

# CURRICULUM VITAE

ALEX C. HOFFMANN

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## PERSONAL DETAILS

Gender: Male

Date of birth: 9th of February, 1952

Place of birth: Næstved, Denmark

Citizenship: Danish

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## CAREER SUMMARY

More than twenty years of industrial and academic experience in research and development, consultation and teaching within the field of Chemical Engineering. Expertise in transport phenomena and thermodynamics, specifically in technology involving multiphase systems. Focus on cross-disciplinary research for industry (mainly energy) applying micro- and nanoscale modeling to processes involving multiphase systems in cooperation with mathematicians, chemists and physicists.

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## EDUCATION/QUALIFICATIONS

1980	B.Sc. (Hons. 2:1), Chemical Engineering, University of the South Bank. Specialization: electrochemistry
1983	Ph.D. Chemical Engineering, Ramsay Memorial Laboratory for Chemical Engineering, University College London. Thesis: "Gas Fluidization at Elevated Pressures".
1985	Chartered Engineer, CEng.
2003	Chartered Scientist, CSci.

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## WORKING EXPERIENCE

- 01/2001–present Full Professor at the Dept. of Physics and Technology, University of Bergen. Responsible for the masters specialization Multiphase Systems within the study programme Process Technology. Head of the Theoretical Physics and Energy Physics Unit in the Department, and head of a research group within the unit, the group having a yearly budget of about 3 million NOK.
- 01/1987–12/2000 Assistant, and from 1992 Associate professor at the Department of Chemical Engineering, University of Groningen, the Netherlands  
*Research:* Particle and dispersed phase technology, (computational) fluid dynamics.  
*Teaching:* A number of courses in fundamental and applied thermodynamics and transport phenomena.  
*Administration:* Study coordinator for the Department. Served on planning committees for education reforms.
- 01/1984–01/1987 Research associate and consultant at SPS Harwell, UK, detached from the University of Surrey. Was responsible for the SPS cyclone research program, reporting to the sponsoring industries. Consultant in gas cleaning. Made the safety case for, and commissioned, an industrial scale experimental rig.
- 03/1978–03/1979 Engineer at UOP, Chicago, USA. Operated oil refining pilot plants. Researched processes for recovering heavy metals from oil residues. Characterized foaming problems in a catalytic cracking process.

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LIST OF RESEARCH PROJECTS

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Title of Project	Partners	Sponsors, Manpower and Duration
Discharge and fluidization of cohesive powders under vibration	Prof. Janssen, Dept. Chem. Eng., RuG	University. 1 Ph.D. student, 4 masters students, 1 technician part-time, work-shop staff. 4 years.
Particle mixing and segregation in batch and continuous fluidized beds	Prof. Dehling, Dept. of Math, Univ. of Bochum, Dr. Samson, Shell Global Solutions	Shell Global Solutions and University. 1 Ph.D. student, 6 masters students. 5 years.
The effect of solids loading in gas-solid cyclones	-	SON (Dutch public funding), University. 3 masters students. 1.5 years
The 'natural vortex length' in gas-solid cyclones	Ir Dries, Shell Global Solutions	NFR (Norwegian public funding), Shell Global Solutions, UiB. 1 post-doctoral fellow, 2 masters students. 2 years
The dynamics of pellets in interconnected gas fluidized beds	Prof. Yates, Dept. of Chem. Eng., UCL, Prof Seville, Dept. of Chem.Eng, Univ. of Birmingham	EU SOCRATES program, University. 2 masters students. 1 year.
Investigation of a PoC	Ir. Plomp, Bureau M+I	NOVEM, Bureau M+I. 1 post-doctoral fellow, 3 masters students. 1.5 years
CFD simulation of the dynamics of bubbles and drops	Prof. Hoogstraten, Dept. of Math, RuG, Ir Cox, Shell KSEPL	Shell KSEPL and University. 1 university researcher, 1 Chem. Eng. 2 Math. masters students. 3.5 years.

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<b>Title of Project</b>	<b>Partners</b>	<b>Sponsors, Manpower and Duration</b>
The nature of adsorbates and their effect on interparticle forces by Molecular Dynamics	Prof. Berendsen, Prof. Mark Dept. Bioph. Chem., RuG, Dr Samson, Shell Global Solutions	STW, Shell Global Solutions. 1 post-doctoral fellow, 1 masters student. 3 years.
The Shell drum separator	Ir Dries, Shell Global Solutions	Shell Global Solutions. 1 post-graduate fellow. 0.5 years.
The drying behaviour of protein-sugar foams	-	Cadbury. 1 post-graduate and 1 post-doctoral research fellow. 1 year.
Improvement of gas-solid separators for the Fluid Catalytic Cracking (FCC) process.	Ir. H.W.A. Dries , Ir J. Kater, Shell Research	Shell Global Solutions. 1 post-graduate research fellow, 1 post-doctoral research fellow, 5 masters students, 2 part-time technicians, workshop staff. 5 years
Material separation in fluidized beds	-	EET. 1 post-doctoral research fellow 1 Ph.D. student contributed on a part-time basis. 1 year
Fluidized bed granulation	Dept. of Pharmacy, RuG	University, Dept. of Pharmacy. 1 Ph.D. student. 4 years.
Bubbly flows by computational fluid dynamics (CFD)	Prof. A.E.P. Veldman, Dept. of Math. RuG, and a European network	EU INTAS program. 1 masters student from chemical engineering, 2 under-graduate students from mathematics. 1 year
Production, molecular selforganization and applications of Gemini surfactants	Dept. of Organic and Anorganic Chemistry and Chemical Engineering, RuG	University. 3 masters students 1.5 years

<b>Title of Project</b>	<b>Partners</b>	<b>Sponsors, Manpower and Duration</b>
An automated maintenance system for gas treatment installations	Ir. de Groot, Ir Kools, NAM	NAM (Dutch Gas Exploration Company). 1 Ph.D. student, 2 supervisors part-time from the NAM. 4 years
Rheology of colloidal suspensions	Prof. Engberts, Dept of Organic and Anorganic Chemistry, RuG	Based at OMAC. 1 Ph.D. student based at the Dept. of Organic and Anorganic Chemistry. -
Lean gas-solid flow and separation	Dr M.B. Ray, National University of Singapore	NUS, EU Marco Polo funds. 3 masters students, technical staff at the NUS. 1.5 years
Description of high shear granulation with population balances	Dr Willemse, Organon. Prof. Hounslow, University of Sheffield	Organon, University of Groningen. 1 masters student. 1 year
Rheokinetics of polymerization	Prof. Janssen, Dept. Chem. Eng., RuG	Ubbo Emmius scholarship. 1 Ph.D. student. 4 years
Particle collisions with MD simulations	Prof. Mark, Prof. Berendsen, Dr Apol, Dept. of Biophysical Chemistry, RuG	1 Ph.D. student. 3 years.
Numerical simulation of particle dynamics by DEM and CFD	Inst. of Physics, UiB, NFR	UiB. 1 post-doctoral fellow, 2 Ph.D. students. 4 years.
High pressure cleaning of natural gas	HiPGaS project, including Statoil and NTNU	HiPGaS project, 0.4 NFR and 0.6 a network of industries. 1 Ph.D. student.
Materials for Solid Oxide Fuel Cells (MSOFC)	Prototech, the University of Uppsala	NFR, Prototech, 2 post-docs, 3 Ph.D. students, 1 Masters student
Hydrates in Petroleum Production—Assessment of Plug Risk (HYPERION)	Norsk Hydro, mr P. Fotland, Dept. of Chemistry, UoB, prof. T. Barth	NFR, Norsk Hydro, 2 post-docs, 1 Ph.D. student

<b>Title of Project</b>	<b>Partners</b>	<b>Sponsors, Manpower and Duration</b>
Hydrates in Petroleum Production—Deposition Characteristics (HYADES)	Dr S. Høiland, SINTEF, Mr P. Fotland Norsk Hydro, Prof. T. Barth UoB	NFR, Norsk Hydro and Chevron. 1 Ph.D. student, 2 supervisors part-time from the SINTEF and Norsk Hydro. 3 years
MD simulation of Solid Oxide Fuel Cell components	the University of Uppsala, the NANOPROCESS programme of the UoB	NANOPROCESS, 1 Ph.D. student, 4 years
A Model for the Natural Vortex Length in Centrifugal Separators	the University of Utrecht, prof. H. A. Dijkstra	NFR, 1 Ph.D. student, 3 years
Solid Separation from Highly Viscous Fluids by Cyclonic Technology	Aker Solutions, Dr L. Addicks, Dr W. Peng	NFR, Aker Solutions, 1 Ph.D. student, 3 years

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## MEMBERSHIPS, AWARDS

Member of Academia Europaea.

Recipient of the Shell Global Solutions President's Award in 2005. Special Recognition Certificate. In recognition of valued contribution to Shell Global Solutions' Business.

Member of the Norwegian Academy of Technological Sciences

Fellow of The British Institution of Chemical Engineers

Member of the Organizing and Governing Committee for the "Gas Conference in Bergen", a yearly conference for researchers, policy makers and industrialists.

Meltzer Grant at the University of Bergen 2001.

Served on NOKUT expert panel for the evaluation of new PhD course (Norway)

Served on the NOVEM expert committee for evaluation of new drying technology (The Netherlands).

Member of the WCNA2000 and the WCNA2004 (World Congress of Nonlinear Analysts) organizing committees.

Member of the WCPT4 (World Congress on Particle Technology) organizing committee

Recipient of about 25 research awards from industry (mostly oil and gas related), including British Gas, Akzo-Organon, Bureau M+I, Cadbury, Shell Global Solutions, NAM, CMR-Prototech, Statoil, Norsk Hydro, Chevron and Aker Solutions, and public funding bodies, including the EU, SERC, NOVEM, NWO, EET and the NFR, and from universities, the RuG and the UoB.

Research in mixing and segregation of particles in fluidized beds was awarded a prize in the 'Young Researchers award' of the Particle Technology Subject Group of the IChemE.

Research in rheokinetics awarded a prize at the 21. Annual European AIChE Symposium.

Elected 'lecturer of the year' for course "Applied Thermodynamics" by the chemistry students at the University of Groningen.

Reviewer of books and articles for many leading international scientific journals in chemical engineering, applied mathematics and physics.

Reviewer of proposals for funding bodies for applied and fundamental research.

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## PUBLICATIONS

### Books

- 1 Hoffmann, A.C. *Gas fluidization at Elevated Pressures* Ph.D. Thesis, Ramsay Memorial Laboratory of Chemical Engineering, University of London (1983).
- 2 Hoffmann, A.C. and Stein, L.E., *Gas Cyclones and Swirl Tubes—Principles, Design and Operation* Springer Verlag, Berlin, Heidelberg, New York (2002) ISBN 3-540-43326-0. 328 pp.
- 3 Translation to Chinese of Hoffmann, A.C. and Stein, L.E., *Gas Cyclones and Swirl Tubes—Principles, Design and Operation* Translation: W. Peng and Z. Ji, Chemical Industry Press, Beijing (2004) ISBN 7-5025-5871-3.
- 4 Dehling, H.G., Gottschalk, T. and Hoffmann, A.C. *Stochastic Modeling in Process Technology* Elsevier Science, London (2007) ISBN 978-0444520265, 279 pp.
- 5 Hoffmann, A.C. and Stein, L.E., *Gas Cyclones and Swirl Tubes—Principles, Design and Operation* 2nd, Extended Edition, Springer Verlag, Berlin, Heidelberg, New York (2007) ISBN 978-3-540-74694-2. 426 pp.

### Refereed Articles<sup>1</sup>

- 1 Rowe, P.N., Foscolo, P.U., Hoffmann, A.C. and Yates, J.G., “Fine powders fluidized at low velocity at pressures up to 20 bar with gases of different viscosity” *Chem. Eng. Sci.* **37** (1982), 1115–1117.
- 2 Rowe, P.N., Foscolo, P.U., Hoffmann, A.C. and Yates, J.G., “X-ray observation of gas fluidized beds under pressure” in: “Fluidization”, Kunii, D. and Toei, R. (eds.) *Proceedings of the 4th international conference on fluidization*, Kashikojima, Japan, 1983.
- 3 Hoffmann, A.C. and Yates, J.G. “Experimental observations of fluidized beds at elevated pressures” *Chem. Eng. Commun.* **41** (1986). 133–149.
- 4 Hoffmann, A.C. “Modellen voor het voorspellen van het scheidingsvermogen van cyclonen” (“Models for Predicting the Separation Efficiency of Cyclones”) *I<sup>2</sup> Procestechologie* **11** (1989).
- 5 Janssen, L.P.B.M., Prins, J., Hoffmann, A.C., de Meijer, R.J and Veen, A.W.L. “Modeling the migration of contaminants in soil” *Chem. Eng. Commun.* **89** (1990), 37–48.
- 6 Hoffmann, A.C. and Paarhuis, H. “A study of the particle residence time distribution in vertically moving fluidized beds” *IChemE Symp. Ser.* **121** (1990), 37–49.
- 7 Clift, R., Ghadiri, M. and Hoffmann, A.C. “A critique of two models for cyclone performance”, *AIChE Journal* **37** (1991), 285–289.
- 8 Hoffmann, A.C. and Romp, E.J. “Segregation in a fluidized powder of a continuous size distribution”, *Powder Technol.* **66** (1991), 119–126.

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<sup>1</sup>Precise record in the ISI database: AU=(hoffmann ac OR hoffman ac) AND AD=( groningen OR bergen OR london OR harwell)



- 9 Hoffmann, A.C., Arends, H. and Sie, H. "An experimental investigation elucidating the effect of solid loading on cyclone performance" *Filtration and Separation* **28** (1991), 188–193.
- 10 Hoffmann, A.C. and Grommers, H.E. "Aspects of the numerical modeling of the flowpattern in gas cyclones", *Proceedings Filtech Europa '91*, Karlsruhe, October 1991, 569–582.
- 11 Hoffmann, A.C., van Santen, A., Allen, R.W.K. and Clift, R. "Effects of geometry and solid loading on the performance of gas cyclones" *Powder Technol.* **70** (1992), 83–91.
- 12 Hoffmann, A.C., Janssen, L.P.B.M and Prins, J. "Particle segregation in fluidized binary mixtures" *Chem. Eng. Sci.* **48** (1993), 1583–1592.
- 13 Hartholt, G.P., Hoffmann, A.C., Janssen, L.P.B.M, Hoogstraten, H.W. and Moes, J.H. "Finite element calculations of flow past a spherical bubble rising on the axis of a cylindrical tube" *ZAMP* **45** (1994), 733–745.
- 14 Hoffmann, A.C, Hartholt, G.P. and Yates, J.G. "On the rheology of the dense phase of a gas fluidized bed" *Chem. Eng. Commun.* **130** (1994), 31–44.
- 15 Marring, E., Hoffmann, A.C. and Janssen, L.P.B.M. "The effect of vibration on the fluidization behaviour of some cohesive powders" *Powder Technol.* **79** (1994), 1–10.
- 16 Hoffmann, A.C., Finkers, H.J. and Seegers, J.A. "Predicting the behaviour of industrial powders in precision handling equipment" *Proceedings of the 1. International Particle Technology Forum* Denver, Colorado, August 17-19, 1994.
- 17 Hartholt, G.P., Hoffmann, A.C. and Janssen, L.P.B.M. "Visual observation of individual particles in fluidized beds" *Proceedings of the 1. International Particle Technology Forum* Denver, Colorado, August 17-19, 1994.
- 18 Hoffmann, A.C. and van den Bogaard, H.A. "A numerical investigation of bubbles rising at intermediate reynolds and large weber numbers" *Ind. Eng. Chem. Res.* **34** (1995), 366–372.
- 19 Hoffmann, A.C. and Finkers, H.J. "A relation for the void fraction of randomly packed particle beds" *Powder Technol.* **82** (1995), 197–203.
- 20 Hartholt, G.P., Hoffmann, A.C. and Janssen, L.P.B.M. "The influence of the gas relative humidity on the mixing and segregation in gas-solid fluidized beds" *Proceedings of the 1995 IChemE Research Event/First European Conference*, Edinburgh, Jan. 1995, Chameleon Press, London, p.862–864.
- 21 Hartholt, G.P., Hoffmann, A.C., Kamphuis, A.J. and Janssen, L.P.B.M. "Avoiding demixing and defluidisation in gas fluidized bed reactors" *Proceedings of the 1995 AIChE Annual Meeting*, Miami, Florida, Nov 12–17, 1995.
- 22 Marring, E., Hoffmann, A.C. and Janssen, L.P.B.M. "A study of the discharge of cohesive powders under simultaneous aeration and vibration" *Particulate Science and Technology* **13** (1995), 7–21.
- 23 Hartholt, G.P., R. la Rivière, Hoffmann, A.C. and Janssen, L.P.B.M "Separating solids from a mixture in a gas-solid fluidized bed" *International patent application PCT/NL95/00243* submitted by Verenigde Octrooibureaux, Groningen, Den Haag July, 1995.

- 24 Hoffmann, A.C., de Jonge, R., Arends, H. and Hanrats, C. "Evidence of the 'natural vortex length' and its effect on the separation efficiency of gas cyclones" *Filtration and Separation* **32** (1995), 799–804.
- 25 Hartholt, G.P., Hoffmann, A.C. and Janssen, L.P.B.M. "Visual observation of individual particle behaviour in gas and liquid fluidized beds" *Powder Technol.* **88** (1996), 341–345.
- 26 Meetsma, W.A., Hoffmann, A.C. and Cox, E.L. "Gravity-driven thickening in a long, vertical tube" *Chem. Eng. Sci.* **51** (1996), 4279–4288.
- 27 la Rivière, R., Hartholt, G.P., Hoffmann, A.C. and Janssen, L.P.B.M. "Methods for the determination of particle residence time distribution in continuous gas fluidized beds" *ICHEME Symp. Ser.* **140** (1996), 283–294.
- 28 Hoffmann, A.C., de Groot, M. and Hospers, A. "The effect of the dust collection system on the flowpattern and separation efficiency of a gas cyclone" *Can. J. Chem. Eng.* **74** (1996), 464–470.
- 29 Hartholt, G.P., Hoffmann, A.C., Kamphuis, A.J. and Janssen, L.P.B.M. "Avoiding demixing and defluidisation in gas fluidized bed reactors" *AICHE Symp. Ser.* **92** (1996), 15–19.
- 30 Hoffmann, A.C., Finkers, H.J. and Seegers, J.A. "Relations between particle and bulk properties for some industrial powders" *Part. Part. Syst. Charact.* **13** (1996), 354–361.
- 31 Ray, M.B., Tien, C., Hoffmann, A.C. and Beumer, M.I.L., "Numerical simulation of the swirl flow pattern and collection efficiencies in gas-solid separators" *Proceedings of the Asia-Pacific Conference on Sustainable Energy and Environmental Technology* Singapore, June 1996, 290–297.
- 32 Jonker, G. H., Hoffmann, A.C. and Beenackers, A.A.C.M. "Classification mechanism of the chute, a liquid-phase remover of fines in the micron range from a batch of porous particles" *Powder Technol.* **90** (1997), 251–258.
- 33 Ray, M.B., Luning, P.E., Hoffmann, A.C., Plomp, A. and Beumer, M.I.L. "Post cyclone (PoC); an innovative way to reduce the emission of fines from industrial cyclones" *Ind. Eng. Chem. Res.* **36** (1997), 2766–2774.
- 34 Hartholt, G.P., la Rivière, R., Hoffmann, A.C. and Janssen, L.P.B.M "The influence of perforated baffles on the mixing and segregation of a binary group B mixture in a gas-solid fluidized bed" *Powder Technol.* **93** (1997), 185–188.
- 35 Hoogstraten, H.W., Rass, W.B., Hartholt, G.P. and Hoffmann, A.C. "A numerical study of the flow past a spherical cap bubble rising in a fluidized bed" *Ind. Eng. Chem. Res.* **37** (1998), 247–252.
- 36 Janssen, L.P.B.M., Marring, E., Hoogerbrugge, J.C. and Hoffmann, A.C. "The mechanical behaviour of vibrated, aerated beds of glass and starch powder" *Chem. Eng. Sci.* **53** (1998), 761–772.
- 37 Finkers, H.J. and Hoffmann, A.C., "Using a 'structural ratio' for predicting the fractional voidage of binary particle mixtures" *AICHE Journal* **44** (1998), 495–497.
- 38 Ray, M.B., Luning, P.E., Hoffmann, A.C., Plomp, A. and Beumer, M.I.L., "Improving the efficiency of industrial scale cyclones for particles less than five micron" *Int. J. Miner. Process.* **53** (1998), 39–47.

- 39 Hoffmann, A.C., Postma, R., Plomp, A. and Ray, M.B. "Comparison of different analytical methods in predicting the efficiency of gas-solid separators" *Proceedings PARTEC 98, 4. European Symposium Separation of Particles from Gases*, F. Ebert (ed.) Nürnberg, March 1998, 35–44.
- 40 Schaafsma, S.H., Hoffmann, A.C., Blauw, L., Vonk, P. and Kossen, N.W.F. "Influence of liquid distribution on the fluid bed agglomeration process" *Proceedings PARTEC 98, 1. European Symposium Process Technology in Pharmaceutical and Nutritional Sciences*, H. Leunenberger (ed.), Nürnberg, March 1998, 100–109 .
- 41 Wensink, E.J.W., Hoffmann, A.C. and Apol, M.E.F. "The effect of adsorbed moisture on interparticle forces, investigated by means of MD simulations" *Proceedings of the World Conference on Particle Technology 3*, Brighton, UK, July 1998.
- 42 Hoffmann, A.C. and Dehling, H.G. "A stochastic modeling approach to particle residence time distribution in continuous fluidized beds" *Proceedings of the World Conference on Particle Technology 3*, Brighton, UK, July 1998.
- 43 Snieders, F., Hoffmann, A.C., Yates, J.G. and Cheesman, D. "Experimental investigation of the behaviour of coarse particles in an interconnected fluidized bed" *Proceedings of the World Conference on Particle Technology 3*, Brighton, UK, July 1998.
- 44 Postma, R., Hoffmann, A.C., Dries, H.W.A. and Williams, C.P. "The use of swirl tubes for dedusting" *Proceedings of the World Conference on Particle Technology 3*, Brighton, UK, July 1998.
- 45 Dijk, van J.-J., Hoffmann, A.C., Cheesman, D. and Yates, J.G. "The influence of horizontal internals on the flowpattern in dense fluidized beds. An X-ray investigation." *Powder Technol.* **98** (1998), 273–278.
- 46 Snieders, F.F., Hoffmann, A.C., Cheesman, D., Yates, J.G., Stein, M. and Seville, J.P.K. "The dynamics of large particles in a four-compartment interconnected fluidized bed" *Powder Technol.* **101** (1999), 229–239.
- 47 Hoffmann, A.C. and Kevelam, J. "A model for the interparticle surface separation in concentrated mono- and polydisperse suspensions" *AIChE Journal* **45** (1999), 285–290.
- 48 de Jong, J.A.H., Hoffmann, A.C. and Finkers H.J. "Powder flowability in practice: a review and discussion" *Chem. Eng. Progress* **95** No4 (1999) 25–33.
- 49 Schaafsma, S., Kossen, N.W.F., Mos, M.T., Blauw, L. and Hoffmann, A.C. "Effects and control of humidity and particle mixing in fluid-bed granulation" *AIChE Journal* **45** (1999), 1202–1210.
- 50 Kevelam, J., Hoffmann, A.C., Engberts, J.B.F.N., Blokzijl, W., Pas, J. van de, Versluis, P. "Rheology of concentrated dispersions of sterically-stabilized polydisperse lamellar droplets" *Langmuir* **15** (1999), 5002–5013.
- 51 Dries, H.W., Geiger, F.J. , Bekink, S.J., Postma, R.S. and Hoffmann A.C. "Hot flue gas clean up with the upgraded shell third stage separator" *Proceedings of CFB-6, 6th International Conference on Circulating Fluidized Beds*, August 22–27, 1999, Würzburg, Germany.
- 52 Dehling, H.G., Hoffmann, A.C. and Stuu, H.W. "Stochastic models for transport in a fluidized bed" *SIAM J. Appl. Math.* **60** (1999), 337–358.

- 53 Hoffmann A.C., Berrino, A. and Ray, M.B. "On the shape of grade efficiency curves computed for centrifugal dedusters by CFD with Lagrangian particle tracking" *AIChE Symp. Ser.* **95** No321 (1999), 13–17.
- 54 Ray, M.B., Hoffmann, A.C. and Postma, R.S. "Performance of different analytical methods in evaluating grade efficiency of centrifugal separators" *J. Aerosol Sci* **31** (2000), 563–581.
- 55 Hoffmann, A.C. "Manipulating Fluidized Beds by using Internals: Fluidization with baffles" *NPT Procestechologie*, **7** No 2 (2000), 20–24.
- 56 Dechsiri, C., Abanades, J.C., Dehling, H.G., Hoffmann, A.C. and Wright, P.C. "A stochastic model for mixing and segregation in slugging fluidized beds" *Récents Progrès en Génie des Procédés* No 75 vol 14 (2000), *Proceedings of the 3rd European Conference on Fluidization*, Toulouse, May 2000, 631–641.
- 57 Wensink, E.J.W., Hoffmann, A.C., Apol, M.E.F. and Berendsen H.J.C. "Properties of adsorbed water layers and the effect of adsorbed layers on interparticle forces" *Langmuir* **16** (2000), 7392–7400.
- 58 Cioffi, M., Janssen, L.P.B.M. and Hoffmann, A.C. "Reducing the gel effect in free radical polymerization" *Chem. Eng. Sci.* **56** (2001), 911–915.
- 59 Dechsiri, C., Bosma, J.C., Hoffmann, A.C., Hui, G. and Dehling, H.G. "A stochastic model for particle mixing and segregation in fluidized beds with baffles" *Proceedings PARTEC 2001 International Congress for Particle Technology*, Nürnberg, March 2001.
- 60 Peng, W., Hoffmann, A. C., Boot, P., Udding, A., Dries, H.W.A. and Kater, J. "Determining the best modeling assumptions for cyclones and swirl tubes by CFD and LDA" *Proceedings PARTEC 2001 International Congress for Particle Technology*, Nürnberg, March 2001.
- 61 Cioffi, M., Hoffmann, A.C. and Janssen, L.P.B.M. "Rheokinetics and the influence of shear rate on the Trommsdorff (gel) effect during free radical polymerization" *Polymer Eng. and Sci.* **41** (2001), 595–602.
- 62 Cioffi, M., Janssen, L.P.B.M. and Hoffmann, A.C. "Instabilities in free radical polymerization" *Nonlinear Analysis* **47** (2001), 897–906.
- 63 Hoffmann, A.C., de Groot, M. Peng, W., Dries, H.W.A. and Kater, J. "Advantages and risks in increasing cyclone separator length" *AIChE Journal* **47** (2001), 2452–2460.
- 64 Peng W., Boot, P.J.A.J., Hoffmann A.C., Dries, H.W.A., Kater, J., Ekker, A. "Flow in the inlet region in tangential inlet cyclones" *Ind. Eng. Chem. Res.* **40** (2001), 5649–5655.
- 65 Reuvekamp, R.J., Ray, M.B. and Hoffmann, A.C. "Deposition of a fine powder in horizontal pipelines and bends" *Chem Eng Comm.* **189** (2002), 849–864.
- 66 Dechsiri C., van der Zwan E., Bosma, J.C, Paans A.M.J. and Hoffmann A.C. "Positron emission tomography (PET) for fluidization" *Proceedings WCPT4, the Fourth World Congress on Particle Technology*, Sydney, 2002.
- 67 Dechsiri C., Dehling H.G. and Hoffmann A.C. "Stochastic model for fluidization" *Proceedings WCPT4, the Fourth World Congress on Particle Technology*, Sydney, 2002.

- 68 Wright, P. C., Makkawi, Y.T., Meeyoo, V., Dechsiri, C., Zwan, E., Paans, A.M.J. and Hoffmann A.C. "Observation of cross-sectional non-uniformity in fluidized beds using two different imaging techniques" *Proceedings WCPT4, the Fourth World Congress on Particle Technology*, Sydney, 2002.
- 69 Apol, M.E.F. Berendsen, H.J.C. Mark, A.E. and Hoffmann A. C. "Interparticle forces for DEM by MD simulations" *Proceedings WCPT4, the Fourth World Congress on Particle Technology*, Sydney, 2002.
- 70 Bosma, J.C. Hoffmann, A.C. "Feasibility study of particle classification in fluidized beds with internal baffles" *Proceedings WCPT4, the Fourth World Congress on Particle Technology*, Sydney, 2002.
- 71 Peng, W., Hoffmann, A.C. Boot, P., Udding, A., Dries, H.W.A., Ekker, A. and Kater, J. "Flowpattern in reverse-flow centrifugal separators" *Powder Technol.* **127** (2002), 212–222.
- 72 Cioffi, M., Ganzeveld, K.J., Hoffmann, A.C. and Janssen, L.P.B.M. "Rheokinetics of linear polymerization. A literature review" *Polymer Engineering and Science* **42** (2002), 2383–2392.
- 73 Biggs, C.A., Sanders, C., Scott, A.C., Willemse, A.W., Hoffmann, A.C., Instone, T., Salman, A.D. and Hounslow, M.J. "Coupling granule properties and granulation rates in high-shear granulation" *Powder Technol.* **130** (2003), 162–168.
- 74 Bosma, J.C. and Hoffmann, A.C. "On the capacity of continuous powder classification in a gas fluidized bed with horizontal baffles" *Powder Technol.* **134** (2003), 1–15.
- 75 Wensink, E.J.W, Hoffmann, A.C., van Maaren, P.J. and van der Spoel, D. "Dynamic properties of water/alcohol mixtures studied by computer simulation" *Journal of Chemical Physics* **119** (2003), 7308–7317.
- 76 Dechsiri, C., van de Wiel, F., Dehling, H.G., Paans, A.M.J. and Hoffmann, A.C. "Positron Emission Tomography Applied to Fluidization Engineering" *Proceedings of the 3rd World Conference on Industrial Process Tomography* Banff, Canada, Sept. 2003. Keynote paper.
- 77 Hoffmann, A.C., Dechsiri, C., van de Wiel, F., Ghione, A., Dehling, H.G., Paans, A.M.J. "Tracking Individual Particles in a Fluidized Bed using a Medical PET-Camera" *Proceedings of the 3rd World Conference on Industrial Process Tomography* Banff, Canada, Sept. 2003.
- 78 Dewitz, T.S., Sanborn, R.A., Dries, H.W.A., Ekker, A.A., Kater, J., Peng, W. and Hoffmann, A.C. "Cyclone separator with a vortex extender pin (swirl tube separator)" *International Patent Application 13765636.0-2316-US0322294* Shell Internationale Research Maatschappij B.V. (2003).
- 79 Cioffi, M., Ganzeveld, K.J., Hoffmann, A.C. and Janssen, L.P.B.M. "A Rheokinetic study of bulk free radical polymerization with a helical barrel rheometer" *Polymer Engineering and Science* **44** (2004), 179–185.
- 80 Peng, W., Hoffmann, A.C. and Dries H. "The separation characteristics of swirl tube dust separators" *AIChE Journal* **50** (2004), 87–96.
- 81 Dechsiri, C., van der Zwan, E.A., Dehling H.G. and Hoffmann A.C. "The Dispersion of Particle Pulses in Fluidized Beds Measured by PET" *AIChE Journal* **51** (2005), 791–801.

- 82 Hoffmann, A.C., Dechsiri, C., van de Wiel, F. and Dehling, H.G. "PET investigation of a fluidized particle: Spatial and temporal resolution and short term motion" *Meas. Sci. Technol.* **16** (2005), 851–858.
- 83 Dechsiri, C., Ghione, A., Van de Wiel, F., Dehling, H.G., Paans, A.M.J. and Hoffmann, A.C. "Positron Emission Tomography Applied to Fluidization Engineering" *Can. J. Chem. Eng.* **83** (2005), 88–96.
- 84 Kosinski, P., Hoffmann, A.C. and Klemens, R. "Dust lifting behind shock waves: comparison of two modelling techniques" *Chem. Eng. Sci.* **60** (2005), 5219–5230.
- 85 Kosinski, P. and Hoffmann, A.C. "Dust explosions in connected vessels: mathematical modelling" *Powder Technology* **155** (2005), 108–116.
- 86 Ritherdon, J., Dechsiri, C., Jones, A.R., Hoffmann, A.C. and Wright, I.G. "On suitability of novel fluidised bed technique for separation of metallic powders during commercial powder metallurgical processing" *Powder Metallurgy* **48** (2005), 199–202.
- 87 Peng, W., Hoffmann, A.C., Dries, H.W.A., Regelink, M.A. and Stein, L.E. "Experimental study of the vortex end in centrifugal separators: The nature of the vortex end" *Chem. Eng. Sci.* **60** (2005), 6919–6928.
- 88 Kosinski, P. and Hoffmann, A.C. "Modelling of dust lifting using the Lagrangian approach" *Int. J. of Multiphase Flow* **31** (2005), 1097–1115.
- 89 Peng, W., Hoffmann, A.C., Dries, H.W.A., Regelink, M.A. and Foo, K.-K. "Neutrally boyant tracer in gas cleaning equipment. A case study" *Meas. Sci. Technol.* **16** (2005), 2405–2414.
- 90 Kosinski, P. and Hoffmann, A.C. "Mathematical modelling of dust explosions in interconnected vessels" *Nonlinear Analysis* **63** (2005), e1087–e1096.
- 91 Ho, T.X., Kosinski, P. and Hoffmann, A.C. "Direct numerical simulation of particle-fluid flow: The state-of-the-art" *Proceedings of WCPT5, The Fifth World Conference on Particle Technology*, Orlando, Florida, April 23–27, 2006. Paper 11c.
- 92 Suciu, C. and Hoffmann, A.C. "Sol-Gel Production of ZrO<sub>2</sub> and YSZ with a New Organic Precursor" *Proceedings of WCPT5, The Fifth World Conference on Particle Technology*, Orlando, Florida, April 23–27, 2006. Paper 234c.
- 93 Schaafsma, S.H., Marx, T. and Hoffmann, A.C. "Investigation of the particle flowpattern and segregation in tapered fluidized bed granulators" *Chem. Eng. Sci.* **61** (2006), 4467–4475.
- 94 van der Spoel, D., Wensink, E.J.W. and Hoffmann, A.C. "Lifting a wet glass from a table: a microscopic picture" *Langmuir* **22** (2006), 5666–5672.
- 95 Schaafsma, S.H., Vonk, P., Kossen, N.W.F. and Hoffmann, A.C. "A model for the spray zone in early-stage fluidized bed granulation" *AIChE Journal* **52** (2006), 2736–2741.
- 96 Hoffmann, A.C., Peng, W., Dries, H., Regelink M., Foo, K.-K. "Effect of pressure recovery vanes on the performance of a swirl tube, with emphasis on the flow pattern and separation efficiency" *Energy & Fuels* **20** (2006), 1691–1697.

- 97 Gottschalk, T., Dehling, H.G. and Hoffmann, A.C. "Danckwerts' law for mean residence time revisited" *Chem. Eng. Sci.* **61** (2006), 6213–6217.
- 98 Jacobsson, S., Austrheim, T. and Hoffmann A.C. "Experimental and CFD investigation of the flow in and around once-through swirl tubes" *Ind. & Eng. Chem. Res.* **45** (2006), 6525–6530.
- 99 Kosinski, P., Kosinska, A. and Hoffmann A.C. "Fluid-particles flows in a driven cavity" *Proceedings ICNAAM*, Crete, Sept. 15–19, 2006. ISBN 3-527-40743-X.
- 100 Ilea, C.G., Kosinski, P. and Hoffmann A.C. "3-D Eulerian-Lagrangian simulation of dust lifting" *Proceedings ICNAAM*, Crete, Sept. 15–19, 2006. ISBN 3-527-40743-X.
- 101 Kosinski, P. and Hoffmann, A.C. "An investigation of the consequences of primary dust explosions in interconnected vessels" *Journal of Hazardous Materials* **A137** (2006), 752–761.
- 102 Suciu, C. Hoffmann, A.C., Gagea, L. and Mocean, M. "Sol-Gel Production of Zirconia Nanoparticles with a New Organic Precursor" *Chem. Eng. Sci.* **61** (2006), 7831–7835.
- 103 Dehling, H.G, Dechsiri, C., Gottschalk, T., Wright P.C. and Hoffmann, A.C. "A stochastic model for mixing and segregation in slugging fluidized beds" *Powder Technology* **171** (2007), 118–125.
- 104 Kosinski, P. and Hoffmann, A.C. "A Eulerian-Lagrangian model for dense particle clouds" *Computers & Fluids* **36** (2007), 714–723.
- 105 Peng, W., Hoffmann, A.C., Dries, H., Regelink M., Foo, K.-K. "Reverse-flow, centrifugal separators operating in parallel, performance and flow pattern" *AIChE Journal* **53** (2007), 589–597.
- 106 Kosinska, A., Kosinski, P. and Hoffmann A.C. "Numerical simulation of particle-flow interactions: formation of agglomerates" *Proceedings PARTEC 2007, International Congress on Particle Technology* Nuremberg, March 2007, paper S01\_3 .
- 107 Ho, T.X., Kosinski, P., Hoffmann, A.C., Wærnhus, I. and Vik, A. "Numerical Simulation of Electrochemical and Transport Processes in Solid Oxide Fuel Cells" *ECS Transactions* **7** (2007), 1901–1908.
- 108 Austrheim, T., Gjertsen, L.H. and Hoffmann A.C. "Is the Souders-Brown equation sufficient for scrubber design? An experimental investigation at elevated pressure with hydrocarbon fluids" *Chem. Eng. Sci.* **62** (2007), 5715–5727.
- 109 Peng, W., Jacobsson, S. and Hoffmann, A.C. "Neutrally buoyant tracer in gas cleaning equipment. A case study" *Proceedings WCIPT 5* Bergen, Sept. 3–6, 2007.
- 110 Austrheim, T., Gjertsen, L.H. and Hoffmann A.C. "Reentrainment correlations for demisting cyclones acting at elevated pressures on a range of fluids" *Energy & Fuels* **21** (2007) 2969–2976.
- 111 Suciu, C., Hoffmann, A.C., Vik, A., Firuta G. "Fuel Cells and Nanoparticles" *Studia Universitatis Babeş-Bolyai Chemia* **52**, 2, (2007) 3–12.
- 112 Ilea, C., Kosinski, P. and Hoffmann A.C. "Dust Lifting Simulations with Particles of Distributed Sizes" *AIP Conference Proceedings* **936** (2007), 631–634.

- 113 Kosinski, P., Kosinska, A. and Hoffmann A.C. "Consequences of particle-particle interaction in a 2-D square domain" *AIP Conference Proceedings* **936** (2007), 639–642.
- 114 Austrheim, T., Gjertsen, L.H. and Hoffmann A.C. "Experimental investigation of the performance of a large-scale scrubber operating at elevated pressure on live natural gas" *Fuel* **87** (2008), 1281–1288.
- 115 Austrheim, T., Gjertsen, L.H. and Hoffmann A.C. "An experimental investigation of scrubber internals at conditions of low pressure" *Chem. Eng. J.* **138** (2008), 95–102.
- 116 Suciu, C., Hoffmann, A.C, Vik, A. and Goga, F. "Effect of calcination conditions and precursor proportions on the properties of YSZ nanoparticles obtained by modified sol-gel route" *Chem. Eng. J.* **138** (2008), 608–615.
- 117 Gottschalk, T., Dehling, H.G. and Hoffmann, A.C. "Multiphase stochastic model for fluidized beds" *Phys. Rev. E.* **77**, (2008), 031306-1–031306-11.
- 118 Suciu, C., Hoffmann, A.C. and Kosinski, P. "Obtaining YSZ nanoparticles by the sol-gel method with sucrose and pectin" *Journal of Materials Processing Technology* **202** (2008), 316–320.
- 119 Suciu, C., Hoffmann, A.C., Dorolti, E. and Tetean, R. "NiO/YSZ nanoparticles obtained by new sol-gel route" *Chem. Eng. J.* **140** (2008), 586–592.
- 120 Ilea, C.G., Kosinski, P. and Hoffmann A.C. "Simulation of a dust lifting process with rough walls" *Chem. Eng. Sci.* **63** (2008), 3864–3876.
- 121 Ilea, C.G., Kosinski, P. and Hoffmann A.C. "Three-dimensional simulation of a dust lifting process with varying parameters" *Int. J. Multiphase Flow* **34** (2008), 869–878
- 122 Ho, T.X., Kosinski, P., Hoffmann A.C. and Vik, A. "Numerical study of an SOFC with direct internal reforming using charge diffusion-based model" *Proceedings of the 8th European Solid Oxide Fuel Cell Forum* Lucerne 30. June–4. July (2008).
- 123 Sæthre, B.S. and Hoffmann, A.C. "Surface-fluctuations on clathrate hydrate structure I and II slabs in selected environments" *Proceedings of the 6th International Conference on Gas Hydrates (ICGH 2008)*, Vancouver, British Columbia, Canada, July 6–10 (2008).
- 124 Barth, T., Talatori, S, Erstad, K., Borgund, A.E., Genov, G., Sæthre, B.S., Kosinski, P. and Hoffmann, A.C. "Hydrates in petroleum production—assessment of plug risk. Project HYPERION enters its third and final year" *Proceedings of the 6th International Conference on Gas Hydrates (ICGH 2008)*, Vancouver, British Columbia, Canada, July 6–10 (2008).
- 125 Ho, T.X., Kosinski, P., Hoffmann, A.C. and Vik, A. "Numerical modeling of solid oxide fuel cells" *Chem. Eng. Sci.* **63** (2008), 5356–5365.
- 126 Balakin, B.V., Hoffmann, A.C., Kosinski, P.J. and Rhyne, L.D. "Eulerian-Eulerian simulation of sedimentation of uniformly-sized, non-Brownian spheres in viscous fluids" *AIP Conference Proceedings* **1048** (2008), 723–726.
- 127 Ilea, C. G., Kosinski, P. and Hoffmann, A.C. "Influence of collision algorithm parameters on statistical results of dust lifting simulations" *AIP Conference Proceedings* **1048** (2008), 815–818.



- 128 Ho, T.X., Kosinski, P., Hoffmann, A.C. and Vik, A. "Numerical analysis of a planar anode-supported SOFC with composite electrodes" *International Journal of Hydrogen Energy* **34** (2009), 3488–3499.
- 129 Kosinski, P., Kosinska, A. and Hoffmann, A.C. "Simulation of solid particles behaviour in a driven cavity flow" *Powder Technology* **191** (2009), 327–339.
- 130 Ho, T.X., Kosinski, P., Hoffmann, A.C. and Vik, A. "Modeling of transport, chemical and electrochemical phenomena in a cathode-supported SOFC" *Chem. Eng. Sci.* **64** (2009), 3000–3009.
- 131 Suciu, C.S., Mæland, D., Hoffmann, A.C., Vik, A. and Wærnhus, I. "Priorities in Material Design for Solid Oxide Fuel Cells -With Emphasis on the Anode and the Electrolyte" *International Journal of Advances in Mechanics and Applications of Industrial Materials* **1** (2009), pp. 35–40.
- 132 Suciu, C.S., Mæland, D., Hoffmann, A.C., Vik, A. and Wærnhus, I. "The Use of Nanoparticles for Solid Oxide Fuel Cell Components" *International Journal of Advances in Mechanics and Applications of Industrial Materials* **1** (2009), pp. 29–33.
- 133 Mæland, D., Suciu, C., Wærnhus, I. and Hoffmann, A.C. "Sintering of 4YSZ ( $ZrO_2 + 4 \text{ mol}\% Y_2O_3$ ) nanoceramics for solid oxide fuel cells (SOFCs), their structure and ionic conductivity" *J. Eur. Ceram. Soc.* **29** (2009), 2537–2547.
- 134 Kosinski, P. and Hoffmann, A.C. "An extension of the hard-sphere particle-wall collision model to account for particle deposition" *Phys. Rev. E* **79** (2009), 061302-1–061302-11.
- 135 Asserson, R., Hoffmann, A.C., Høiland, S. and Asvik, K.M. "Interfacial tension measurement of freon hydrates by droplet deposition and contact angle measurements" *Journal of Petroleum Science and Engineering* **68** (2009), 209–217.
- 136 Ilea, C.G, Kosinski, P. and Hoffmann, A.C. "Numerical investigation of the effect of polydispersity on dust lifting behind shock waves" *Powder Technology* **196** (2009), 194–201
- 137 Ilea, C., Kosinski, P. and Hoffmann A.C. "Jet-vortex interaction: A numerical study" *AIP Conference Proceedings* **1168** (2009), 617–620.
- 138 Pisarev, G.I, Hoffmann A.C., Peng, W. and Dijkstra, H.A. "Large-eddy simulation of the vortex end in reverse-flow centrifugal separators" *AIP Conference Proceedings* **1168** (2009), 641–644.
- 139 Suciu, C., Erichsen, E, Hoffmann, A.C., Dorolti, E. and Tetean, R. "Modified sol-gel method used for obtaining SOFC electrolyte materials" *ECS Transactions* **25** (2) (2009), 1679–1686.
- 140 Ho, T.X., Kosinski, P., Hoffmann, A.C. and Vik, A. "Detailed Modeling of an anode-supported solid oxide fuel cell using a fully three-dimensional approach" *ECS Transactions* **25** (2) (2009), 1231–1240.
- 141 Balakin, B.V., Pedersen, H., Kilinc, Z., Hoffmann, A.C., Kosinski, P. and Høiland, S. "Turbulent Flow of Freon R11 Hydrate Slurry" *Journal of Petroleum Science and Engineering* **70** (2010), 177–182.
- 142 Balakin, B.V., Hoffmann, A.C. and Kosinski, P. "Population balance model for nucleation, growth, aggregation and breakage of hydrate particles in turbulent flow" Accepted for publication in *AIChE Journal* (2009)

- 143 Balakin, B.V., Hoffmann, A.C., Kosinski, P. and Rhyne, L.D. "Eulerian-Eulerian CFD model for the sedimentation of spherical particles in suspension with high particle concentrations" Accepted for publication in *Engineering Applications of Computational Fluid Mechanics* (2009)
- 144 Peng, W., Christensen, D., Jacobsson, S., Kvinnesland, E. and Hoffmann, A.C. "Studies of the flow in and around gas dedusters and demisters using neutrally buoyant tracer" *Chem. Eng. J.* doi:10.1016/j.cej.2008.07.014 (2008).
- 145 Kosinski, P. and Hoffmann, A.C. "An Eulerian-Eulerian and Eulerian-Lagrangian modelling of a shock-wave interaction with a cloud of particles" *submitted*.
- 146 Suciu, C., Goga, F. and Hoffmann A.C. "Physico-chemical characterization of processes and products for synthesization of 8YSZ nanoparticles by a modified sol-gel method" *submitted*.
- 147 Saethre, B.S., Hoffmann, A.C., Spoel, D. van der and Fotland, P. "Interfacial tension of structure II clathrate hydrate in oily and aqueous environments by Molecular Dynamic simulation" *submitted*
- 148 Suciu, C., Dorolti, E., Tetean, R. and Hoffmann, A.C. "NiO nanopowders" *submitted*
- 149 Kosinski, P. and Hoffmann, A.C. "An extension of the hard-sphere particle-particle collision model to study agglomeration" *Submitted*
- 150 Ho, T.X., Kosinski, P., Hoffmann, A.C. and Vik, A. "Effects of heat sources on the performance of a planar solid oxide fuel cell" *Submitted*
- 151 Ho, T.X., Kosinski, P., Hoffmann, A.C. and Vik, A. "Transport, chemical and electrochemical processes in a planar SOFC: Detailed three-dimensional modeling" *Submitted*
- 152 Balakin, B.V., Hoffmann, A.C., Kosinski, P. and Hoiland, S., "Turbulent flow og gas hydrate in a pipeline of complex configuration" *submitted*
- 153 Balakin, B.V., Hoffmann, A.C. and Kosinski, P. "Computational fluid dynamic model of gas hydrate deposition in a turbulent flow" *submitted*

### Some Presentations and Professional Articles

- Allen, R.W.K., Abrahamsen, J.A., van Santen, A. and Hoffmann, A.C. "Design of reverse flow gas cyclones" SPS DR 23 (1986). This report is the basis for the commercial software "Cyclone" licensed by SPS.
- Hoffmann, A.C. "The performance of gas cyclones at varying solid loadings" *Proceedings of the SPS Symposium*, University College, Oxford, Sept. 1986, p. 52-60.
- Hoffmann, A.C., Janssen, L.P.B.M. and Prins, J. "Mixing and Segregation in Fluidized Beds of Binary Mixtures", presentation at "*Mixing XII*", *Engineering Foundation Conference*, Potosi, Missouri, 1989.
- Hoffmann, A.C. "Menging en segregatie in gefluidiseerde bedden" ("Mixing and Segregation in Fluidized Beds") presentation held by invitation at the symposium *Stortgoed Technologie* in Groningen, The Netherlands, October 1991 under the auspices of Nederlandse Werkgroep Stortgoedtechnologie.
- Hoffmann, A.C. "The separation performance of gas-solid cyclones". Presentation held by invitation at The University of Surrey 1986.
- A number of oral and poster presentations at the yearly SON-meeting for academic and industrial chemical engineers in Lunteren, The Netherlands.
- Hoffmann, A.C. "The Gas Flowpattern in Gas-Solid Cyclones" and "The Flow Properties of Powders", 2 poster presentations for the book celebrating the opening of the "Onderzoeksschool Procestechologie" in Twente, The Netherlands October 1992.
- Hoffmann, A.C., de Jonge, R., Arends, H. and Hanrats, C. "Evidence of the 'Natural Vortex Length' and its Effect on the Separation Efficiency of Gas Cyclones", *Proceedings PARTEC, 2. European Symposium Separation of Particles from Gases*, Nürnberg 24-28 March 1992 (a preliminary version of the paper with the same title in *Filtration and Separation* above.)
- Hoffmann, A.C. "The Stability of Particulate Expansion of Pressurised Gas Fluidized Beds" Presentation held by invitation at the University of Amsterdam April 1993.
- Hoffmann, A.C. "Why do Gas Cyclones Work Better at Higher Solids Loadings?" Presentation held by invitation at University College, London Feb. 1994.
- Riedstra, S. Bosgra, L., Finkers, H.J., Hartholt, G.P., Hoffmann, A.C. and Janssen L.P.B.M. "Beheersing van luchtvochtigheid voor stromingsgedrag poeders" ("Control of the air humidity for the Flow Properties of Powders") *NPT Procestechologie*, Sept. 1995.
- Ray, M.B., Luning, P.E., Hoffmann, A.C., Plomp, A. and Beumer, M.I.L., "Improving the Efficiency of Industrial Scale Cyclones for Particles Less than Five Micron" *Proceedings of The Engineering Foundation Conference on Particle Science and Technology in the 21st century*, Pune, India 17-21 Dec. 1995.
- Plomp, A, Beumer, M.I.L. and Hoffmann, A. "Postcyclone (PoC) an Approach to a Better Efficiency of Dustcyclones" *J. Aerosol Sci.* **27** (1996), S631-S632.
- Postma, R.S. and Hoffmann, A.C. "On the Performance of some Modifications to the Shell Drum" *commercial in confidence*.

- Hoffmann, A.C. and Janssen, L.P.B.M., “Deeltjes in de wetenschap” (“Particles in Science”) *BULK* No2 (April 1998), 56-59.
- Hoffmann A.C., “Cyclone Dedusters” Feature article in *Who’s Who in Bulk Handling* 1998.
- Postma, R.S. and Hoffmann A.C., “‘Post Cyclone’ halveert stofemissie” (“‘Post Cyclone’ halves Dust Emission”) *BULK* No3 (June 1998), 54-56.
- Hoffmann, A.C. “Particle Transport in Fluidized Beds”. Presentation held by invitation at The Heriot-Watt University, June 1998.
- Finkers, H.J., Noordman, R. and Hoffmann, A.C. “The Drying Behaviour of Marshmallows” *commercial in confidence*.
- Postma, R.S., Hoffmann, A.C., Udding, A., Baratte, B. and Boot, P. “On the Improvement of a Swirl Tube Separator by Geometry Modifications” *commercial in confidence*
- Dries, H.W. Postma, R.S. and Hoffmann, A.C. “Optimisation of FCC-Reactor Cyclones using Experiments” *commercial in confidence*
- Hoffmann A. C., Berrino, A. and Ray, M.B. “On the Shape of Grade Efficiency Curves Computed for Centrifugal Dedusters by CFD with Lagrangian Particle Tracking”, *Advanced Technologies for Particle Processing*, Volume II, p. 63-69, Proceedings of the Topical Conference on Particle Interactions in Fluid-Particle Systems, at the 1998 AIChE Annual Meeting, Nov. 1998, Miami Beach, Florida.
- Hoffmann, A.C., Hoogerwerf, M. and Ray, M.B. “Effect of Conduit Characteristics on the Deposition of Various Powders in Bends” Presented at the *AIChE annual meeting*, 1999.
- Cartellier A., Nirshl H., Ehmann M., Hoffmann A., Kashinsky O., Pokhvalov Yu. 1999, “Bubbly flows in chemical and biochemical engineering” (summary of the project no. INTAS 96-2319). *Transactions of International Symposium “Actual Problems of Physical Hydroaerodynamics*. Novosibirsk, Russia, 19-23 April 1999. P. I-26.
- Cartellier A., Nirshl H., Ehmann M., Hoffmann A., Kashinsky O., Pokhvalov Yu. , 1999, “Bubbly Flows in Chemical and Biochemical Engineering”. *Reports of the International Workshop “Outcomes and Perspectives of Cooperation of the European and Siberian Scientists in the Field of Physical Hydromechanics”*. Novosibirsk, Russia, 19-21 April 1999.
- Janssen, L.P.B.M. Cioffi, M. and Hoffmann A.C. “Rheokinetics of Free Radical Polymerization” *Proceedings of the XIII International Congress on Rheology*, Cambridge, UK (2000), Vol 1, 133-135.
- Cioffi, M., Janssen, L.P.B.M. and Hoffmann A.C. “A Solution of the Problem of Gel Effect in Free Radical Polymerization” *21. Annual European AIChE Colloquium*. Paper awarded a diploma.
- Hoffmann, A.C., de Groot, M., Peng, W, Dries, H.W.A. and Kater, J.J. “Advantages and Risks in increasing Cyclone Separator Length” *commercial in confidence*.
- Kater, J.J., Dries, H.W.A. and Hoffmann, A.C. “Optimisation of the Shell FCC Third Stage Separator - 2 Results of Lab.Tests on a “4-in-a-row” Swirdeck” *commercial in confidence*.

- Hoffmann, A.C. Book Review: "Introductory Chemical Engineering Thermodynamics" by: J. Richard Elliott and Carl T. Lira. *Chem. Eng. Progress* Nov. issue (2000).
- Hoffmann, A.C. "Suggestions for Improvements to SuikerUnie Material Cyclones" (2000) *commercial in confidence*.
- Hoffmann, A.C. Book review: "Multiphase Flows with Droplets and Particles" by: Clayton Crowe, Martin Sommerfeld and Yutaka Tsuji. *Chem. Eng. Progress* in print.
- Hoffmann, A.C. Dries, H.W.A., "Comparing the Performance of Different Swirl Tube Units" (2000) *commercial in confidence*.
- Jonker, G. and Hoffmann, A.C. "Onderzoek naar reductie van de stofemissie van drogers 2, 3 en 4 met gascyclonen" ("Research to Reduce the Dust Emission from Dryers 2, 3 and 4 with Gas Cyclones") (2000) *commercial in confidence*.
- Cioffi, M., Janssen, L.P.B.M. and Hoffmann, A.C. "Instabilities in free radical polymerization" Invited lecture at *WCNA-2000 The Third World Congress of Nonlinear Analysts* Catania, Italy, 19-26 July 2000
- Cioffi, M., A.C. Hoffmann and L.P.B.M. Janssen, "Reducing the Gel Effect in Free Radical Polymerization", *Proc ISCRE 16 conf on Chem React. Eng beyond the year 2000*, Polish Acad. of Sci., Cracow, 10-13 Sept 2000
- Cioffi, M., Janssen, L.P.B.M. and Hoffmann, A.C. "Reducing the gel effect to enhance reactive extrusion" *Proceedings ZLIN*, Czech Republic, August (2000) 48-49.
- Hoffmann, A.C. Book Review: "Transport Phenomena" by Beek, Mutzall and van Heuven *Chem. Eng. Journal* **81** (2001) 331
- Jonker, G. and Hoffmann, A.C. "Optimalisatie van de stofafscheiding van droger 1, uitgaande van de huidige configuratie" ("Optimization of the Dust Separation from Dryer 1, Based on the Current Configuration") (2001) *commercial in confidence*.
- Hoffmann, A.C. "Hvordan levere kompetence til gasindustrien?" ("How Provide the Natural Gas Industry with Competence?") Gasconferencen i Bergen, 2001, Bergen, Norway, May 2001.
- Hoffmann, A.C. "Brændselsceller, en anden slags elektrokemi" ("Fuel cells, a Different Kind of Electrochemistry") Presentation at: Fysikk-Forum 2001, Fysisk Institutt, University of Bergen, October 2001
- C.A. Biggs, C.F.W. Sanders, A.C. Scott, A.W. Willemse, A.C. Hoffmann, T. Instone, M.J. Hounslow (2001) "Coupling Granule Properties and Granulation Rates in High-Shear Granulation" *7th Int. Symp. Agglom.*, Albi, France.
- Bollen, A.M. and Hoffmann, A.C. "Onderzoek naar de bruikbaarheid van stofsloten voor de reiniging van pulpdrogergas" ("Research into the feasibility of using Dust Traps for Cleaning Off-Gas from a Pulp Dryer") *commercial in confidence*
- Hoffmann, A.C. "Brenselscelleteknologi" ("Fuel Cell Technology") presentation held at the Work-shop about R&D within Cleaning technology for gas power plants Norges forskningsråd, Oslo, January 2002

- Hoffmann, A.C. “Gas Cyclone Separators - Potential and Limitations” Invited presentation at the Mahanakorn University of Technology, Bangkok, July 2002
- Hoffmann, A.C. “Gas Cyclone Separators - Potential and Limitations” Invited presentation at the Chulalongkorn University, Bangkok, July 2002
- Bollen, A.M. and Hoffmann, A.C. “Onderzoek naar de bruikbaarheid van stofsloten voor de reiniging van pulpdroergas” Coöperatie Suiker Unie ua, Groningen, 2002 *commercial in confidence*.
- Peng, W. and Hoffmann, A.C. “Visualization of the vortex end in the SHELL swirl tube” Bergen, 2004 *commercial in confidence*
- Peng, W. and Hoffmann, A.C. “Controlling the vortex end in the SHELL swirl tube” Bergen, 2004 *commercial in confidence*
- Peng, W., Hoffmann, A.C. and Foo, K. “Controlling the vortex end and cross-talk, and finding the optimal geometry for the SHELL TSS swirl-deck” Bergen, 2004 *commercial in confidence*
- Wensink, E., Hoffmann, A.C., Maaren, P.J. van and Spoel, D. van der “Extensive simulation studies of alcohol in water” Poster presentation at *CESIO, the 6<sup>th</sup> World Surfactants Congress* Berlin, Germany, June 2004
- Kosinski, P. and Hoffmann, A.C. “Mathematical modelling of dust explosions in interconnected vessels” *Proceedings of WCNA2004* Orlando, Florida, July 2004.
- Hoffmann, A.C. “Brændselsceller” Presentation at the meeting of Norsk Fysisk Selskab, Fevik, 19–20 August, 2004
- Hoffmann, A.C. “Gas-vores nye mulighed, men hvad med teknologien?” Presentation at the meeting of Kiwanis, Bergen, November, 2004.
- Hoffmann, A.C. “Nogle muligheder for brug af naturgas” Presentation at the meeting of TEKNA, Bergen, November, 2004
- Kosinski, P., Hoffmann, A.C. and Klemens, R. “Dust lifting modelling using the Eulerian and Lagrangian approaches” Poster presentation at *30<sup>th</sup> Symposium on Combustion* Chicago, USA July 25–30 2004
- Hoffmann, A.C. “Innen den overskuelige framtid vil verdens energiforbruk mangedobles, hvilke utfordringer byr det på? Finnes det plausible løsninger?” Presentation at Norske Fysikkstudenters Konferanse 25–27. February, 2005
- Hoffmann, A.C. “The physics of cyclones” Presentation at Simon Bolivar University, Caracas, Venezuela, 05. May 2005
- Hoffmann, A.C. “Energy for the future, wherefrom?” Presentation at the Santa Teresa High School, Caracas, Venezuela, 12. May 2005
- Hoffmann A.C. “Fremtidens energi” Newspaper article in *Bergens Tidende*, August 2005.
- Hoffmann A.C. “Energikilder for det næste århundrede” Presentation at the HIB, Bergen, Norway, November 2005.
- Ilea, C.G., Kosinski, P. and Hoffmann, A.C. “Numerical simulation of dust lifting behind shock waves in a three-dimensional computational domain” *poster presentation at WCPT5, The Fifth World Conference on Particle Technology*, Orlando, Florida, April 23–27, 2006.

- Kosinski, P. and Hoffmann, A.C. “Simulation of Solid Particles Behaviour in a Driven Cavity Flow” *poster presentation at WCPT5, The Fifth World Conference on Particle Technology, Orlando, Florida, April 23–27, 2006.*
- Clark, D. “Separation success rewarded” Interview with Hoffmann in *Impact 1 2006* in connection with the award of the Shell President’s Award.
- Hoffmann, A.C. “Energi for Framtiden” Presentation at the meeting: *Ny energi rundt Damsgårdssundet—visjoner for morgendagens bydel* May 20., 2006.
- Ilea, C.G., Kosinski, P. and Hoffmann A.C. “Simulation of a dust lifting process in a two-dimensional domain with rough walls” *Proceedings PARTEC 2007, International Congress on Particle Technology* Nuremberg, March 2007, paper P01\_02.
- Suciu, C., Vik, A. and Hoffmann, A.C. “Nanoparticles for solid oxide fuel cell anodes” *Proceedings PARTEC 2007, International Congress on Particle Technology* Nuremberg March 2007, paper P11\_13.
- Lunev, M., Hoffmann, A.C. and Silalahi, S. “Solid Oxide Fuel Cell Components Studied by Molecular Dynamics” Poster presentation at the NANOMAT Conference 2007, Bergen, Norway, 4–9 June 2007.
- Suciu, C, Mæland, D., Hoffmann, A.C., Vik, A. and Wærnhus, I. “SOFC components from nano-particles: particle manufacture, sintering and characterization” Poster presentation at the NANOMAT Conference 2007, Bergen, Norway, 4–9 June 2007.
- Hoffmann, A.C. “Cyclone for Outdoor Vacuum Cleaner” Commercial design report, 2007.
- Gottschalk, T., Dehling, H.G. and Hoffmann, A.C. “Multiphase stochastic model for fluidized beds” Selected by the AIP for publication in *Virtual Journal of Nanoscale Science & Technology* **17** Issue 13, 2008. This is the same paper as was published in *Phys. Rev. E.* in 2008.
- Mæland, D., Suciu, C., Wærnhus, I. and Hoffmann, A.C. “Sintering properties of 4YSZ nanoparticles and ionic impedance of the resulting materials” poster presentation in *EuroConference on Nanotechnology for Sustainable Energy* 14–19 June 2008, Obergurgl, Austria.
- Suciu, C., Hoffmann, A.C., Vik, A., Tetean, R., Dorolti, E. and Erichsen E. “Optimizing sol-gel produced NiO nanopowder as precursor for SOFC anodes” poster presentation in *EuroConference on Nanotechnology for Sustainable Energy* 14–19 June 2008, Obergurgl, Austria.
- Suciu, C., Hoffmann, A.C., Goga, A., Tetean, R., Dorolti, E. “NiO nanoparticles for SOFC anodes. Comparison of two synthesis methods” oral presentation at *Zing Nanomaterials Conference 2008*, Playa del Carmen, Mexico, December 7–10, 2008.
- Suciu, C.S., Mæland, D., Hoffmann, A.C., Vik, A. and Wærnhus, I. “Research in materials for solid oxide fuel cells” invited oral presentation at *Norwegian Hydrogen Seminar 2008*, Bergen, Norway, September 25–26, 2008.
- Ho, T.X., Kosinski, P., Hoffmann, A.C. and Vik, A. “Numerical study of a solid oxide fuel cell with direct internal methane reforming” poster presentation at *Norwegian Hydrogen Seminar 2008*, Bergen, Norway, September 25–26, 2008.

- Suciu, C.S., Mæland, D., Hoffmann, A.C., Vik, A. and Wærnhus, I. “Priorities in Material Design for Solid Oxide Fuel Cells -With Emphasis on the Anode and the Electrolyte” *Proceedings, AES-ATEMA/2008 Second International Conference*, Cesena, Italy, September 01-05, 2008, pp. 81–84. Invited plenary paper.
- Suciu, C.S., Mæland, D., Hoffmann, A.C., Vik, A. and Wærnhus, I. “The Use of Nanoparticles for Solid Oxide Fuel Cell Components ” *Proceedings, AES-ATEMA/2008 Second International Conference*, Cesena, Italy, September 01-05, 2008, pp. 33–36. Invited keynote paper
- Amundsen, P.A., Hoffmann, A.C. and Olsson, G. “Søknad om akkreditering av Doktorgrad i prosess,-energi- og automatiseringsteknikk ved Høgskolen i Telemark: Rapport fra sakkyndig komité” NOKUTs rapporter ISSN[1501-9640], 2009
- Ho, T.X., Kosinski, P., Hoffmann, A.C. and Vik, A. “Fully three-dimensional modeling of Solid Oxide Fuel Cells” oral presentation at *MODVAL6—6th Symposium on Fuel Cell Modelling and Experimental Validation*, Bad Herrenalb, Karlsruhe, Germany, March 25–26, 2009.
- Hoffmann A.C. “Fysikkens rolle for energispørsmål” Seminar held on the occasion of the 60. anniversary of the Dept. of Physics and Technology, University of Bergen, Bergen, 15. May 2009.
- Suciu, C., Wærnhus, I, Tikkanen, H. and Hoffmann, A.C. “Nanoparticle-based, scandium-doped materials for SOFC electrolytes; production and performance” Poster presentation at *Hydrogen and Fuel Cells in the Nordic Countries*, Oslo, Norway, Nov. 24–26, 2009.



## Theses

- Marring, E. "Fluidization and discharge of cohesive powders" *Ph.D. thesis*, University of Groningen, 1989.
- Hartholt, G.P. "Particle mixing in gas fluidized beds" *Ph.D. thesis*, University of Groningen, 1996.
- Schaafsma, S.H. "Downscaling of the fluid bed agglomeration process" *Ph.D. thesis*, University of Groningen, 1999.
- Cioffi, M. "Rheokinetics" *Ph.D. thesis*, University of Groningen, 2002.
- Dechsiri, C. "Particle transport in fluidized beds: experiments and stochastic models" *Ph.D. thesis*, University of Groningen, 2004.
- Wensink, E.J.W. "Molecular Simulations of Complex Liquids and Confined Systems" *Ph.D. thesis*, University of Bergen, 2005.
- Austrheim, T. "Experimental Characterization of High-Pressure Natural Gas Scrubbers" *Ph.D. thesis*, University of Bergen 2006.
- Ilea, C.S. "New Materials for Solid Oxide Fuel Cells Based on Nanoparticles" *Ph.D. thesis*, University of Bergen 2007.
- Ilea, C.G. "Numerical Simulations of Dust Lifting" *Ph.D. thesis*, University of Bergen 2008.
- Ho, T.X. "Modeling of transport, chemical and electrochemical processes in solid oxide fuel cells" *Ph.D. thesis*, University of Bergen 2009.
- Manger, A.E. "Trillingsfluidisatie van cohesieve poeders" *Master's thesis*, University of Groningen, 1988.
- Parmentier, J. "A t(h)rilling bed" *Master's thesis*, University of Groningen, 1988.
- Prins, J. "Menging en segregatie in gefluidiseerde bedden" *Master's thesis*, University of Groningen, 1988.
- Paarhuis, H. "gefluidiseerde bedden. Menging en segregatie, verblijftijd-spreiding" *Master's thesis*, University of Groningen, 1989.
- Sie, H. "Wervels, Wrevel en wat dies meer zij" *Master's thesis*, University of Groningen, 1989.
- Arends, J.H. "Cycloononderzoek. Een kritische kijk op het kritisch beladingsconcept van Muschelknautz" *Master's thesis*, University of Groningen, 1989.
- Romp, E. "Gefluidiseerde bedden. Menging en segregatie" *Master's thesis*, University of Groningen, 1990.
- Grommers, H. "Cyclonen. -Vortex lengte -stromings profielen -deeltjesgrootte analyse" *Master's thesis*, University of Groningen, 1990.
- Luttmmer, M.A. "Fluidisatie technologie. Invloed van de gasvochtigheid op het fluidisatie proces" *Master's thesis*, University of Groningen, 1992.
- Kamphuis, B. "Een mengcriterium voor gefluidiseerde bedden" *Master's thesis*, University of Groningen, 1993.
- Moes, J.H. "De stroming veroorzaakt door een opstijgende gasbel in een vloeistof" *Master's thesis* Mathematics, University of Groningen, 1993.
- Riedstra, S. "Visual observation of mixing mechanisms by means of X-ray radiation and endoscope" *Master's thesis*, University of Groningen, 1994.

- Bunt, H. van de “Invloed van de bedhoogte, de poedersamenstelling en de kolomdimensies op de deeltjesmenging in gefluidiseerde bedden” *Master’s thesis*, University of Groningen, 1994.
- Verkaik, H. “Modellering van batch gefluidiseerde bedden” *Master’s thesis*, University of Groningen, 1994.
- Meetsma, W. “Gravity based downhole dehydration. Theory and process simulation.” *Master’s thesis*, University of Groningen, 1994.
- Finkers, H.J. “Onderzoek naar stromingsgedrag van industriële poeders in poederavul-apparatuur (een benadering op deeltjes-, bulk- en proces niveau)” *Master’s thesis*, University of Groningen, 1995.
- E.-H. Meindertsma “Particle residence time distribution in continuously operated vertical and horizontal fluidized beds” *Master’s thesis*, University of Groningen, 1996.
- Postma, R. “Karakteriseren en optimaliseren van een PoC” *Master’s thesis*, University of Groningen, 1996.
- Snieders, F. “The behaviour of coarse particles in an interconnected fluidized bed” *Master’s thesis*, University of Groningen, 1997.
- Dijk, J.-J. “X-ray studies into the influence of baffles on bubble behaviour and particle mixing and fluidized bed granulation” *Master’s thesis*, University of Groningen, 1997.
- Wage, W. “Invloed van baffles op de deeltjesmenging in gefluidiseerde bedden” *Master’s thesis*, University of Groningen, 1997.
- Wensink, E. “The effect of moisture on interparticle forces. Investigated by means of molecular dynamics simulations” *Master’s Thesis*, University of Groningen, 1997.
- Mos, M.T. “Fluide bed agglomeratie” *Master’s thesis*, University of Groningen, 1998.
- Boot, P.J.A.J. “Flow field and performance measurements in a tangential cyclone” *Master’s thesis*, University of Groningen, 1998.
- Koops, N. “Ontwikkelen conditiemodellen pijpleiding, manifold en Joule Thomson klep” *Master’s thesis*, University of Groningen, 1998.
- Udding, A. “The optimisation of axial cyclones in FCC third stage separators” *Master’s thesis*, University of Groningen, 1999.
- Horst, J. ter “The optimisation of fluid catalytic cracking gas cyclones” *Master’s thesis*, University of Groningen, 1999.
- Marx, T. “Mixing and segregation in fluidized bed granulation” *Master’s thesis*, University of Groningen, 1999.
- Hoogerwerf, M.P. “Effect of conduit characteristics on the deposition of various powders in horizontal pipelines and bends” *Master’s thesis*, University of Groningen, 1999.
- Velden, A.J. van der “Steps towards better swirl tube operation, Vol. I” *Master’s thesis*, University of Groningen, Part I 1999.
- Groot, M. de “Steps towards better tangential cyclone operation” *Master’s thesis*, University of Groningen, Part I 1999.
- Velden, A.J. van der and Groot, M. de “Steps towards better swirl tube operation, Vol II” *Master’s thesis*, University of Groningen, 1999.

- Girardot, T. “A study to determine the efficiency of cyclone separators using narrowly dispersed powders” *Master’s thesis*, University of Groningen, 1999
- Berg, P. van den “The rise of bubbles and solid particles in the proximity of a plane wall: a numerical study” *Master’s thesis*, University of Groningen, 1999
- Blauw, L. “Conditiemodellen voor een betere CAnS in de 21ste eeuw” *Master’s thesis*, University of Groningen, 1999
- Breed, H.C. “Validatie van het Capaciteits Analyse Systeem” *Master’s thesis*, University of Groningen, 1999
- Reuvekamp, R.J. “Effect of conduit characteristics of various powders in pneumatic conveying systems” *Master’s thesis*, University of Groningen, 1999
- Zwan, E., van der “PET, a new method for analyzing fluidized beds” *Master’s thesis*, University of Groningen, 2001
- H. van Dam, B. Meijers and P. Westerink “A Sweet Green Route to new Products? -Towards a Comprehensive Assessment of Sugar Based Gemini Surfactant Potential” Three *Master’s theses*, University of Groningen, 2002
- Wiel, F. van de “Fluidization dynamics using Positron Emission Tomography ” *Master’s thesis*, University of Groningen, 2003
- Ghione, A. “Tracking of a single particle in a fluidized bed by PET” *Master’s thesis*, University of Genova, 2003.
- Sæthre, B.S. “Interfacial area determination by chemically enhanced extraction with new adaptations for use in continuous flow rigs” *Master’s thesis*, University of Bergen, 2004.
- Kvinnesland, E. “Single-phase characterization of the inlet arrangement schoepentoeter” *Master’s thesis*, University of Bergen, 2005.
- Christensen, D. “Single-phase characterization of the new open spinlet arrangement” *Master’s thesis*, University of Bergen, 2005.
- Jacobsson, S. “Single-phase characterization of the Verlaan cyclone” *Master’s thesis*, University of Bergen, 2005.
- Heimvik, R. “Screen printing of a thin SOFC electrolyte” *Master’s thesis*, University of Bergen, 2005.
- Asserson, R.B. “Interfacial tension measurements of freon hydrates by means of droplet deposition and contact angle measurements” *Master’s thesis*, University of Bergen, 2007.
- Lie, R. “Horizontal particle transport in a flowing fluid” *Cand. Scient. thesis*, University of Bergen 2007.
- Mæland, D. “Sintering and impedance spectroscopy characterisation of nanoparticle-based functional materials for solid oxide fuel cells ” *Master’s thesis*, University of Bergen 2008.
- Thormodsæter, O.A. “Production and characterization of YSZ nanoparticles and thin films for planar ceramic SOFC electrolytes” *Master’s thesis*, University of Bergen 2008.

- Pedersen, H. “Formation, particle size distribution and flow dependence of Freon (R11) hydrates in multiphase flow systems” *Master’s thesis*, University of Bergen 2008.
- Kilinc, Z. “Formation and particle size distribution of cyclopentane hydrates in a multiphase flow system” *Master’s thesis*, University of Bergen 2008.
- Seeberg, E. “Dispersion of methane in two different prechambers for a lean-burn gas engine” *Master’s thesis*, University of Bergen 2008.