

Poul L. Bjerg, Professor, Department of Environmental Engineering

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Department of Environmental Engineering, Building 115, room 153,
Bygningstorvet, Technical University of Denmark, DK-2800 Lyngby, Denmark

Date and place of birth: August, 24, 1961 in Krusbjerg, Denmark

Employment and degrees:

2002- Professor, 1-8-2002, Institute of Environment & Resources
2000 Sabbatical at CSIRO, Land and Water, Perth, Australia (12-9-2000 to 10-2-2001)
1996 Associate professor 1-8-1996, Department of Environmental Science and Engineering (IMT), Technical University of Denmark
1992 Ph.D., IMT, Technical University of Denmark
1987 M.Sc. in Environmental Engineering, Technical University of Denmark

General

Research focus in the area of remediation technologies and risk assessment for contaminated soil and groundwater. Leader of several research projects under different programmes (FP6, Strategic Environmental Research Programme 1996/Pesticides, Danish Research Council /Groundwater Research Centre/Technical University of Denmark). Significant experience with collaboration projects with leading consulting companies (GeoSyntec, Cowi, Orbicon, NIRAS) and administrative bodies (Danish EPA, regions/former counties). More than 50 ISI publications, several with national and international co-authors. Supervisor/co-supervisor for 11 Phd-projects and 75 master thesis students.

Leadership experiences and boards/committees, selection

2005- Head of E&R PhD-programme and member of PhD-programme committee, DTU
2005- Member of the Editor-in-chief group "Journal of Contaminant Hydrology"
2004- Chairman of the ATV-committee for soil and groundwater
2001-2005 Vice head of Institute of Environment & Resources
2000 Co-chairing, Groundwater 2000, 6-8 June, Int. conference in Copenhagen

Projects, headed by Poul L. Bjerg, selection

2007- Collaboration project, "Treatability studies for chloroethanes" funded by the Capitol Region of Denmark.
2005-2006 Collaboration project, "Remediation of chlorinated solvents in groundwater and risk assessment at contaminated sites", funded by County of Copenhagen
2003-2006 Technology development project, "Anaerobic dechlorination of chlorinated solvents in groundwater" funded by Danish EPA.
2003-2006 Collaboration project "Remediation of chlorinated solvents in groundwater", funded by County of Funen
2002-2005 Research project, "CORONA", STREP funded by EU, FP6
2001-2003 Research project, "Natural and enhanced remediation of contaminant plumes in groundwater" at the Groundwater Research Centre, Technical University of Denmark funded by the Danish Research Council
1996-1999 Research project, "Field Investigation on transport and fate of pesticides in aquifers" funded by the Strategic Environmental Research Programme.

Phd Education, on-going

Mads Trolborg (from 2006-): Quantification of uncertainties in risk assessment of groundwater contamination from point sources. Co-supervisor
Gitte Lemming (from 2006-): Strategies for in-situ remediation of chlorinated solvents - integration of life cycle assessments and cost-effectiveness analyses
Camilla Christiansen (from 2006-): Quantification of governing processes and development of methods for remediation of clayey till
Aikaterini Tsitonaki (from 2005-): Treatment trains for the remediation of aquifers polluted with chlorinated solvents and other contaminants

Selected publications 2006-2008

International refereed journals, ISI

(58) Christiansen, C., Riis, C., Christensen, S. B., Broholm, M. M., Christensen, A. G., Klint, K. E. S., Wood, J. S. A., Bauer-Gottwein, P., and Bjerg, P. L. (2008): Characterization and quantification of pneumatic fracturing effects at a clay till site. Environmental Science and Technology, 42, 570–576.

(57) Tsitonaki, K. Smet, B.F.; Bjerg, P.L (2008): The effects of heat-activated persulfate oxidation on soil microorganisms. Water Research, 42, 1013-1022.

(56) Trolborg, M., Lemming, G., Binning, P.J., Tuxen, N., and Bjerg, P.L. (2008): Risk assessment and prioritisation of contaminated sites on the catchment scale, submitted to Journal of Contaminant Hydrology.

(55) Friis, A.K., Edwards, E.A., Albrechtsen, H.-J., Udell, K.S., Duhamel, M. & Bjerg, P.L. (2007): Dechlorination after thermal treatment of a TCE-contaminated aquifer: Laboratory experiments. Chemosphere, 67, 816-825.

(54) Friis, A.K., Heimann, A.C., Jakobsen, R., Albrechtsen, H.-J., Cox, E. & Bjerg, P.L. (2007): Temperature dependence of anaerobic TCE-dechlorination in a highly enriched *Dehalococcoides*-containing culture. Water Research, 41, 355-364.

(53) Friis, A.K., Kofoed, J.L.L., Heron, G., Albrechtsen, H.-J. & Bjerg, P.L. (2007): Microcosm evaluation of bioaugmentation after field-scale thermal treatment of a TCE-contaminated aquifer. Biodegradation, (In press)

(52) Hønning, J., Broholm, M.M. & Bjerg, P.L. (2007): The role of diffusion in chemical oxidation of PCE-contaminated clayey till with interbedded sand lenses. Submitted.

(51) Hønning, J., Broholm, M.M. & Bjerg, P.L. (2007): Quantification of potassium permanganate consumption and PCE oxidation in subsurface materials. Journal of Contaminant Hydrology, 90, 221-230.

(50) Friis, A.K., Heron, G., Albrechtsen, H.-J., Udell, K.S. & Bjerg, P.L. (2006): Anaerobic dechlorination and redox activities after full-scale

electrical resistance heating (ERH) of a TCE-contaminated aquifer. Journal of Contaminant Hydrology, 88, 219-234.

(49) Friis, A.K., Albrechtsen, H.-J., Cox, E. & Bjerg, P.L. (2006): The need for bioaugmentation after thermal treatment of TCE-contaminated aquifer: Laboratory experiments. Journal of Contaminant Hydrology, 88, 235-248.

(48) Lønborg, M.J., Engesgaard, P., Bjerg, P.L. & Rosbjerg, D. (2006): A steady state redox zone approach for modeling the transport and degradation of xenobiotic organic compounds from a landfill site. Journal of Contaminant Hydrology, 87, 191-210.

(47) Prommer, H., Tuxen, N. & Bjerg, P.L. (2006): Fringe-controlled natural attenuation of phenoxy acids in a landfill plume: Integration of field-scale processes by reactive transport modeling. Environmental Science and Technology, 40, 4732-4738.

(45) Tuxen, N., Reitzel, L.A., Albrechtsen, H.-J. & Bjerg, P.L. (2006): Addition of oxygen enhances phenoxy acid biodegradation in ground water at contaminated sites. Groundwater, 44, 256-265.

Other publications

Bjerg, Poul Løgstrup; Broholm, Mette Martina; Scheutz, Charlotte; Weeth, E.B.; Jørgensen, T.; Jacobsen, C.S.; Durant, N.; Cox, E.; Rasmussen, P.; Christophersen, M. (2007). Challenges in remediation of low permeability sediments by enhanced reductive dechlorination of chlorinated solvents. In: *Groundwater Quality 2007: Securing Groundwater Quality in Urban and Industrial Environments, Fremantle, Western Australia, 2-7 December 2007. Proceedings of the Sixth International IAHS Groundwater Quality Conferences* (p. Paper No. 278P). Wembley, WA: CSIRO

Broholm, Mette Martina; Hunkeler, D.; Abe, Y.; Jeannotat, S.; Aravena, R.; Westergaard, C.; Jacobsen, C.S.; Just, N.; Rokkjær, A.; Bjerg, Poul Løgstrup (2007). Integrated plume characterisation including isotopic fractionation and molecular biological tools documents degradation of DCE and VC under iron reducing conditions in a deep aquifer. In: *Groundwater Quality 2007: Securing Groundwater Quality in Urban and Industrial Environments, Fremantle, Western Australia, 2-7 December 2007. Proceedings of the Sixth International IAHS*

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Groundwater Quality Conferences (p. Paper No. 300P). Wembly, WA: CSIRO