

Curriculum Vitae

Personalia

Ingela Karin Christina Niklasson Björn

Date of birth: 13 th of February 1960, Nyed, Sweden.

Permanent address: Ellösgatan 12, 416 74 Göteborg, Sweden

Married with two children

Education

Master of Science in Chemical Engineering, Chalmers University of Technology, Göteborg, Sweden, 1983

Licentiate of Engineering, Department of Chemical Engineering Design, Chalmers University of Technology, Göteborg, Sweden, 1987

Appointment

Associate Principal Scientist within AstraZeneca, 2002

AstraZeneca

Core Team Member of AstraZeneca CoE Complex Oral Controlled Release between 2002 och 2004.

Core Team Member of AstraZeneca CoE Process Analytical Technology since 2003.

Member of AZ CoE PAT Research and Technology group since 2003.

Leader of a global AstraZeneca group *Technology Interest Group: Mixing and Granulation*

Long experience of in-line monitoring techniques, lab, pilot plant and manufacturing scale.

Responsible for implementation of CFD(Computational Fluid Dynamics) as a tool in product development.

Industrial Supervisor for Ph D students (3) at Chalmers University of Technology, Göteborg, Sweden

Several patents within the PAT area.

Other

Vice Chairman 1999- 2003 and from 2003 Chairman of the research programme Multiphase Flow sponsored by The Swedish Foundation for Strategic Research

Chairman of SIAMUF (Swedish Industrial Association For Multiphase Flow) since 2000 with 11 member companies.

Member and AZ contact person for CPE(Centre of Process Engineering) at Chalmers University of Technology, Göteborg Sweden.

Scientific publications

I. Björn, ” En systemanalytisk studie av två enhetsoperationer.” , Thesis for Licentiate of Engineering, Chalmers tekniska högskola, 1987 (In swedish)

I. Björn, U. Grén , K.Ström, ”A study of a heat pump distillation column system”, Chemical Engineering and Processing, Vol 29, issue 3, 185 – 191, (1991)

I. Niklasson Björn, U. Grén, F. Svensson , ” Simulation and experimental study of intermediate heat exchange in a sieve tray distillation column., Computers & Chemical Engineering, Vol 26, issue 4-5, 499-505, (2002)

I. Niklasson Björn, U. Grén, ”Distribution of entropy production in distillation - improvements by the use of intermediate heat exchange”. Manuscript.

I. Niklasson Björn ,U. Grén, ”Energetic improvements for a distillation column with separation maintained”. Manuscript.

I. Niklasson Björn, U. Grén, A. Soemardji, “Intermediate heat exchange for fixed separation requirements – Application to a binary sieve tray distillation column”. Manuscript in preparation.

A. Jansson, A. Rasmuson, I. Niklasson Björn, S. Folestad, ” High Shear Wet Granulation Modelling – a mechanistic approach using population balances” . Submitted 2004 for publication in Powder Technology.

I. Niklasson Björn, A. Jansson, M. Karlsson, S. Folestad, A. Rasmuson ” Empirical to Mechanical Process Models in High Shear Granulation – Examples from the Pharmaceutical Industry”.

Chemical Engineering Science, Volume 60, Issue 14, July 2005, page 3795-3803

A. Jansson, H. Brage, A. Rasmuson, I. Niklasson Björn, S. Folestad, ” A multi-dimensional population balance approach for high-shear wet granulation”.

Submitted to Chemical Engineering Science, 2005

D.Ström, S. Karlsson, S. Folestad, I. Niklasson Björn, T., Laurell, J., Nilsson, and A. Rasmuson, ”A New Device for Coating Single Particles under Controlled Conditions”.

Chemical Engineering Science, Volume 60, Issue 16, August 2005, page 4647-4653

S. Karlsson, I. Niklasson Björn, S., Folestad, and A. Rasmuson, ”Measurement of Particle Movement in the Fountain Region of a Wurster Type Bed”.

Submitted 2005 for publication in Powder Technology

N., Hörle, I. Niklasson Björn, O. Berntsson , S. Folestad, ” In-situ Characterisation of Powder Drying in Fluidised Beds by NIR Spectroscopy”.

Manuscript in preparation

Presentations at international conferences

I. Björn, U. Grén, K. Ström , ” An evaluation of VLE-data in the simulation of heat pump systems” MATCHEM 86, 5-8 maj, Balatonfured, Ungern,1986

I. Björn, U. Grén, ”Pulp washing at high temperature. A simulation study of the exergy efficiency”, Pulp Washing ‘87 Conference, 19 - 22 maj, Mariehamn, Finland, del 1 av 2 , sid. 199-211, 1987

I. Björn, U. Grén , K. Ström, ”A study of a heat pump distillation column system”,CHISA ‘87, 30 aug. - 4 sept, Prag , Tjeckoslovakien., 1987

I. Niklasson Björn, Folestad S., Ström D., Åberg C., Andersson M. ”In-line NIR Spectrometry – a Tool for Quality Control During Fluidised Bed Coating” 9 th Int. Conference on Near-Infrared Spectroscopy, 13-18 juni, Verona, Italien, 1999

I. Niklasson Björn, Folestad S., Johansson M., Andersson M. "In-line NIR Spectroscopy – a Tool for Quality Control During Fluidised Bed Coating", PARTEC2001, 27-29 mars, Nürnberg, Tyskland, 2001
Proceedings nummer 180

I. Niklasson Björn, Folestad S., Josefsson L., Josefson M. "Optimization of fluid bed coating of pellets by means of chemometrics, 4 th Int. Symposium on Solid Oral Dosage Forms, 13-15 maj, Malmö, 2001,

I. Niklasson Björn, Grén U, Svensson F., "Simulation and experimental study of intermediate heat exchange in a sieve tray distillation column., 27-30 maj, ESCAPE 11, Kolding, Danmark, 2001

I. Niklasson Björn, Folestad S., Johansson M., Andersson M. "In-line NIR Spectroscopy – a Tool for Quality Control During Fluidised Bed Coating", ESCAPE12, Haag, maj 2002

I. Niklasson Björn, N. Hörle, A. Blomberg, S Folestad., "Control of Fluid bed drying by using in-line NIR Spectroscopy", NIRS 2003, Cordoba, Spanien, 2003

International Workshop on Granulation, Sheffield 22-24 juni, 2004

L. Gradinarsky, H.Brage, I.N.Björn and S.Folestad, "Advanced Monitoring and Control of Wetness in Pharmaceutical Powder Processes Using In-Situ Dielectric Probe Measurements", Presented at the Sixth Conference on "Electromagnetic Wave Interaction with Water and Moist Substances", Weimar Germany, 2005

Poster presentations

I. Niklasson Björn, Folestad S., D. Ström, C. Åberg, "NIRS – ett verktyg vid dragering av pellets", Läkemedelskongressen, Älvsjömassan, nov 1997

M. Josefson, I. Niklasson Björn, B.Olsson, M.Andersson, L. Björk, S. Folestad, B. Lagerholm, A. Sparén, D.Ström, C. Åberg, "Batch Modelling by PLS and the data Handling Aspects, USA, juni, 1998

AstraZeneca PAC 3, meeting, "Real-time determination of film coating thickness in a fluidised bed coating process with in-line NIR spectroscopy", Mölndal, 11 jan, 2001

I. Niklasson Björn, Grén U, Svensson F., "Simulation and experimental study of intermediate heat exchange in a sieve tray distillation column., 27-30 maj, Kolding, Danmark, 2001