environmental Engineering, June. 2015 **currently:** Postdoctoral Researcher, University of Exeter, UK
 23. Lasse Pedersen (MS Univ. of Copenhagen, DK), PhD Environmental Engineering, August 2015
 24. Borja Valverde Perez (MS Univ. Santiago de Compostela, ESP), co-advisor, PhD candidate, Dec 2015. **currently:** Postdoctoral Researcher, DTU, DK
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25. Katerina Papadopoulou (MS Univ. of Crete, GR), PhD candidate, Expected May 2016
26. Dorottya Sarolta Wágner (BS, Techn. Univ. Budapest, HU, MS DTU, DK), co-advisor, PhD candidate
27. Carlos Domingo Felez (MS, DTU, DK), PhD candidate, Expected Dec 2016
28. Sara Ekström (MS, Univ. Lund, SE), PhD candidate, Expected Dec 2016
29. Alex Palomo (MS, Univ. Auton. Madrid, ESP), PhD candidate, Expected Dec 2016
30. Marta Kinnunen (MS Clarkson Univ, USA), PhD candidate, Expected June 2017
31. Vaibhav Diwan (MS, Lund Univ, SE), co-advisor, PhD candidate, Expected Dec 2016
32. Elena Torresi (MS, Aalborg Univ, DK), co-advisor, PhD candidate, Expected Dec 2016
33. Bastiaan Cockx (MS, Delft Univ. Technology, NL), PhD candidate, Expected Dec 2017
34. Yunjie Ma (MS, Univ. Science Technology China, PRC), PhD candidate, Expected Dec 2017
35. Jan-Michael Blum (MS, TU Braunschweig, DE), PhD candidate, Expected Feb 2018
36. Su Qingxian (MS, Sun Yat Sen University, PRC), PhD candidate, Expected Oct. 2018

POST DOCTORAL ADVISEES

Yuhui Yang, Hassan Brim, Catalina Arango Pinedo (now: Asst. Prof., St Joseph's University, PA) , Alexis Bazire (now: Asst. Prof., Univ. Bretagne Sud, FR), Laurent Lardon (now: Assoc. Prof., Univ. Montpellier, FR) Najoi El Azhari, Rongchang Wang (now: Assoc. Prof., Tongji Univ., PRC), Akihiko Terada (now: Assoc. Prof., Tokyo Univ. Agric. Technology, JP), Brian Merkey, Arnaud Dechesne, Bing-Jie Ni, Sanin Musovic, Jose Seoane, Li Liu, Marlene M. Jensen, Arda Gülay, Jane Fowler, (current)

SPONSORED RESEARCH (EXTERNAL GRANTS)

PROJECT TITLE	FUNDING AGENCY	PROJECT DATE	LEVEL
Development of an innovative bioscrubber for volatile organic compounds; <i>with</i> T. J. Overcamp & C. P. L. Grady Jr. at Clemson Univ.	US Army Corps of Engineers CERL, Champaign IL	08/01/93-10/31/94.	\$68,539
Development of a protocol for establishing the shock load capacity of activated sludge systems treating synthetic organic compounds; <i>with</i> C. P. L. Grady Jr. at Clemson Univ.	Eastman Kodak Co.	01/01/94-05/15/95	\$68,092
Biodegradation of Polychlorinated Pollutants: Molecular Probes as Measures of the Biocatalytic Capacity of Ecosystems; <i>with</i> K. M. Noll	Connecticut Institute for Water Resources, United States Geological Survey	09/01/95-08/31/96	\$20,026
Biodegradation of Nitroglycerin; <i>with</i> D. Grasso	US Army Corps of Engineers CERL, Champaign IL	09/01/95-12/31/95	\$24,583
Development of Respirometric Protocols to Quantify Microbial Inhibition in Activated Sludge; Evaluation of the Inhibitory Effect of Organic Compounds	Pfizer Inc., Groton CT	06/01/95-11/30/95	\$14,948
Isolation and Identification of Cr(VI) Reducing Bacteria from Soils	CH2MHill, Albuquerque NM	06/01/96-8/31/96	\$ 5,000
Coupling of 2,4- and 2,6-DNT	US Air Force Office of	01/01/97-12/31/97	\$25,000

PROJECT TITLE	FUNDING AGENCY	PROJECT DATE	LEVEL
mineralization with NO ₂ ⁻ removal by denitrification	Scientific Research, Bolling AFB		
Biodegradation of Nitroglycerin: Stoichiometry and Inhibition Studies	US Army Corps of Engineers CERL, Champaign IL	03/01/97-12/31/97	\$25,000
Quantification of horizontal gene transfer as adaptive response to contaminant stress in microbial communities-Development of an experiential environmental engineering course	National Science Foundation CAREER Program	07/01/97-06/30/02 <i>(incl. REU and Industrial Match)</i>	\$303,419
Preliminary study to evaluate and maximize N-removal at Hockanum WPCF	Town of Manchester, CT	07/28/97-10/28/97	\$9,680
PAH bioremediation at former Manufactured Gas Plant sites; <i>with D. Grasso & J. J. Pignatello</i>	NorthEast Utilities Service Company, Rocky Hill CT	08/15/97-07/15/01	\$400,174
Horizontal gene transfer as adaptive response to heavy metal stress in subsurface microbial communities	Department of Energy, Office of Energy Research NABIR Program	09/15/97-08/31/00	\$305,045
Fundamental Study for Biodegradation of Nitroglycerin in Biofilter	US Army Corps of Engineers CERL, Champaign IL	05/01/98-12/31/99	\$61,459
Inhibition of Biological Nitrogen Removal: Microbiology, Physical Chemistry & Process Engineering; <i>with D. Grasso & J. Semon-Brown</i>	Long Island Sound Research Fund, Environmental Protection Agency Region 1	03/15/99-08/15/01	\$187,079
Evaluation of Engineered Bioattenuation at Sikorsky Stratford Site	United Technologies Research Corporation, Hartford CT	07/01/99-12/31/99	\$25,000
Innovative Technology Development for Prevention of Pathogen Migration from Feedlots; <i>with D. Grasso & R. T. Vinopal</i>	US Department of Agriculture, National Research Initiative Competitive Grants Program	11/01/99-12/31/03	\$265,000
A Graduate Fellowship Program in Environmental Biotechnology at the University of Connecticut, PI <i>with K. M. Noll</i> co-PI, ENVE/MCB faculty, co-Is	U.S. Department of Education	08/15/00-08/14/03	\$688,500 <i>(direct cost)</i>
Natural Attenuation of Chromium and Chlorinated Ethenes at the Sikorsky Facility in Stratford, CT; <i>with N. P. Nikolaidis</i>	Sikorsky Aircraft Corporation, United Technologies Corporation, Hartford, CT	01/01/00-5/31/01	\$152,720
Inhibition of Biological Nitrogen Removal at POTWs - A Critical Investigation of Microbiology, Physical Chemistry and Process Engineering at a NY BNR Facility; <i>with K. Chandran and R.R. Sharp</i> (at Manhattan College)	Long Island Sound Study, US EPA Region 1	08/15/00-08/14/01	\$69,945
Development of predictive tools to infer inhibition of biological nitrogen removal at POTWs via long term bench-scale and full-scale monitoring ; <i>with K. Chandran</i>	Connecticut Institute for Water Resources, United States Geological Survey	03/01/01-02/28/02	\$16,054
Geochemistry, Biochemistry, and Surface /	US EPA Hazardous	10/01/01-09/31/02	\$220,000

PROJECT TITLE	FUNDING AGENCY	PROJECT DATE	LEVEL
Groundwater Interactions for As, Cr, Ni, Zn, and Cd with Applications to Contaminated Waterfronts; PI <i>with</i> A. A. MacKay, N. P. Nikolaidis and A. T. Stone (Johns Hopkins)	Substances Research Center, 2000-STAR-A1 (Johns Hopkins University, lead institution; total \$5 M for 10/01-09/05)		
Directed Evolution of Aromatic Dioxygenases for Trinitrotoluene and Aminodinitrotoluene Degradation; PI <i>with</i> T. K. Wood	NSF- Division of Bioengineering & Environmental Systems	08/15/01-08/14/04 (extended to 08/05)	\$600,000
Role of horizontal gene transfer in the evolution of catabolic pathways in microbial communities (Support to initiate collaborative research with labs at NERI and DTU, Denmark)	NSF – Office of International Programs & Division of Bioengineering & Environmental Systems	08/15/01-08/14/02	\$12,000
Mechanistic Role of Plant Root Exudates in the Phytoremediation of Persistent Organic Chemicals; Co-I <i>with</i> J. C White (PI), CT Ag. Expt. Station, & D. Gage	EPA Joint Program on Phytoremediation 2001-STAR-C1	08/15/01-08/14/04 (extended to 08/05)	\$400,000
Identifying new strategies for the biochemical treatment of pharmaceutical wastewater effluents; PI <i>with</i> A. A. MacKay	Pfizer, Inc. Central Research Division, Groton, CT	08/15/01-08/14/04	\$172,175
Importance of mobile genetic elements and conjugal gene transfer for subsurface microbial community adaptation to biotransformation of metals, co-I <i>with</i> S. Sørensen (Copenhagen Univ, DK, PI), N. Kroer (NERI, DK, co-I), T. Barkay (Rutgers Univ., co-I)	Department of Energy, Office of Energy Research NABIR Program	01/01/04-12/32/06	\$812,612*
Seasonal controls of Arsenic transport across the groundwater-surface water interface at a closed landfill co-PI <i>with</i> A. A. MacKay, and H. Fairbrother Stone (Johns Hopkins)	US EPA Hazardous Substances Research Center, 2000-STAR-A1	10/01/03-09/31/05	\$248,966
Integrated biotreatment technology for nitrogen-rich wastewaters in advanced life support systems; PI <i>with</i> N. G. Love (Virginia Polytechn. Inst.)- <i>PI status transferred to NGL due to departure to DK</i>	Nat. Aeronautics and Space Agency NRA 03-OBPR-01	12/1/03-11/30/06	\$538,718*
A Workshop on Horizontal Gene Flow in Microbial Communities; PI <i>with</i> Tamar Barkay (Rutgers University).	NSF-MCB-MO/MIP & DOE-NABIR	06/13-16/04	\$100,977
Wastewater Treatment to Minimize Nitrogen Delivery from Dairy Farms to Receiving Waters, co- I <i>with</i> N. G. Love (PI) & K. Knowlton (Virginia Polytechn.Inst.)	Cooperative Institute for Coastal and Estuarine Environmental Technology	08/15/04-08/14/06	\$217,267*
Diffusional Constraints Affecting Microbial Distribution and Activity in Unsaturated Porous Media, coPI <i>with</i> Dani Or (Univ. Ct)	NSF- Hydrologic Sciences Program	08/15/04-08/14/07	\$436,379*
Rapid Microbial Adaptation by Horizontal Gene Transfer: Environmental Management Opportunities & Public Health Concerns	EC-FP 6, Marie Curie Excellence Grant	08/15/05-08/14/09	1.9 M €
Redox Stratification Controlled Biofilm Reactors (ReSCOBiR)	Danish Free Research Council	01/01/06-12/31/08	1.8 M DKK

PROJECT TITLE	FUNDING AGENCY	PROJECT DATE	LEVEL
Center for Environmental and Agricultural Microbiology, coPI with J. Sørensen (KU Life), O. Nybroe (KU Life), J. Aamand (GEUS), B. Halling-Sørensen (KU Farma)	Villum Kann Rasmussen Fonden, DK	03/01/06-02/28/11	25 M DKK (BFS share 5.2 M DKK)
RISKPOINT - Assessing the risks posed by point source contamination to groundwater and surface water resources coI, with P. J. Binning (DTU), PI and several others	Danish Council for Strategic Research	09/08-08/12	15 M DKK (BFS share 1 M DKK)
Physical and Physiological Properties of Membrane Aerated & Membrane Supported Biofilms	Veolia Environment (Recherche & Developpement)	09/09-08/12	0.47M €
Microbial Remediation of Contaminated Soil and Water Resources, co I (J. Aamand, PI)	Danish Council for Strategic Research	01/01/09-12/31/14	3.7 M DKK (BFS share)
EcoDesign MBR: Design of Microbial Communities in Membrane Bioreactors, coI and WP leader with PH Nielsen (PI)	Danish Council for Strategic Research	03/01/10-02/28/16	6 M DKK (BFS share)
DW Biofilter: Sustainable Drinking Water Treatment, coPI with HJ Albrechtsen (PI)	Danish Council for Strategic Research	03/01/10-02/28/14	11 M DKK
Biotreat: Biotreatment of drinking water polluted by pesticides and estrogens, co-I and WP leader with J. Aamand (GEUS, DK, PI)	EC-FP7	01/01/11-12/31/14;	0.35 M € (BFS share)
Center for Environmental and Agricultural Microbiology, coPI with J. Sørensen, O. Nybroe & P. Holm(KU Life), S.J. Sørensen (KU Nat), J. Aamand (GEUS), B. Halling-Sørensen (KU Farma)- Phase 2	Villum Kann Rasmussen Fonden, DK	07/01/11-06/30/14	6 M DKK (BFS share)
Diagnostics and management of nitrous oxide production and emission during biological wastewater treatment – N ₂ OMAN (PI)	Danish Free Research Council	01/01/13-12/31/15	5 M DKK
LaGAS-Diagnostics, Monitoring and Mitigation of N ₂ O (Laughing Gas) Emissions from Wastewater Treatment Operations: Towards Climate Compatible Wastewater Technology (PI)	Danish Council for Strategic Research	02/01/13-01/31/17	20 M DKK
MERMAID – An initial training network in Microbial Resource Management and Engineering to close the Urban Water Cycle (PI)	EC-FP7 People Program (Marie Curie)	09/01/13-08/31/17	4 M €
PIANO - Policies, Innovation, And Networks for enhancing Opportunities for China Europe water cooperation (co lead and WP leader)	H2020	03/01/15- 02/28/18	1.1M €
Novel Biocathodic Microbes for Efficient Energy Harvesting (PI)	NovoNordisk Foundation	01/01/15-12/31/17	2.5M DKK (excl. OH)

TEACHING ACTIVITY

(at The University of Connecticut & Technical University of Denmark)

UNDERGRADUATE (BSC LEVEL)

Course #	Course Title	Semester Offered
ENGR 166	Foundations of Engineering (Environmental Engineering section)	S04
CE/ENVE260	Water Quality Engineering	S96 S97 S99 S04
CE/ENVE262	Environmental Engineering Laboratory	S97 S98 S99 S00 S01
CE/ENVE263	Environmental Engineering Fundamentals	F97 F98 F02 F03

At DTU

Course #	Course Title	Offered
12134	Environmental Microbiology/Miljøteknisk Mikrobiologi	F05 –F14
29051	Applied Biodiversity/Anvendt Biodiversitet	S09

GRADUATE (MSC/PHD LEVEL)

Course #	Course Title	Offered
CE394/ENVE306	Biodegradation and Bioremediation	F95 F96 F99
CE320	Advanced Environmental Engineering Laboratory	S98 S99
CE388/ENVE322	Environmental Biochemical Processes	S95 S98 S01 S03
CE 320	Quantitative Microbial Biochemistry (co-instructor)	F00
CE400/ENVE400	Environmental Engineering Seminar (coordinator)	F95 - F99

At DTU

12131	Wastewater Bio/Technology/Spildevandsrensning	F07-F14
12138	Environmental Microbiology II	S13, S14
12913	Strategy and Steps in Writing and Publishing Scientific Articles (PhD course) coordinator	S12
12903	Individual Based Modelling of Microbial Interactions and Processes (PhD Course) coordinator	S08 S09

At Northwestern Univ.

	Environmental Biotechnology	S 10
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PROFESSIONAL SERVICE***Intramural-Technical University of Denmark***

DTU MultiAssay Core Facility

Advisory Committee, Member, 09-

Department of Environmental Engineering

Head of International Research Collaboration

- o Department wide responsibility on International Research Collaboration and Promotion, specific emphasis on EU, South Korea, China, and Singapore

Member of Executive Board 11 - 13

- o Department wide responsibility on International Research Collaboration and Promotion
- o Deputy Head, Environmental Chemistry and Microbiology Section
- o Member of Research, Innovation, Public Service Committee

Deputy to Head, Environmental Engineering Doctoral School, 10-11

Research Committee, Appointed Member, 05-10

- o Primary scientific lead on Integrated Water Technology research collaboration between DTU and KAIST (Korea Advanced Institute of Science-Technology)
- o Major responsibility for guiding and evaluating strategic research plans and monitoring research productivity
- o Major responsibility to prepare department for external research performance assessment

Faculty Search Assessment Committee, Chairman, 09
 Microbial Ecology Research Group, Founder and Coordinator, 06-
 Wastewater Technology Research Group, Interim Coordinator, 07-10
 Urban Water Engineering (Departmental Research Theme), Appointed Leader, 08-10
 L.A. Colding Lecture Series, Co-founder and Committee Member, 07-

Intramural-University of Connecticut

Civil and Environmental Engineering Department

Faculty Secretary 95/96, 96/97
 Facilities & Equipment Committee 95/96, 96/97
 Environmental Processes Laboratory, Director 97/98-99/00
 Space Allocation Committee, Chair 07/00-08/01

Environmental Engineering Program

Program Chair 8/99-8/01
 Seminar Committee, Chair 95/96-99
 Senior Faculty Search Committee, 95/96, 97/98
 Junior Faculty Search Committee, Chair 98/99, 00/01
Outcome: Recruitment of Prof. Britt A. Holmen & Prof. Allison. A. MacKay
 Curriculum & Courses Committee, Chair 02/03
Outcome: Complete Revision of Graduate Curriculum resulting in Core & 3 Specialty Tracks

School of Engineering

BS in Environmental Engineering Committee, 97/98
Outcome: Curriculum Preparation and Implementation of a New UG Major
 Northeast Utilities Endowed Chair Search Committee, 98/01
 International Conference on Advanced Technologies for Homeland Securities (www.engr.uconn.edu/icaths/), Storrs CT,
 Track Coordinator "Biological and Chemical Threat Detection: Technology Challenges" 09/03

Extramural

Promotion and Tenure Reviewer, ETH CH; U of Illinois, USA; UT Austin, USA, NC State Univ, USA
 2011, Notre Dame Univ, USA 2012, Univ. Minnesota, USA 2012, Chalmers Univ, SE 2012, Col.
 School of Mines, 2014, KAIST, 2014

Professorial Assessment Committee, Univ. Southern Denmark, 2009

Program Assessment Committee for all Bioengineering Curricula in Flanders– VLIR, Belgium, 2006

Center for Environmental & Agricultural Microbiology (CREAM: Interdisciplinary center between
 KU, GEUS and DTU, DK), Management Committee, 01/06-05/15

EPA Center for Hazardous Substances in Urban Environments (HSRC, Johns Hopkins Lead
 Institution), Internal Management Committee, 10/01-08/04.

Association for Environmental Engineering & Science Professors, Conference Planning Committee,
 Distinguished Lecturer Committee, 10/02-08/04

31st Industrial and Hazardous Waste Conference, Storrs, CT, Conference Co-chair, 6/99

Water Environment Federation

Biotechnology/Industrial Ecology-Workshop, Invited Participant, 9/98
 Program Committee, Research Subcommittee, 10/99 – 10/04
 WERF, Project Subcommittee on Biological Nutrient Removal, 05/00 – 08/04

International Water Association

Specialist Group "Assessment and Control of Hazardous Substances in Water", Management Committee, 9/04- 6/08
 Task Group "Greenhouse Gasses", Technical Contributor wrt N₂O emissions, 2010- now
 Specialist Group "Biofilms, Management Committee", 2013- now

American Society Microbiology

Regional Meeting, Session Co-chair, 10/98
 109th General Meeting, Boston, USA, Colloquium Organizer, 08

External PhD Examiner (Opponent)

Ecole Polytechnique de Montréal, Department de Genie Chimique, CA 00
Ghent University, Faculty of Agricultural and Applied Biological Sciences, BE 03, 09
University of Copenhagen, DK 05, 13, 15
University of Aarhus, DK 14
Universidad Autonoma de Barcelona, ESP 07
Université de Lausanne, CH 08
Virginia Polytechnic Institute & State University, USA 08
Université Pierre et Marie Curie, FR 09
Univ. Minho, PT 11
Univ. Girona, ESP 11
Univ. Auckland, NZ 14

National Research Council, Water Science & Technology Board, Committee on the Bioavailability of Contaminants in Soils and Sediments, 03/00-09/02

1st US-Egypt Workshop on Microbial Ecology, Invited Participant of US delegation, Cairo Egypt, May 6-10, 2001

Regional Workshops Organization

New England Water Environment Federation, Specialty Conference on BNR, University of Connecticut, Storrs, CT, April 5, 2000,
Inhibition of Biological Nutrient Removal, The University of Connecticut & Manhattan College, February 5, 2003, Stamford CT

International Workshop/Conference Organization

IWA MEWE Conference, DK, 2016, Conference Chair
IWA Biofilm Conference August 24-27, 2015, Arosa, CH Scientific Committee
IWA/WEF Nutrient Removal and Recovery Conference, Vancouver, CA, July 28 - 31, 2013, Scientific Committee
14th International Symposium on Microbial Ecology (ISME-14), August 22-27, 2012, Copenhagen, DK (oral), Local Organizing Committee
IWA Biofilm Conference October 27-30, 2011, Shanghai, PRC, Scientific Committee

Horizontal Gene Flow in Microbial Communities: Evidence from the evolutionary record, relevance for shaping the metabolic prowess of extant microbial communities, and opportunities for environmental management; Co-organizer with Tamar Barkay (Rutgers University), June 13-15, 2003. Invitation-only 40-person workshop addressing state of the science. Funded by NSF and DOE.

Reviewer Activities

Journals : Biodegradation (editorial board member since 2000), Environmental Engineering Science (editorial board member since 2010), Environmental Microbiology (editorial board since 2011), Biotechnology & Bioengineering, Environmental Science & Technology, Water Research, Journal of Environmental Engineering, Applied & Environmental Microbiology, Chemosphere, Environmental Microbiology, Environmental Toxicology & Chemistry, Vadoze Zone Journal (associate editor 2004-2008)

Proposals: National Science Foundation (Panel & *Ad Hoc* Reviewer for: Division of Bioengineering and Environmental Systems, Division of Chemistry, Division of Environmental Biology, Division of Molecular & Cellular Biosciences, Division of Hydrologic Sciences, Microbial Observatories/Microbial Interactions & Processes, Experimental Program to Stimulate Competitive Research (EPSCOR)); National Institute of Health, Department of Energy (Office of Energy /Office of Basic Energy Sciences), United States-Israel Binational Science Foundation, Science Foundation Ireland, National Science Foundation Netherlands, Polish-Swiss Bilateral Foundation, Cyprus Foundation Promotion of Science

Last Updated *April 2016*
