List of Publications for Jens Nielsen

Research papers in international journals with peer review

1988

(1) K. Nikolajsen; **J. Nielsen**; J. Villadsen (1988) In-line flow injection analysis for monitoring lactic acid fermentations. *Anal. Chim. Acta* **214**:137-145

1989

(2) **J. Nielsen**; K. Nikolajsen; J. Villadsen (1989) FIA for on-line monitoring of important lactic acid fermentation *variables. Biotechnol. Bioeng.* **33**:1127-1134

(3) **J. Nielsen**; C. Emborg; K. Halberg; J. Villadsen (1989) Compartment model concept used in the design of fermentation with recombinant microorganisms *Biotechnol. Bioeng.* **34**:478-486

1990

(4) **J. Nielsen**; K. Nikolajsen; S. Benthin; J. Villadsen (1990) Application of flow-injection analysis in the on-line monitoring of sugars, lactic acid, protein, and biomass during lactic acid fermentations. *Anal. Chim. Acta* **237**:165-175

(5) G. Wehnert; K.-D. Anders; C. Bittner; R. Kammeyer; U. Hübner; **J. Nielsen**; T. Scheper (1990) Ein kombinierter Fluoreszenz-/Streulichtsensor und dessen Einsatz zur Prozessbeobachtung in der Biotechnologie. *Chem.-Ing.-Tech.* **62**:211-212

1991

(6) S. Benthin; **J. Nielsen**; J. Villadsen (1991) A simple and reliable method for the determination of cellular RNA content. *Biotechnol. Techn.*. **5**:39-42

(7) **J. Nielsen**; K. Nikolajsen; J. Villadsen (1991) modelling of a microbial system 1. A theoretical study of the lactic acid fermentation. *Biotechnol. Bioeng.* **38**:1-10

(8) **J. Nielsen**; K. Nikolajsen; J. Villadsen (1991) Structured modelling of a microbial system 2. Experimental verification of a structured lactic acid fermentation model. *Biotechnol. Bioeng*. **38**:11-23

(9) K. Nikolajsen; **J. Nielsen**; J. Villadsen (1991) Structured modelling of a microbial system 3. Growth on mixed substrates. *Biotechnol. Bioeng*. **38**:24-29

(10) **J. Nielsen**; A. G. Pedersen; K. Strudsholm; J. Villadsen (1991) Modelling fermentations with recombinant microorganisms : Formulation of a structured model. *Biotechnol. Bioeng.* **37**:802-808

(11) S. Benthin; **J. Nielsen**; J. Villadsen (1991) Characterisation and application of precise and robust flow injection analyzers for on-line measurement during fermentations. *Anal. Chim. Acta* **247**:45-50

(12) L. H. Christensen; **J. Nielsen**; J. Villadsen (1991) Monitoring of substrates and products during fed-batch penicillin fermentations on complex media. *Anal. Chim. Acta* **249**:123-136

(13) L. H. Christensen; **J. Nielsen**; J. Villadsen (1991) Delay and dispersion in an in-situ membrane probe for bioreactors. *Chem. Eng. Sci.* **46**:3304-3307

1992

(14) S. Benthin; **J. Nielsen**; J. Villadsen (1992)
Flow Injection Analysis of micromolar concentrations of glucose and lactate in fermentation media. *Anal. Chim. Acta* **261**:145-153

(15) S. Benthin; **J. Nielsen**; J. Villadsen (1992)
Anomeric specificity of glucose uptake systems in *Lactococcus cremoris*, *Escherichia coli* and *Saccharomyces cerevisiae:* Mechanisms, kinetics and implications. *Biotechnol. Bioeng.* **40**:137-146

(16) **J. Nielsen** (1992) On-line monitoring of microbial processes by flow injection analysis. *Proc. Control Qual*. **2**:371-384

(17) C. L. Johansen; L. H. Christensen; J. Villadsen; **J. Nielsen** (1992) Monitoring and control of fed-batch penicillin fermentation. *Comp. Chem. Eng.* **16**:S297-S304

(18) K. Strudsholm; **J. Nielsen**; C. Emborg (1992) Product formation during batch fermentation with recombinant *Escherichia coli* containing a runaway plasmid. *Bioprocess Eng.* **8**:173-181

1993

(19) A. G. Pedersen; M. Bundgaard; O. Hassager; **J. Nielsen**; J. Villadsen (1993) Rheological characterization of media containing *Penicillium chrysogenum*. *Biotechnol. Bioeng*. **41**:162-164

(20) **J. Nielsen** (1993) A simple morphologically structured model describing the growth of filamentous microorganisms. *Biotechnol. Bioeng.* **41**:715-727

(21) M. Carlsen; L. H. Christensen; **J. Nielsen** (1993) Flow-injection analysis for measurement of penicillin V in fermentation samples. *Anal. Chim. Acta* **274**:117-123

(22) M. Carlsen; H. Meier; F. Lantreibecq; C. Johansen; R. W. Min; **J. Nielsen** (1993) On-line monitoring of penicillin V during penicillin fermentations : A comparison of two different methods based on FIA. *Anal. Chim. Acta* **279**:51-58

(23) S. Benthin; **J. Nielsen**; J. Villadsen (1993) Transport of sugars via two anomer-specific sites on mannose-phosphotransferase system in *Lactococcus cremoris* : In vivo study of mechanism, kinetics and adaption. *Biotechnol. Bioeng.* **42**:440-448

(24) **J. Nielsen** (1993) Simulation of bioreactions. *Comp. Chem. Eng.* **18**:S615-S620

(25) S. Benthin; **J. Nielsen**; J. Villadsen (1993) Two uptake systems for fructose in *Lactococcus lactis* subsp. *cremoris* FD1 produce glucolytic and gluconeogenic fructose phosphates and induce oscillations of growth and lactic acid formation. *Appl. Environ. Microbiol.* **59**:3206-3211

1994

(26) S. Benthin; **J. Nielsen**; J. Villadsen (1994) Galactose expulsion during lactose metabolism in *Lactococcus lactis* subsp. *cremoris* FD1 due to dephosphorylation of intracellular galactose-6-phosphate. *Appl. Environ. Microbiol.* **60**:1254-1259

(27) A. G. Pedersen; M. Bundgaard-Nielsen; **J. Nielsen**; J. Villadsen (1994) Characterization of mixing in stirred tank bioreactors equipped with Rushton turbines. *Biotechnol. Bioeng*. **44**:1013-1017

(28) A. G. Pedersen; H. Andersen; **J. Nielsen**; J. Villadsen (1994) A novel technique based on ^{85}Kr for quantification of gas-liquid mass transfer in bioreactors. *Chem.Eng. Sci.* **49**:803-810

(29) S. Benthin; U. Schulze; **J. Nielsen**; J. Villadsen (1994) Growth energetics of *Lactococcus cremoris* FD1 during energy-, carbon- and nitrogen limitation in steady state and transient cultures. *Chem. Eng. Sci.* **49**:589-610

(30) L. H. Christensen; G. Mandrup; **J. Nielsen**; J. Villadsen (1994) A robust LC method for studying the penicillin fermentation. *Anal. Chim. Acta* **296**:51-62

(31) L. H. Christensen; **J. Nielsen**; J. Villadsen (1994) Degradation of penicillin V in fermentation media. *Biotechnol. Bioeng*. **44**:165-169

(32) M. A. Hjortso; **J. Nielsen** (1994) A conceptual model of autonomous oscillations in microbial cultures. *Chem. Eng. Sci.* **49**:1083-1095

(33) **J. Nielsen**; C. L. Johansen; J. Villadsen (1994) Culture fluorescence measurements during batch and fed-batch cultivations with *Penicillium chrysogenum. J. Biotechnol* **38**:51-62

(34) M. Carlsen; J. Marcher; **J. Nielsen** (1994) An improved FIA-system for measuring α-amylase in cultivation *media, Biotechnol. Tech*. **8**:479-482

1995

(35) H. Jørgensen; **J. Nielsen**; J. Villadsen; H. Mølgaard (1995) Analysis of the penicillin V biosynthesis during fed-batch cultivations with a high yielding strain of *Penicillium chrysogenum, Appl. Microbiol. Biotechnol*. **43**:123-130

(36) **J. Nielsen**; P. Krabben (1995) Hyphal growth and fragmentation of *P. chrysogenum* in submerged cultures. *Biotechnol. Bioeng*. **46**:588-598

(37) **J. Nielsen**; C. L. Johansen; M. Jacobsen; P. Krabben; J. Villadsen (1995) Pellet formation and fragmentation in submerged cultures of *Penicillium chrysogenum* and its relation to penicillin production, *Biotechnol. Prog*. **11**:93-98

(38) H. Jørgensen; **J. Nielsen**; J. Villadsen; H. Mølgaard (1995) Metabolic flux distributions in *Penicillium chrysogenum* during fed-batch cultivations. *Biotechnol. Bioeng.* **46**:117-131

(39) R. Mørkeberg; M. Carlsen; **J. Nielsen** (1995) Induction and repression of α-amylase production in *recombinant and wild-type strains of Aspergillus oryzae, Microbiol.* **141**:2449-2454

(40) **J. Nielsen**; H. S. Jørgensen (1995) Metabolic control analysis of the penicillin biosynthetic pathway in a *high yielding strain of Penicillium chrysogenum, Biotechnol. Prog.* **11**:299-305

(41) R. Lejeune; **J. Nielsen**; G. Baron (1995) Morphology of *Trichoderma reesei* QM 9414 in submerged cultures, *Biotechnol. Bioeng*. **47**:609-615

(42) L. H. Christensen; U. Schulze; **J. Nielsen**; J. Villadsen (1995) Acoustic gas analysis for fast and precise monitoring of bioreactors, *Chem. Eng. Sci*. **50**:2101-2110

(43) R. Lejeune; **J. Nielsen**; G. Baron (1995) Influence of pH on the morphology of *Trichoderma reesei* QM 9414 in submerged cultures. *Biotechnol. Lett*. **17**:341-344

(44) Rong Wei Min; **J. Nielsen**; J. Villadsen (1995) Simultaneous monitoring of glucose, lactic acid and penicillin by Sequential Injection Analysis. *Anal. Chim. Acta* **312**:149-156

(45) L. H. Christensen; C. M. Henriksen; **J. Nielsen**; J. Villadsen; M. Egel-Mitani (1995) Continuous cultivation of *P. chrysogenum*. Growth on glucose and penicillin production. *J. Biotechnol*. **42**:95-107

(46) M. A. Hjortso; **J. Nielsen** (1995) Population balance models of autonomous microbial oscillations. *J. Biotechnol.* **42**:255-269

(47) Rong Wei Min; M. Carlsen; **J. Nielsen**; J. Villadsen (1995) Measurements of α-amylase activity by Sequential Injection Analysis. *Biotechnol. Techn*. **9**:765-768

1996

(48) M. Carlsen; **J. Nielsen**; J. Villadsen (1996) Kinetic studies of acid-inactivation of α-amylase from *Aspergillus oryzae*. *Chem. Eng. Sci.* **51**:37-43

(49) M. Carlsen; A. B. Spohr; **J. Nielsen**; J. Villadsen (1996) Morphology and physiology of an α-amylase producing strain of *Aspergillus oryzae* during batch cultivations, *Biotechnol. Bioeng*. **49**:266-276

(50) C. M. Henriksen; L. H. Christensen; **J. Nielsen**; J. Villadsen (1996) Growth energetics and metabolic fluxes in continuous cultures of *Penicillium chrysogenum, J. Biotechnol*. **45**:149-164

(51) L. H. Christensen; J. Marcher; U. Schulze; M. Carlsen; R. W. Min; **J. Nielsen**; J. Villadsen (1996) Semi-on-line analysis for fast and precise monitoring of bioreaction processes. *Biotechnol. Bioeng*. **52**:237-247

(52) C. M. Henriksen; S. S. Holm; H. S. Jørgensen; **J. Nielsen**; J. Villadsen (1997) Kinetic studies of the carboxylation of 6-amino-penicillanic acid to 8-hydroxy-penillic acid, *Proc. Biochem*. **32**:85-91

(53) M. Carlsen; **J. Nielsen**; J. Villadsen (1996) Growth and α-amylase production of *Aspergillus oryzae* during continuous cultivations. *J. Biotechnol*. **45**:81-93

(54) Rong Wei Min; **J. Nielsen**; J. Villadsen (1996) On-line monitoring of glucose and penicillin by Sequential Injection Analysis. *Anal. Chim. Acta* **320**:199-205

(55) P. de N. Pissarra; **J. Nielsen**; M. J. Bazin (1996) Pathway kinetics and metabolic control analysis of a high-yielding strain of *Penicillium chrysogenum* during fed-batch cultivations. *Biotechnol. Bioeng*. **51**:168-176

(56) U. Schulze; G. Liden; **J. Nielsen**; J. Villadsen (1996) Physiological effects of nitrogen starvation in an anaerobic batch culture of *Saccharomyces cerevisiae. Microbiology* **142**:2299-2310

(57) **J. Nielsen**; H. S. Jørgensen (1996) Kinetic model for the penicillin biosynthetic pathway in *Penicillium chrysogenum*. *Control Eng. Prac.***4**:765-771

(58) C. J. L. Klein, L. Olsson, B. Rønnow, J. D. Mikkelsen, **J. Nielsen** (1996) Alleviation of glucose repression on maltose metabolism by *MIG1* disruption in *Saccharomyces cerevisiae*. *Appl. Environ. Microbiol*. **62**:4441-4449

1997

(59) **J. Nielsen** (1997) Metabolic control analysis of biochemical pathways based on a thermokinetic description of reaction rates. *Biochem. J*. **321**:133-138

(60) T. L. Nissen; U. Schulze; **J. Nielsen**; J. Villadsen (1997) Flux distributions in anaerobic, glucose limited continuous cultures of *Saccharomyces cerevisiae*. *Microbiology* **143**:203-218

(61) K. Schmidt; M. Carlsen; **J. Nielsen**; J. Villadsen (1997) Modelling isotopmer distributions in biochemical networks Using isotopomer mapping matrices. *Biotechnol. Bioeng*. **55**:831-840

(62) T. C. Zangirolami; C. L. Johansen; **J. Nielsen**; S. B. Jørgensen (1997) Simulation of penicillin production in fed-batch cultivations using a morphologically structured model. *Biotechnol. Bioeng*. **56**:593-604

(63) P. de N. Pissarra; **J. Nielsen** (1997) Thermodynamics of metabolic pathways for penicillin production: Analysis of thermodynamic feasibility and free energy changes during fed-batch cultivations. *Biotechnol. Prog*. **13**:156-165

(64) M. Carlsen; K. V. Jocumsen; C. Emborg; **J. Nielsen** (1997) Modeling the growth and proteinase A production in continuous cultures of recombinant *Saccharomyces cerevisiae*. *Biotechnol. Bioeng*. **55**:447-454

(65) P. Krabben; **J. Nielsen**; M. L. Michelsen (1997) Analysis of single hyphal growth and fragmentation in submerged cultures using a population model. *Chem. Eng. Sci*. **52**:2641-2652

(66) A. B. Spohr; M. Carlsen; **J. Nielsen**; J. Villadsen (1997) Morphological characterization of recombinant strains of *Aspergillus oryzae* producing α-amylase during batch cultivations. *Biotechnol. Letters* **19**:257-261

(67) L. Olsson; M. E. Larsen; B. Rønnow; J. D. Mikkelsen; **J. Nielsen** (1997) Silencing *MIG1* in *Saccharomyces cerevisiae*: Effects of Antisense *MIG1* Expression and *MIG1* Gene Disruption. *Appl. Environ. Microbiol*. **63**:2366-2371

1998

(68) **J. Nielsen** (1998) Metabolic Engineering: Techniques for analysis of targets for genetic manipulations. *Biotechnol. Bioeng*. **58**:125-132

(69) A. Spohr; M. Carlsen; **J. Nielsen**; J. Villadsen (1998) α-Amylase production in recombinant *Aspergillus oryzae* during fed-batch and continuous cultivations. *J. Ferment. Bioeng*. **86**:49-56

(70) H. B. Aa. Theilgaard; C. M. Henriksen; K. Kristiansen; **J. Nielsen** (1997) Purification and characterization of δ-(L-α-aminoadipyl)-L-cysteinyl-D-valine synthetase (ACVS) from *Penicillium chrysogenum*. *Biochem. J*. **327**:185-191

(71) K Schmidt; A. Marx; A. A. de Graaf; W. Wiechert; H. Sahm; **J. Nielsen**; J. Villadsen (1998) ^{13}C Tracer experiments and metabolite balancing for metabolic flux analysis: Comparing two approaches. *Biotechnol. Bioeng*. **58**:254-257

(72) T. Agger; A. B. Spohr; M. Carlsen; **J. Nielsen** (1998) Growth and product formation of *Aspergillus oryzae* during submerged cultivations: Verification of a morphologically structured model using fluorescent probes. *Biotechnol. Bioeng*. **57**:321-329

(73) C. M. Henriksen; **J. Nielsen**; J. Villadsen (1997) Influence of dissolved oxygen concentration on the penicillin biosynthetic pathway in steady state cultures of *Penicillium chrysogenum*. *Biotechnol. Prog*. **13**:776-782

(74) A. B. Spohr; C. Dam Mikkelsen; M. Carlsen; **J. Nielsen**; J. Villadsen (1998) On-line study of fungal morphology during submerged growth in a small flow-through cell. *Biotechnol. Bioeng*. **58**:541-553

(75) K. Schmidt; **J. Nielsen**; J. Villadsen (1999) Quantitative analysis of metabolic fluxes in *E. coli*, using 2 dimensional NMR spectroscopy and complete isotopomer models. *J. Biotechnol*. **71**:175-190

(76) C. K. Klein; L. Olsson; B. Rønnow; J. D. Mikkelsen; **J. Nielsen** (1998) Glucose and maltose metabolism in *MIG1*-disrupted and *MAL*-constitutive strains of *Saccharomyces cerevisiae*. *Food Technol. Biotechnol*. **35**:287-292

(77) H. P. Smits; A. Cohen; T. Buttler; **J. Nielsen**; L. Olsson (1998) Clean-up and analysis of sugar phosphates in biological extracts by using solid phase extraction and anion-exchange chromatography with pulsed amperometric detection. *Anal. Biochem*. **261**:36-42

(78) J. Holmalahti; O. Raatikainen; A. von Wright; H. Laatsch; A. Spohr; O. K. Lyngberg; **J. Nielsen** (1998) Production of dihydroabikoviromycin by *Streptomyces anulatus*. Production parameters and chemical characterization of genotoxicity. *J. Appl. Microbiol*. **85**:61-68

(79) C. J. L. Klein; L. Olsson; **J. Nielsen** (1998) Nitrogen-limited continuous cultivations as a tool to quantify glucose control in *Saccharomyces cerevisiae*. *Enz. Microbial. Technol*. **23**:91-100

(80) C. M. Henriksen; **J. Nielsen**; J. Villadsen (1998) High exogeneous concentrations of phenoxyacetic acid are crucial for a high penicillin V productivity in *Penicillium chrysogenum*. *Microbiol*. **144**:2001-2006

(81) C. M. Henriksen; **J. Nielsen**; J. Villadsen (1998) Modelling of the protonophoric uncoupling by phenoxyacetic acid of the plasma membrane of *Penicillium chrysogenum*. *Biotechnol. Bioeng*. **60**:761-767

(82) J. Dynesen; H. P. Smits; L. Olsson; **J. Nielsen** (1998) Carbon catabolite repression of invertase during batch cultivations of *Saccharomyces cerevisiae*: The role of glucose, fructose, and mannose. *Appl. Microbiol. Biotechnol.* **50**:579-582

(83) S. Ostergaard; H. B. Aa. Theilgaard; **J. Nielsen** (1998) Identification and purification of O-acetyl-L-serine sulfhydrylase in *Penicillium chrysogenum*. *Appl. Microbiol. Biotechnol*. **50**:663-668

1999

(84) A. Aleksenko; W. Liu; Z. Gojkovic; **J. Nielsen**; J. Piskur (1999) Structural and transcriptional analysis of the *pyrABCN, pyrC*, and *PyrF* genes in *Aspergillus nidulans* and the evolutionary origin of fungal dihydroorotases. *Mol. Microbiol.* **33**:599-611

(85) H. Pedersen; M. Carlsen; **J. Nielsen** (1999) Identification of enzymes and quantification of metabolic fluxes in the wild type and in a recombinant strain of *Aspergillus oryzae* strain. *Appl. Environ. Microbiol*. **65**:11-19

(86) A. L. Santerre Henriksen; S. Even; C. Müller; P. J. Punt; C. A. M. J. J. van den Hondel; **J. Nielsen** (1999) Study of the glucoamylase promoter in *Aspergillus niger* using green fluorescence protein. *Microbiol*. **145**:729-734

(87) T. Christiansen; A. Spohr; **J. Nielsen** (1999) On-line study of growth kinetics of single hyphae of *Aspergillus oryzae* in a flow-through cell. *Biotechnol. Bioeng*. **63**:147-153

(88) A. Heydorn; T. Suhr-Jessen; **J. Nielsen** (1999) Growth and production kinetics of a teicoplanin producing strain of *Actinoplanes teicomyceticus*. *J. Antibio*. **52**:40-44

(89) H. Aae. Theilgaard; **J. Nielsen** (1999) Metabolic control analysis of the penicillin biosynthetic pathway: The influence of the LLD-ACV:bisACV ratio on the flux control. *Antonie van Leeuvenhoek* **75**:145-154

(90) C. J. L. Klein; J. J. Rasmussen; B. Rønnow; L. Olsson; **J. Nielsen** (1999) Investigation of the impact of *MIG1* and *MIG2* on the phyiology of *Saccharomyces cerevisiae*. *J. Biotechnol*. **68**:197-212

(91) M. Anderlund; T. L. Nissen; **J. Nielsen**; J. Villadsen; J. Rydström; B. Hahn-Hägerdal; M. C. Kielland-Brandt (1999) Expression of the *E. coli pntA* and *pntB* genes encoding nicotinamide nucleotide transhydrogenase in *Saccharomyces cerevisiae* and its effect on product formation during anaerobic glucose fermentation. *Appl. Environ. Microbiol.* **65**:2333-2340

(92) K. Schmidt; L. C. Nørregaard; B. Pedersen; A. Meissner; J. Ø. Duus; **J. Nielsen**; J. Villadsen (1999) Quantification of intracellular metabolic fluxes from fractional enrichment measurements and isotopomer analysis of ^{13}C labelled biomass components. *Metabol. Eng.* **1**:166-179

(93) B. Christensen; **J. Nielsen** (1999) Isotopomer analysis using GC-MS. *Metabol. Eng.* **1**:282-290

(94) A. Santerre Henriksen; M. Carlsen; H. de Bang; **J. Nielsen** (1999) Kinetics of α-amylase secretion in *Aspergillus oryzae*. *Biotechnol. Bioeng.* **65**:76-82

(95) B. Rønnow; L. Olsson; **J. Nielsen**; J. D. Mikkelsen (1999) Derepression of galactose metabolism in melibiase producing baker's and distillers' yeast *J. Biotechnol.* **72**:213-228

2000

(96) H. Pedersen; **J. Nielsen** (2000) The influence of nitrogen sources on the α-amylase productivity of *Aspergillus oryzae* in continuous culture. *Appl. Microb. Biotechnol*. **53**:278-281

(97) T. Agger; **J. Nielsen** (1999) Genetically structured modelling of protein production in filamentous fungi. *Biotechnol. Bioeng.* **66**:164-170

(98) C. Müller; A. Spohr; **J. Nielsen** (2000) Role of substrate concentration on mitosis and hyphal extension of *Aspergillus*. *Biotechnol. Bioeng.* **67**:390-397

(99) H. Pedersen; B. Christensen; C. Hjort; **J. Nielsen** (2000) Construction and characterization of an oxalic acid non-producing strain of *Aspergillus niger*. *Metabol. Eng.* **2**:34-41

(100) H. Pedersen; M. Beyer; **J. Nielsen** (2000) Glucoamylase production in batch, chemostat and fed-batch cultivations by an industrial strain of *Aspergillus niger*. *Appl. Microbiol. Biotechnol.* **53**:272-277

(101) S. Ostergaard; C. Roca; B. Rønnow; **J. Nielsen**; L. Olsson (2000) Physiological studies in aerobic batch cultivations of *Saccharomyces cerevisiae* strains harbouring the *MEL1* gene. *Biotechnol. Bioeng.* **68**:252-259

(102) H. Pedersen; C. Hjort; **J. Nielsen** (2000) Cloning and characterization of *oah*, the gene encoding oxaloacetate hydrolase from *Aspergillus niger*. *Mol. Gen. Genetics.* **263**:281-286

(103) L. Olsson; **J. Nielsen** (2000) The role of metabolic engineering in the improvement of *Saccharomyces cerevisiae*: Utilization of industrial media. *Enz. Microbiol. Technol.* **26**:785-792

(104) T. L. Nissen; C. W. Hamann; M. C. Kielland-Brandt; **J. Nielsen**; J. Villadsen (2000) Anaerobic and batch cultivations of *Saccharomyces cerevisiae* mutants impaired in glycerol synthesis. *Yeast* **16**:463-474

(105) T. L. Nissen; M. C. Kielland-Brandt; **J. Nielsen**; J. Villadsen (2000) Optimisation of ethanol production in *Sacchaoromyces cerevisiae* by metabolic engineering of the ammonia assimilation. *Metabol. Eng.* **2**:69-77

(106) A. Heydorn; B. O. Pedersen; J. Ø. Duus, S. Bergmann; T. Suhr-Jessen; **J. Nielsen** (2000) Biosynthetic studies of the glycopeptide teicoplanin by 1H and 13C NMR. *J. Biol. Chem.* **275**:6201-6206

(107) J. P. van Dijken *et al.* (2000) An inter-laboratory comparison of physiological and genetic properties of four *Saccharomyces cerevisiae* strains. *Enz. Microb. Technol.* **26**:706-714

(108) T. C. Zangirolami; M. Carlsen; **J. Nielsen**; S. B. Jørgensen (2000) Selection and characterization of a high α-amylase-producing variant in glucose-limited continuous cultures of *Aspergillus oryzae*. *Myc. Res.* **104**:1241-1249

(109) B. Christensen; **J. Nielsen** (2000) Metabolic network analysis on *Penicillium chrysogenum* using 13C-labelled glucose. *Biotechnol. Bioeng.* **68**:652-659

(110) B. Christensen; J. Thykær; **J. Nielsen** (2000) Metabolic characterization of high and low yielding strains of *Penicillium chrysogenum*. *Appl. Microbiol. Biotechnol*. **54**:212-217

(111) **J. Nielsen** (2000) The role of metabolic engineering in the improvement of industrial processes. *Thai J. Biotechnol.* **2**:14-25

(112) H. P. Smits; J. Hauf; S. Müller; T. J. Hobley; F. K. Zimmermann; B. Hahn-Hägerdal; **J. Nielsen**; L. Olsson (2000) Simultaneous over-expression of enzymes of the lower part of glycolysis can enhance the fermentative capacity of *Saccharomyces cerevisiae*. *Yeast* **16**:1325-1334

(113) H. Aae Theilgaard; M. van den Berg; C. Mulder; R. A. L. Bovenberg; **J. Nielsen** (2000) Quantitative analysis of *Penicillium chrysogenum* Wis54-1255 transformants over-expressed in the penicillin biosynthetic genes. *Biotechnol. Bioeng.* **72**:379-388

(114) L. F. Bautista; M. Hentzer; A. Santerre Henriksen; A. Aleksenko; **J. Nielsen** (2000) Antisense silencing of the *creA* gene in *Aspergillus nidulans*. *Appl. Environ. Microbiol.* **66**:4579-4581

2001

(115) T. Agger; A. Spohr; **J. Nielsen** (2001) α-Amylase production in high cell density submerged cultivations of *Aspergillus oryzae* and *Aspergillus nidulans*. *Appl. Microbiol. Biotechnol.* **55**:81-84

(116) S. Ostergaard; L. Olsson; M. Johnston; **J. Nielsen** (2000) Increasing galactose consumption by *Saccharomyces cerevisiae* through metabolic engineering of the *GAL* gene regulatory network. *Nature Biotechnol.* **18**:1283-1286

(117) E. Jonsbu; T. Elingsen; **J. Nielsen** (2001) Effects of nitrogen sources on cell growth and production of nystatin by *Streptomyces noursei J. Antibiot.* **53**:1354-1362

(118) M. McIntyre; J. Dynesen; **J. Nielsen** (2001) Morphological characaterization of *Aspergillus nidulans*: Growth, septation and fragmentation. *Microbiol.* **147**:239-246

(119) A. K. Gombert; M. M. dos Santos; B. Christensen; **J. Nielsen** (2001) Network identification and flux quantification in the central metabolism of *Saccharomyces cerevisiae* at different conditions of glucose repression. *J. Bacteriol.* **183**:1441-1451

(120) S. Ostergaard; L. Olsson; **J. Nielsen** (2001) *In vivo* dynamics of galactose metabolism in *Saccharomyces cerevisiae*: Metabolic fluxes and metabolite levels. *Biotechnol. Bioeng.* **73**:412-425

(121) S. Ostergaard; K. O. Walløe; C. S. G. Gomes; L. Olsson; **J. Nielsen** (2001) The impact of *GAL6*, *GAL80*, and *MIG1* on glucose control of the *GAL* system in *Saccharomyces cerevisiae*. *FEMS Yeast Research.* **1**:47-55

(122) T. L. Nissen; M. Anderlund; M. C. Kielland-Brandt; **J. Nielsen**; J. Villadsen (2001) Expression of a cytoplasmic transhydrogenase in *Saccharomyces cerevisiae* results in formation of 2-oxoglutarate due to depletion of the NADPH pool. *Yeast* **18**:19-32

(123) K. Møller; L. D. Tidemand; J. R. Winther; L. Olsson; J. Piskur; **J. Nielsen** (2001) Production of a heterologous proteinase A by *Saccharomyces kluyveri*. *Appl. Microbiol. Biotechnol.* **57**:216-219

(124) B. Christensen; T. Christiansen; A. K. Gombert; J. Thykær; **J. Nielsen** (2001) A simple and robust method for estimation of the flux through the pentose phosphate pathway in micro-organisms. *Biotechnol. Bioeng.* **74**:517-523

(125) E. Jonsbu; B. Christensen; **J. Nielsen** (2001) Changes in *in vivo* fluxes through central metabolic pathways during production of nystatin by *Streptomyces noursei* in batch culture. *Appl. Microbiol. Biotechnol.* **56**:93-100

(126) M. Carlsen; **J. Nielsen** (2001) Influence of carbon source on α-amylase production by *Aspergillus oryzae*. *Appl. Microbiol. Biotechnol.* **57**:346-349

(127) T. Agger; J. B. Petersen; S. M. O'Connor; R. L. Murphy; J. M. Kelly; **J. Nielsen** (2002) Physiological characterisation of recombinant *Aspergillus nidulans* strains with different *creA* genotypes expressing *A. oryzae* α-amylase. *J. Biotechnol.* **92**:279-285

(128) T. C. Zangirolami; M. Carlsen; **J. Nielsen**; S. B. Jørgensen (2002) Growth and enzyme production during continuous cultures of a high amylase-producing variant of *Aspergillus oryzae*. *Brazilian J. Chem. Eng.* **19**:55-68

(129) J. Robin; M. Jacobsen; M. Beyer; H. Noorman; **J. Nielsen** (2001) Physiological characterisation of *Penicillium chrysogenum* strains expressing the expandase gene from *Streptomyces clavuligerus* during batch cultivations. Growth and adipoyl-7-ADCA production. *Appl. Microbiol. Biotechnol.* **57**:357-362

(130) K. Møller; B. Christensen; J. Förster; J. Piskur; **J. Nielsen**; L. Olsson (2001) Aerobic glucose metabolism of *Saccharomyces kluyveri*: Growth, metabolite production and quantification of metabolic fluxes. *Biotechnol. Bioeng.* **77**:186-193

2002

(131) T. Christiansen; B. Christensen; **J. Nielsen** (2002) Metabolic network analysis of *Bacillus clausii* on minimal and semi-rich medium using ^{13}C-labeled glucose. *Metabolic Eng.* **4**:159-169

(132) J. Thykaer; B. Christensen; **J. Nielsen** (2002) Metabolic network analysis of an adipoyl-7-ADCA producing strain of *Penicillium chrysogenum*: Elucidation of adipate degradation. *Metabolic Eng.* **4**:151-158

(133) M. McIntyre; J. Breum; J. Arnau; **J. Nielsen** (2002) Growth physiology and dimorphism of *Mucor circinelloides* (syn. *racemosus)* during submerged batch cultivation. *Appl. Microbiol. Biotechnol.* **58**:495-502

(134) T. Christiansen; **J. Nielsen** (2002) Growth energetics of an alkaline serine protease producing strain of *Bacillus clausii* during continuous cultivation. *Bioproc. Biosystems Eng.* **24**:329-339

(135) B. Christensen; **J. Nielsen** (2002) Reciprocal ^{13}C-labeling: A method for investigating the catabolism of co-substrates. *Biotechnol. Prog.* **18**:163-166

(136) C. Müller; M. McIntyre; K. Hansen; **J. Nielsen** (2002) Metabolic engineering of the morphology of *Aspergillus oryzae* by altering chitin synthesis. *Appl. Environ. Microbiol.* **68**:1827-1836

(137) A. G. Vara; A. Hochkoeppler; **J. Nielsen**; J. Villadsen (2002) Production of teicoplanin by *Actinoplanes teichomyceticus* in continuous fermentation. *Biotechnol. Bioeng.* **77**:589-598

(138) **J. Nielsen**; L. Olsson (2002) An expanded role for microbial physiology in metabolic engineering and functional genomics: Moving towards systems biology. *FEMS Yeast Res.* **2**:175-181

(139) N. B. S. Jensen; B. Christensen; **J. Nielsen**; J. Villadsen (2002) The simultaneous biosynthesis and uptake of amino acids by *Lactococcus lactis* studied by ^{13}C labelling experiments. *Biotechnol. Bioeng.* **78**:11-16

(140) K. Møller; C. Bro; J. Piskur; **J. Nielsen**; L. Olsson (2002) Steady-state and transient-state analysis of aerobic fermentation in *Saccharomyces kluyveri*. *FEMS Yeast Res.* **2**:233-244

(141) T. Christiansen; **J. Nielsen** (2002) Production of extracellular protease and glucose uptake in *Bacillus clausii* in steady state and transient continuous cultures. *J. Biotechnol*. **97**:265-273

(142) J. Förster; A. K. Gombert; **J. Nielsen** (2002) A functional genomics approach using metabolomics and *in silico* pathway analysis. *Biotechnol. Bioengi* **79**:703-712

(143) J. Zaldivar; A. Borges; B. Johansson; H. P. Smits; S. G. Villas-Boas; **J. Nielsen**; L. Olsson (2002) Fermentation performance and intracellular metabolite patterns in laboratory and industrial xylose fermenting *Saccharomyces cerevisiae*. *Appl. Microbiol. Biotechnol*. **59**:436-442

(144) C. Müller; C. M. Hjort; K. Hansen; **J. Nielsen** (2002) Altering the expression of two chitin synthase genes differentially affects the growth and morphology of *Aspergillus oryzae*. *Microbiology* **148**:4025-4033

(145) B. Christensen; A. K. Gombert; **J. Nielsen** (2002) Analysis of flux estimates based on ^{13}C-labeling experiments. *Eur. J. Biochem.* **269**:2795-2800

(146) E. Jonsbu; M. McIntyre; **J. Nielsen** (2002) The influence of carbon sources and morphology on nystatin production by *Streptomyces noursei*. *J. Biotechnol.* **95**:133-**144**

(147) M. D. W. Piper; P. Daran-Lapujade; C. Bro; B. Regenberg; S. Knudsen; **J. Nielsen**; J. T. Pronk (2002) Reproducibility of oligonucleotide microarray transcriptome analysis: an interlaboratory comparison using chemostat cultures of *Saccharomyces cerevisiae*. *J. Biol. Chem.* **277**:37001-37008

2003

(148) C. Müller; K. Hansen; P. Szabo; **J. Nielsen** (2003) Effect of chitin synthesis on mycelial morphology and culture viscosity in *Aspergillus oryzae*. *Biotechnol. Bioeng.* **81**:525-534

(149) T. Christiansen; S. Michaelsen; M. Wümpelmann; **J. Nielsen** (2003) Production of Savinase and population viability of *Bacillus clausii* during high cell density fed-batch cultivations. *Biotechnol. Bioeng.* 83:344-352

(150) J. Robin; G. Lettier; M. McIntyre; H. Noorman; **J. Nielsen** (2003) Continuous cultivations of *Penicillium chrysogenum* strain expressing the expandase gene from *Streptomyces clavuligerus*: Growth yields and morphological characterisation. *Biotechnol. Bioeng.* **83**:353-360

(151) J. Robin; P. Bruheim; M. L. Nielsen; H. Noorman; **J. Nielsen** (2003) Continuous cultivations of *Penicillium chrysogenum* strain expressing the expandase gene from *Streptomyces clavuligerus*: Kinetics of adipoyl-7-aminodeacetoxycephalosporanic acid and by-product formation. *Biotechnol. Bioeng.* **83**:361-368

(152) J. Förster; I. Famili; P. Fu; B. Ø. Palsson; **J. Nielsen** (2003) Genome-scale reconstruction of the *Saccharomyces cerevisiae* metabolic network. *Genome Res.* **13**:244-253

(153) T. L. Lübbehüsen; **J. Nielsen**; M. McIntyre (2003) Characterization of the *Mucor circinelloides* life cycle by on-line image analysis. *J. Appl. Microbiol.* **95**:1152-1160

(154) J. Robin; S. Bonneau; D. Schipper; H. Noorman; **J. Nielsen** (2003) Influence of the adipate and dissolved oxygen concentrations on the β-lactams production during continuous cultivations of a *Penicillium chrysogenum* strain expressing the expandase gene from *Streptomyces clavuligerus*. *Metabol. Eng.* **5**:42-48

(155) N. Gunnarsson; P. Bruheim; **J. Nielsen** (2003) Production of the glycopeptide antibiotic A40926 by *Nonomuria* sp. ATCC 39727: influence of medium composition in batch fermentation. *J. Ind. Microbiol. Biotechnol*. **30**:150-156

(156) J. Dynesen; **J. Nielsen** (2003) Surface hydrophobicity of *Aspergillus nidulans* conidiophores and its role in pellet formation. *Biotechnol. Prog.* **19**:1049-1052

(157) M. M. dos Santos; A. K. Gombert; B. Christensen; L. Olsson; **J. Nielsen** (2003) Identification of *in vivo* enzyme activities in the co-metabolism of glucose and acetate by *Saccharomyces cerevisiae* using ^{13}C-labeled substrates. *Eukar. Cell.* **2**:599-608

(158) J. Förster; I. Famili; B. Ø. Palsson; **J. Nielsen** (2003) Large-scale Evaluation of *in silico* Gene Deletions in *Saccharomyces cerevisiae*. *Omics J. Integrative Biol.* **7**:193-202

(159) T. L. Lübbehüsen; **J. Nielsen**; M. McIntyre (2003) Morphology and physiology of the dimorphic fungus *Mucor circinelloides* (syn. *M. racemosus*) during anaerobic growth. *Mycol. Res.* **107**:223-230

(160) C. Roca; **J. Nielsen**; L. Olsson (2003) Metabolic engineering of ammonium assimilation in xylose fermenting *Saccharomyces cerevisiae* improves ethanol production. *Appl. Env. Microbiol.* **69**:4732-4736

(161) W. Prathumpai; M. McIntyre; **J. Nielsen** (2004) The effect of CreA in glucose and xylose catabolism in *Aspergillus nidulans*. *Appl. Microbiol. Biotechnol*. **63**:748-753

(162) C. Bro; B. Regenberg; G. Lagniel; J. Labarre; M. Montero-Lomeli; **J. Nielsen** (2003) Transcriptional, proteomics and metabolic response to lithium in galactose-grown yeast cells. *J. Biol. Chem.* **278**:32141-32149

(163) W. Prathumpai; J. B. Gabelgaard; P. Wanchanthuek; P. J. I. van de Vondervoort; M. J. L. de Groot; M. McIntyre; **J. Nielsen** (2003) Metabolic control analysis of xylose catabolism in *Aspergillus*. *Biotechnol. Prog.* **19**:1136-1141

(164) H. David; M. Åkesson; **J. Nielsen** (2003) Reconstruction of the central carbon metabolism of *Aspergillus niger*. *Eur. J. Biochem.* **270**: 4243-4253

(165) M. M. dos Santos; G. Thygesen; P. Kötter; L. Olsson; **J. Nielsen** (2003) Aerobic physiology of redox-engineered *Saccharomyces cerevisiae* strains modified in the ammonium assimilation for increased NADPH availability. *FEMS Yeast Res.* **4**:59-68

(166) I. Famili; J. Förster; **J. Nielsen**; B. Palsson (2003) *Saccharomyces cerevisiae* phenotypes can be predicted using constraint based analysis of a genome-scale reconscructed metabolic network. *Proc. Nat. Acad, Sci.* **100**:13134-13139

(167) J. Dynesen; **J. Nielsen** (2003) Branching is coordinated with mitosis in growing hyphae of *Aspergillus nidulans*. *Fungal Gen. Biol*. **40**:15-24

(168) S. G. Villas-Boas; D. G. Delicado; M. Åkesson; **J. Nielsen** (2003) Simultaneous analysis of amino and nonamino organic acids as methyl chloroformate derivatives using gas chromatography-mass spectrometry. *Anal. Biochem.* **322**:134-138

(169) **J. Nielsen** (2003) It is all about metabolic fluxes. *J. Bacteriol.*, **185**:7031-7035

2004

(170) T. L. Lübbehüsen, **J. Nielsen**, M. McIntyre (2004) Aerobic and anaerobic ethanol production by *Mucor circinelloides* during submerged growth. *Appl. Microbiol. Biotechnol.* **63**:543-548

(171) T. L. Lübbehüsen, V. G. Polo, S. Rossi, **J. Nielsen**, S. Moreno, M. McIntyre, J. Arnau (2004) Protein kinase A is involved in the control of morphology and branching during aerobic growth in *Mucor circinelloides*. *Microbiol.* **150**:143-150

(172) C. Bro; B. Regenberg; **J. Nielsen** (2004) Genome-wide transcriptional response of a *Saccharomyces cerevisiae* strain with an altered redox metabolism. *Biotechnol. Bioeng.* **85**:269-276

(173) W. Prathumpai; M. McIntyre; **J. Nielsen** (2004) The effect of CreA in glucose and xylose catabolism in *Aspergillus nidulans*. *Appl. Microbiol. Biotechnol.* **63**:748-753

(174) C. Bro; **J. Nielsen** (2004) Impact of 'Ome' analysis on inverse metabolic engineering. *Met. Eng.* **6**:204-211

(175) K. Møller; C. Bro; R. B. Langkjær; J. Piskur; **J. Nielsen**; L. Olsson (2004) Pyruvate decarboxylases from the petite-negative yeast *Saccharomyces kluyveri*. *Mol. Genet. Genomics* **270**:558-568

(176) T. Grotkjær; M. Åkesson; B. Christensen; A. K. Gombert; **J. Nielsen** (2004) Impact of transamination reactions and protein turnover on labeling dynamics in ^{13}C-labelling experiments. *Biotechnol. Bioeng.* **86**:209-216

(177) M. Åkesson; J. Förster; **J. Nielsen** (2004) Integration of gene expression data into genome-scale metabolic models. *Met. Eng*, **6**:285-293

(178) G. G. Larsen; K. F. Appel; A.-M. Wolff, **J. Nielsen**; J. Arnau (2004) Characterization of the *Mucor circinelloides* regulated promoter gpd1P and construction of a constitutive derivative. *Curr. Genet.* **45**:225-234

(179) N. Gunnarson; U. H. Mortensen; M. Sosio; **J. Nielsen** (2004) Identification of the Entner-Doudoroff pathway in an antibiotic producing actinomycete species. *Mol Microbiol* **52**: 895-902

(180) N. Eckert-Boulet; P. S. Nielsen; C. Friis; M. M. dos Santos; **J. Nielsen**; M. C. Kielland-Brandt; B. Regenberg (2004) Transcriptional profiling of extracellular amino acid sensing in *Saccharomyces cerevisiae* and the role of Stp1p and Stp2p. *Yeast* **21**: 635-648

(181) S. L. Westergaard; C. Bro; L. Olsson; **J. Nielsen** (2004) Elucidation of the role of Grr1p on glucose sensing by *Saccharomyces cerevisiae* through genome-wide transcription analysis. *FEMS Yeast Res.* **5**:193-204

(182) V. Raghevendran; A. K. Gombert; B. Christensen; P. Kötter; **J. Nielsen** (2004) Phenotypic characterization of glucose repression mutants of *Saccharomyces cerevisiae* using experiments with ^{13}C-labelled glucose. *Yeast* **21**:769-779

(183) T. Grotkjær; **J. Nielsen** (2004) Enhancing yeast transcription analysis through integration of heterogeneous data. *Cur. Genomics* **5**:673-686

(184) M. M. dos Santos; V. Raghevendran; P. Kötter; L. Olsson; **J. Nielsen** (2004) Manipulation of the malic enzyme in *Saccharomyces cerevisiae* for increasing NADPH production capacity aerobically in different cellular compartments. *Met. Eng.* **6**:352-363

(185) B. Regenberg; U. Krühne; M. Beyer; L. H. Pedersen; M. Simón; O. R.T. Thomas; **J. Nielsen**; T. Ahl (2004) Use of laminar flow patterning for miniaturised biochemical assays. *Lab. Chip* **4**:654-657

(186) W. Prathumpai; S. J. Flitter; M. McIntyre; **J. Nielsen** (2004) Lipase production by recombinant strains of *Aspergillus niger* expressing a lipase-encoding gene from *Thermomyces lanuginosus*. *Appl. Microbiol. Biotechnol.* **65**:714-719

(187) C. Cannizzaro; B. Christensen; **J. Nielsen**; U. von Stockar (2004) Metabolic network analysis on *Phaffia rhodozyma* yeast using ^{13}C-labeled glucose and gas chromatography-mass spectrometry. *Met. Eng.* **6**:340-351

(188) N. Gunnarson; P. Bruheim; **J. Nielsen** (2004) Glucose metabolism in the antibiotic producing Actinomycete *Nonomuiaea* sp. *Biotechnol. Bioeng.* **88**: 652-663

2005

(189) G. Panagiotou, S. G. Villas-Boas, P. Christakopoulos, **J. Nielsen**, L. Olsson (2005) Intracellular metabolite profiling of *Fusarium oxysporum* converting glucose to ethanol. *J. Biotechnol.* **115**:425-434

(190) J. Smedsgaard, **J. Nielsen** (2005) Metabolite profiling of fungi and yeast: from phenotype to metabolome by MS and informatics. *J. Exp. Bot.* **56**:273-286

(191) K. R. Patil, **J. Nielsen** (2005) Uncovering transcriptional regulation of metabolism by using metabolic network topology. *Proc. Nat. Acad. Sci.* **102**:2685-2689

(192) I. Borodina, C. Schöller, A. Eliasson, **J. Nielsen** (2005) Metabolic network analysis of *Streptomyces tenebrarius*, a *Streptomyces* with Entner-Doudoroff pathway. *Appl. Environ. Microbiol.* **71**:2294-2302

(193) S. G. Villas-Bôas; M. Åkesson; **J. Nielsen** (2005) Biosynthesis of glyoxylate from glycine in *Saccharomyces cerevisiae*. *FEMS Yeast Res.* **5**:703-709

(194) S. G. Villas-Bôas; J. F. Moxley; M. Åkesson; G. Stephanopoulos; **J. Nielsen** (2005) High-throughput metabolic state analysis: The missing link in integrated functional genomics of yeasts. *Biochem. J.* **388**:669-677

(195) N. Eckert- Boulet; B. Regenberg; **J. Nielsen** (2005) Grr1p is required for transcriptional induscton of amino acid permease genes and proper transcriptional regulation of genes in carbon metabolism of *Saccharomyces cerevisiae*. *Curr. Genet.* **47**:139-149

(196) T. Seker; K. Møller; **J. Nielsen** (2005) Analysis of acyl CoA ester intermediates of the mevalonate pathway in *Saccharomyces cerevisiae*. *Appl. Microbiol. Biotechnol.* **67**:199-124

(197) I. Borodina; P. Krabben; **J. Nielsen** (2005) Genome-scale analysis of *Streptomyces coelicolor* A3(2) metabolism. *Genome Res.***15**:820-829

(198) A. P. Oliveira; **J. Nielsen**; J. Förster (2005) Modeling *Lactococcus lactis* using a genome-scale flux model. *BMC Microbiol.* **5**:39

(199) C. Bro; S. Knudsen; B. Regenberg; L. Olsson; **J. Nielsen** (2005) Improvement of galactose uptake in *Saccharomyces cerevisiae* through overexpression of phosphoglucomutase: Example of transcript analysis as a tool in inverse metabolic engineering. *Appl. Environ. Microbiol.* **71**:6465-6472

(200) H. David; A. M. Krogh; C. Roca; M. Åkesson; **J. Nielsen** (2005) CreA influences the metabolic fluxes of *Aspergillus nidulans* during growth on glucose and xylose. *Microbiol.* **151**:2209-2221

(201) V. Raghevendran; **J. Nielsen**; L. Olsson (2005) Teaching microbial physiology using glucose repression phenomenon in Baker's yeast as an example. *Biochem. Mol. Biol. Edu.* **33**:404-410

(202) M. C. Jewett; A. P. Oliveira; K. R. Patil; **J. Nielsen** (2005) The role of high-throughput transcriptome analysis in metabolic engineering. *Biotechnol. Bioproc. Eng.* **10**:385-399

(203) T. Grotkjær; P. Christakopoulos; **J. Nielsen**; L. Olsson (2005) Comparative metabolic network analysis of two xylose fermenting recombinant *Saccharomyces cerevisiae* strains. *Met. Eng.* **7**:437-444

(204) K. R. Patil; I. Rocha; J. Förster; **J. Nielsen** (2005) Evolutionary programming as a platform for *in silico* metabolic engineering. *BMC Bioinformatics* **6**:308

(205) S. G. Villas-Bôas; J. H. Pedersen; M. Åkesson; J. Smedsgaard; **J. Nielsen** (2005) Global metabolite analysis of yeast: evaluation of sample preparation methods. *Yeast* **22**:1155-1169

2006

(206) T. Grotkjær; O. Winther; B. Regenberg; **J. Nielsen**; L. K. Hansen (2006) Robust multi-scale clustering of large DNA microarray datasets with the consensus algorithm. *Bioinformatics* **22**:58-67

(207) N. Eckert-Boulet; K. Larsson; B. Wu; P. Poulsen; B. Regenberg; **J. Nielsen**; M. Kielland-Brandt (2006) Deletion of *RTS1*, encoding a regulatory subunit of protein phosphatase 2A, results in constitutive amino acid signaling via increased Stp1p processing. *Eukaryotic Cell* **5**:174-179

(208) C. Bro; B. Regenberg; J. Förster; **J. Nielsen** (2006) *In silico* aided metabolic engineering of *Saccharomyces cerevisiae* for improved bioethanol production. *Met. Eng.* **8**:102-111

(209) R. Mustachi; S. Hohmann; **J. Nielsen** (2006) Yeast systems biology to unravel the network of life. *Yeast* **23**:227-238

(210) J. Mogensen; H. B. Nielsen; G. Hofmann; **J. Nielsen** (2006) Transcription analysis using high-density micro-arrays of *Aspergillus nidulans* wild-type and D*creA* mutant during growth on glucose and ethanol. *Fung. Gen. Bio.* **43**:593-603

(211) V. Raghevendran; K. R. Patil; L. Olsson; **J. Nielsen** (2006) Hap4 is not essential for activation of respiration at low specific growth rates in *Saccharomyces cerevisiae*. *J. Biol. Chem.* **281**:12308-12314

(212) R. Usaite; K. R. Patil; T. Grotkjær; **J. Nielsen**; B. Regenberg (2006) Globl transcriptional and physiological responses of *Saccharomyces cerevisiae* to ammoniu, L-alanine or L-glutamine limitation. *Appl. Environ. Microbiol.* **72**:6194-6203

(213) A. Diano; S. Bekker-Jensen; J. Dynesen; **J. Nielsen** (2006) Polyol synthesis in *Aspergillus niger*: Influence of oxygen availability, carbon and nitrogen sources on the metabolism. *Biotechnol. Bioeng.* **94**:899-908

(214) B. Regenberg; T. Grotkjær; O. Winther; A. Fausbøll; M. Åkesson; C. Bro; L. K. Hansen; S. Brunak; **J. Nielsen** (2006) Growth-rate regulated genes have profound impact on interpretation of transcriptome profiling in *Saccharomyces cerevisiae*. *Genome Biol*. **7**:R107

(215) H. David; G. Hofmann; A. P. Oliveira; H. Jarmer; **J. Nielsen** (2006) Metabolic network driven analysis of genome-wide transcription data from *Aspergillus nidulans*. *Genome Biol.* **7**:R108

(216) T. Cakir; K. R. Patil; Z. I. Önsan; K. Ö. Ülgen; B. Kirdar; **J. Nielsen** (2006) Integration of metabolome data with metabolic networks reveals reporter reactions. *Mol. Systems Biol.* **2**:50

2007

(217) S. L. Westergaard; A. P. Oliveira; C. Bro; L. Olsson; **J. Nielsen** (2007) A systems biology approach to study glucose repression in the yeast *Saccharomyces cerevisiae*. *Biotechnol. Bioeng.* **96**:134-145

(218) G. N. Vemuri; M. A. Eiteman; J. E. McEwen; L. Olsson; **J. Nielsen** (2007) Increasing NADH oxidation reduces overflow metabolism in *Saccharomyces cerevisiae*. *Proc. Nat. Acad. Sci.* **104**:2402-2407

(219) H. J. Pel et al. (2007) Genome sequencing and analysis of the versatile cell factory *Aspergillus niger* CBS513.88. *Nature Biotech.* **25**:221-231

(220) S. Mass; S. G. Villas-Boas; M. E. Hansen; M. Ålesson; **J. Nielsen** (2007) A comparison of direct infusion MS and GC-MS for metabolic footprinting of yeast mutants. *Biotechnol. Bioeng.* **96**:1014-1022

(221) S. Wattanachaisaereekul; A. Eliasson Lantz; M. L. Nielsen; O. S. Andresson; **J. Nielsen** (2007) Optimization of heterologous production of the polyketide 6-MSA in *Saccharomyces cerevisiae*. *Biotechnol. Bioeng.* **97**:893-900

(222) C. J. Baxter; H. Redestig; N. Schauer; D.Repsilber; K. R. Patil; **J. Nielsen**; J. Selbig; J. Liu; A. R. Fernie; L. J. Sweetlove (2007) The metabolic response of heterotrophic *Arabidopsis* cells to oxidative stress. *Plant Phys.* **143**:312-325

(223) K. Y. Arga; Z. I. Onsan; B. Kirdar; K. O. Ulgen; **J. Nielsen** (2007) Understanding signaling in yeast: Insights from network analysis. *Biotechnol. Bioeng.* **97**:1246-1258

(224) T. Cakir; B. Kirdar; Z. I. Onsan; K. O. Ulgen; **J. Nielsen** (2007) Effect of carbon source pertubations on transcriptional regulation of metabolic fluxes in *Saccharomyces cierevisiae*. *BMC Systems Biol.* **1**:18

(225) J. Thykaer; **J. Nielsen** (2007) Evidence, through C13-labelling analysis, of phosphoketolase activity in fungi. *Proc. Biochem.* **42**:1050-1055

(226) S. Meier; G. Panagiotou; L. Olsson; **J. Nielsen** (2007) Physiological characterization of xylose metabolism in *Aspergillus niger* under oxygen limited conditions. *Biotechnol. Bioeng.* **98**:462-475

(227) I. Nookaew; A. Meechai; C. Thammarongtham; K. Loateng; V. Ruanglek; S. Cheevadhanarak; **J. Nielsen**; S. Bhumiratana (2007) Identification of flux regulation coefficients from elementary flux modes: A systems biology tool for analysis of metabolic networks. *Biotechnol. Bioeng*. **97**:1535-1549

(228) M. L. Nielsen; W. A. de Jongh; S. L. Meijer; **J. Nielsen**; U. Mortensen (2007) Transient marker system for iterative gene targeting of a prototrophic fungus. *Appl. Environ. Microbiol.* **73**:7240-7245

(229) M. J. van der Werf; R. Takors; J. Smedsgaard; **J. Nielsen**; T. Ferenci; J. C. Portais; C. Wittmann; M. Hooks; A. Tomassini; M. Oldiges; J. Fostel; U. Sauer (2007) Standard reporting requirements for biological samples in metabolomics experiments: Microbial and in vitro biology experiments. *Metabolomics* **3**:189-194

2008

(230) R. Usaite; **J. Nielsen**; L. Olsson (2008) Physiological characterization of glucose repression in the strains with *SNF1* and *SNF4* genes deleted. *J. Biotechnol.* **133**:73-81

(231) R. Usaite; J. Wohlschlegel; J. D. Venable; S. K. Park; **J. Nielsen**; L. Olsson; John R. Yates III (2008) Characterization of global yeast quantitative proteome data generated from the wild type and glucose repression *Saccharomyces cerevisiae* strains: the comparison of two quantitative algorithms. *J. Proteom Res.* **7**:266-275

(232) W. de Jongh; **J. Nielsen** (2007) Enhanced citrate production through gene insertion in *Aspergillus niger*. *Met. Eng.* **10**:87-96

(233) M. Asadollahi; J. Maury; K. Møller; K. F. Nielsen; M. Schalk; A. Clark; **J. Nielsen** (2008) Production of plant sesquiterpenes in *Saccharomyces cerevisiae*: Effect of *ERG9* repression on sesquiterpene biosynthesis. *Biotechnol. Bioeng.* **99**:666-677

(234) M. R. Andersen; M. L. Nielsen; **J. Nielsen** (2008) Metabolic model integration of the bibliome, genome, metabolome and reactome of *Aspergillus niger*. *Mol. Systems Biol.* **4**:178

(235) A. P. Oliveira; K. Patil; **J. Nielsen** (2008) Architecture of transcriptional regulatory circuits is knitted over the topology of bio-molecular interaction networks. *BMC Systems Biol.* **2**:17

(236) J. Thykaer; K. Rueksomtawin; H. Noorman; **J. Nielsen** (2008) NADPH-Dependent glutamate dehydrogenase in *Penicillium chrysogenum* is involved in regulation of b-lactam production. *Microbiol.* **154**:1242-1250

(237) H. David; I. Ozcelik; G. Hofmann; **J. Nielsen** (2008) Analysis of *Aspergillus nidulans* metabolism at the genome-scale. *BMC Genomics* **9**:163

(238) W. A. de Jongh; C. Bro; S. Ostergaard; B. Regenberg; L. Olsson; **J. Nielsen** (2008) The roles of galactitol, galactose-1-phosphate and phosphoglucomutase in galactose-induced toxicity in *Saccharomyces cerevisiae*. *Biotechnol. Bioeng.* **101**:317-326

(239) G. Panagiotou; M. R. Andersen; T. Grotkjær; T. B. Regueira; G. Hofmann; **J. Nielsen**; L. Olsson (2008) Systems analysis unfolds the relationship between the phosphoketolase pathway and growth in *Aspergillus nidulans*. *PLoS One* **3**:e2847

(240) M. R. Andersen; W. Vongsangnak; G. Panagiotou; M. P. Salazar; L. Lehmann; **J. Nielsen** (2008) A trispecies *Aspergillus* microarray: Comparative transcriptomics of three *Aspergillus* species. *Proc. Nat. Acad. Sci.* **105**:4387-4392

(241) W. Vongsangnak; P. Olsen; K. Hansen; S. Krogsgaard; **J. Nielsen** (2008) Improved annotation through genome-scale metabolic modeling of *Aspergillus oryzae*. *BMC Genomics* **9**:245

(242) A. Fazio; M. C. Jewett; P. Daran-Lapujade; R. Mustacchi; R. Usaite; J. Pronk; C. Workman; **J. Nielsen** (2008) Transcription factor control of growth rate dependent genes in *Saccharomyces cerevisiae*: A three factor design. *BMC Genomics* **9**:341

(243) S. Wattanachaisaereekul; A. E. Lantz; M. L. Nielsen; **J. Nielsen** (2008) Production of the polyketide 6-MSA in yeast engineered for increased malonyl-CoA supply. *Metabolic Eng.* **10**:246-254

(244) I. Nookaew; M. C. Jewett; A. Meecha; C. Thammarongtham; K. Laoteng; S. Cheevadhanarak; **J. Nielsen**; S. Bhumiratana (2008) The genome-scale metabolic model iIN800 of Saccharomyces cerevisiae and its validation: a scaffold to query lipid metabolism. *BMC Sys. Biol.* **2**:71

(245) F. Pizarro; M. C. Jewett; **J. Nielsen**; E. Agosin (2008) Growth temperature exerts a differential physiological and transcriptional response in laboratory and wine strains of *Saccharomyces cerevisiae*. *Appl. Environ. Microbiol.* **74**:6358-6368

(246) I. Borodina; J. Siebring; J. Zhang; C. P. Smith; G. van Keulen; L. Dijkhuizen; **J. Nielsen** (2008) Antibiotic overproduction in *Streptomyces coelicolor* A3(2) mediated by phosphofructokinase deletion. *J. Biol. Chem.* **283**:25186-25199

(247) J. Højer-Pedersen; J. Smedsgaard; **J. Nielsen** (2008) The yeast metabolome addressed by electrospray ionization mass spectrometry: Initiation of a mass spectral library and its application for metabolic footprinting by direct infusion mass spectrometry. *Metabolomics* **4**:393-405

(248) M. J. Herrgård; N. et al.; **J. Nielsen**; D. B. Kell (2008) A consensus yeast metabolic network obtained from a community approach to systems biology. *Nature Biotechnol.* **26**:1155-1160

(249) M. Rocha; P. Maia; R. Mendes; J. P. Pinto; E. C. Ferreira; K. Patil; **J. Nielsen**; I. Rocha (2008) Natural computation meta-heuristics for the in silico optimization of microbial strains. *BMC Bioinformatics* **9**:499

(250) J. Maury; M. A. Asadollahi; K. Møller; M. Schalk; A. Clark; L. R. Formenti; **J. Nielsen** (2008) Reconstruction of a bacterial isoprenoid biosynthetic pathway in *Saccharomyces cerevisiae*. *FEBS Let.* 582:4032-4038

2009

(251) A. Diano; J. Peeters; J. Dynesen; **J. Nielsen** (2009) Physiology of *Aspergillus niger* in oxygen-limited continuous cultures: Influence of aeration, carbon source concentration and dilution rate. *Biotechnol. Bioeng.* **103**:956-965

(252) J. R. Wortman *et al.* (2009) The 2008 update of the *Aspergillus nidulans* genome annotation: A community effort. *Fungal Gen. Biol.* **46**:S2-S13

(253) K. R. Kjeldsen; **J. Nielsen** (2008) *In silico* genome-scale reconstruction and validation of the *Corynebacterium glutamicum* metabolic network. *Biotechnol. Bioeng.* **102**:583-597

(254) P. M. Coutinho *et al.* (2009) Post-genomic insights into the plant polysaccharide degradation potential of *Aspergillus nidulans* and comparison to *Asperpergillus niger* and *Aspergillus oryzae*. *Fungal Gen. Biol.* **46**:S161-S169

(255) G. Hofmann; A. Diano; **J. Nielsen** (2009) Recombinant bacterial haemoglobin alters metabolism of *Aspergillus niger*. *Met. Eng.* **11**:8-12

(256) J. Thykaer; K. Rueksomtawin; H. Noorman; **J. Nielsen** (2009) Disruption of the NADPH-dependent Glutamate Dehydrogenase Affects the Morphology of Two Industrial Strains of *Penicillium chrysogenum. J. Biotechnol.* **139**:280-282

(257) T. S. Christensen; A. P. Olivaira; **J. Nielsen** (2009) Reconstruction and logical modeling of glucose repression signaling pathways in *Saccharomyces cerevisiae*. *BMC Systems Biol.* **3**:7

(258) S. Meijer; J. Otero; M. R. Andersen; L Olsson; **J. Nielsen** (2009) Overexpression of isocitrate lyase – glyoxylate byplass influence on metabolism in *Aspergillus niger*. *Metabolic Eng.* **11**:107-116

(259) D. Cimini; K. R. Patil; C. Shiraldi; **J. Nielsen** (2009) Global transcriptional response of *Saccharomyces cerevisiae* to the deletion of SDH3. *BMC Systems Biol.* **3**:17

(260) J. F. Moxley; M. C. Jewett; M. R. Antoniewicz; S. G. Villas-Boas; H. Alper; R. T. Wheeler; L. Tong; A. G. Hinnebusch; T. Ideker; **J. Nielsen**; G. Stephanopoulos (2009) Linking transcriptional regulation and high resolution metabolic fluxes in yeast modulated by the global regulator Gcn4p. *Proc. Nat. Acad. Sci.* **106**:6477-6482

(261) G. Panagiotou; M. R. Andersen; T. Grotkjær; T. B. Regueira; **J. Nielsen**; L. Olsson (2009) Studies of the production of fungal polyketides in *Aspergillus nidulans* by using systems biology tools. *Appl. Environ, Microbiol.* **75**:2212-2220

(262) S. Meijer; M. L. Nielsen; L. Olsson; **J. Nielsen** (2009) Gene deletion of cytosolic ATP:Citrate lyase leads to altered organic acid production in *Aspergillus niger*. *J. Ind. Microbiol. Biotechnol.* **36**:1275-1280

(263) M. R. Andersen; L. Lehmann; **J. Nielsen** (2009) Systemic analysis of the response of *Aspergillus niger* to ambient pH. *Genome Biol.* **10**:R47

(264) M. A. Asadollahi; J. Maury; K. R. Patil; M. Schalk; A. Clark; **J. Nielsen** (2009) Enhancing sesquiterpene production in *Saccharomyces cerevisiae* through *in silico* driven metabolic engineering. *Met. Eng.* **11**;328-334

(265) D. Rossouw; R. Olivares-Hernandes; **J. Nielsen**; F.F. Bauer (2009) A comparative 'omics' approach to investigate differences in wine yeast physiology and metabolism during fermentation. *Appl. Environ. Microbiol.* **75**:6600-6612

(266) S.Meijer; W.A.de Jongh; L. Olsson; **J. Nielsen** (2009) Physiological characterization of *acuB* deletion in *Aspergillus niger*. *Appl. Microbiol. Biotechnol.* **84**:157-167

(267) D. B. Flagfeldt; V. Siewers; L. Huang; **J. Nielsen** (2009) Characterization of chromosomal integration sites for heterologous gene expression in *Saccharomyces cerevisiae*. *Yeast* **26**:545-551

(268) V. Siewers; X. Chen; L. Huang; J. Zhang; **J. Nielsen** (2009) Heterologous production of the non-ribosomal peptide LLD-ACV in *Saccharomyces cerevisiae*. *Met. Eng.* **11**:391-397

(269) R. Usaite; M. C. Jewett; A. P. Oliveira; J. R. Yates III; L. Olsson; **J. Nielsen** (2009) Reconstruction of the yeast Snf1 kinase regulatory network reveals its role as a global energy regulator. *Mol. Sys. Biol.* **5**:319

(270) W. Vongsangnak; M. Salazar; K. Hansen; **J. Nielsen** (2009) Genome-wide analysis of maltose utilization and regulation in aspergilla. *Microbiol.* **155**:3893-3902

(271) M. Salazar; W. Vongsangnak; G. Panagiotou; M. R. Andersen; **J. Nielsen** (2009) Uncovering transcriptional regulation of glycerol metabolism in Aspergilli through genome-wide gene expression data analysis. *Mol. Genet. Genom.* **282**:571-586

2010

(272) M. A. Asadollahi; J. Maury; M. Schalk; A. Clark; **J. Nielsen** (2010) Enhancement of farnesyl diphosphate pool as direct precursor of sesquiterpenes through metabolic engineering of the mevalonate pathway in *Saccharomyces cerevisiae*. *Biotechnol. Bioeng.* **106**:86-96

(273) K. van Eunen; J. Bouwman; P. Daran-Lapujade; J. Postmus; A. B. Canelas; F. I. Mensonides; R. Orij; I. Tuzun; J. van den Brink; G. J. Smits; W. M. van Gulik; S. Brul; J. J. Heijnen; J. H. de Winde; M. J. Teixeira de Mattos; C. Kettner; **J. Nielsen**; H. V. Westerhoff; B. M. Bakker (2010) Measuring enzyme activities under standardized in-vivo like conditions for systems biology. *FEBS J.* **277**:749-760

(274) W. Vongsangnak; I. Nookaew; M. Salazar; **J. Nielsen** (2010) Analysis of genome-wide co-expression and co-evolution of *Aspergillus oryzae* and *Aspergillus niger*. *Omics* **14**:165-175

(275) S. Bordel; **J. Nielsen** (2010) Identification of flux control in metabolic networks using non-equilibrium thermodynamics. *Met. Eng.* **12**:369-377

(276) V. Siewers; R. San-Bento; **J. Nielsen** (2010) Implementation of communication-mediating domains for non-ribosomal peptide production in *Saccharomyces cerevisiae*. *Biotechnol. Bioeng.* **106**:841-844

(277) I. Rocha; P. M. P. Evangelista; P. Vilaça; S. Soares; J. P Pinto; **J. Nielsen**; K. R Patil; E. C. Ferreira; M. Rocha (2010) OptFlux: an open-source software platform for in silico metabolic engineering. *BMC Systems Biol.* **4**:45

(278) J. Thykaer; **J. Nielsen**; W. Wohlleben; T. Weber; M. Gutknecht; A. E. Lantz; E. Stegmann (2010) Increased glycopeptides production after overexpression of shikimate pathway genes being part of the balhimycin biosynthetic gene cluster. *Met. Eng.* **12**:455-461

(279) M. Cvijovic; R. Olivares-Hernandez; R. Agren; W. Vongsangnak; I. Nookaew; K. R. Patil; **J. Nielsen** (2010) BioMet Toolbox: Genome-wide analysis of metabolism. *Nuc. Acid Res.* **38**:W144-W149

(280) S. K. Nandy; P. Jouhten; **J. Nielsen** (2010) Reconstruction of the yeast protein-protein interaction network involved in nutrient sensing and global metabolic regulation. *BMC Sys. Biol.* **4**:68

(281) J. Zhang; L. Olsson; **J. Nielsen** (2010) The β-subunits of the Snf1 kinase in *Saccharomyces cerevisiae*, Gal83 and Sip2, but not Sip1, are redundant in glucose derepression and regulation of sterol biosynthesis. *Mol. Microbiol.* **77**:371-383

(282) S. Bordel; R. Agren; **J. Nielsen** (2010) Sampling the solution spaee in genome-scale metabolic networks reveals transcriptional regulation in key enzymes. *PLoS Comp. Biol.* **6**:e1000859

(283) I. Nookaew; B. G. Gabrielsson; A: Holmäng; A.-S. Sandberg; **J. Nielsen** (2010) Identifying molecular effects of diet through systems biology: Influence of herring diet on sterol metabolism and protein turnover in mice. *PLoS One* **5**:e12361

(284) M. Papini; I. Nookaew; G. Scalcinati; V. Siewers; **J. Nielsen** (2010) Phosphoglycerate mutase knock-out mutant *Saccharomyces cerevisiae*: Physiological investigation and transcriptome analysis. *Biotechnol. J.* **5**:1016-1027

(285) R. Olivares-Hernandez; R. Usaite; **J. Nielsen** (2010) Integrative analysis using proteome and transcriptome data from yeast to unravel regulatory patterns at post-transcriptional level. *Biotechnol. Bioeng.* **107**:865-875

(286) R. Olivares-Hernandez; H. Sunner; J. C. Frisvad; L. Olsson; **J. Nielsen**; G. Panagiotou (2010) Combining substrate specificity analysis with support vector classifiers reveals feruloyl esterase as a phylogenetically informative protein group. *PLoS One* **5**:e12781

(287) S. Partow; V. Siewers; S. Bjørn; **J. Nielsen**; J. Maury (2010) Characterization of different promoters for designing a new expression vector in *Saccharomyces cerevisiae*. *Yeast* **27**:955-964

(288) J.M. Otero; M.A. Papadakis; D.B.R.K. Gupta Udatha; **J. Nielsen**; G. Panagiotou (2010) Yeast biological networks unforld the interplay of antioxidants, genome and phenotype, and reveal a novel regulator of the oxidative stress response. *PLoS One* **5**:e13606

(289) A.Canelas; N.Harrison; A.Fazio; J.Zhang; et al. ; **J. Nielsen** (2010) Integrated multilaboratory systems biology reveals differences in protein metabolism between two reference yeast strains. *Nature Comm.* **1**:145

(290) J.M. Otero; W. Vongsangak; M.A.Asadollahi; R. Olivares-Hernandes; J.Maury; L.Farinelli; L.Barlocher; M.Østerås; M.Schalk; A. Clark; **J. Nielsen** (2010) Whole genome sequencing of *Saccharomyces cerevisiae*: from genotype to phenotype for improved metabolic engineering applications. *BMC Genomics* **11**:723

2011

(291) W. Vongsangnak; K. Hansen; **J. Nielsen** (2011) Integrated analysis of the global transcriptional response to α−amylase over-production in *Aspergillus oryzae*. *Biotechnol. Bioeng.* **108**:1130-1139

(292) L. Albertsen; Y. Chen; L.S. Bach; S. Rattleff; J. Maury; S. Brix; **J. Nielsen**; U. Mortensen (2011) Fusion of host and heterologous enzymes diverts flux towards sesquiterpene production in *S. cerevisiae*. *Appl. Environ. Microbiol.* **77**:1033-1040

(293) R. Ruenwai; A. Neiss; K. Laoteng; W. Vongsangnak; A.B. Dalfard; S. Cheevadhanarak; D. Petranovic; **J. Nielsen** (2011) Heterologous production of polyunsaturated fatty acids in *Saccharomyces cerevisiae* causes a global transcriptional response resulting in reduced proteasomal activity and increased oxidative stress. *Biotechnol. J.* **6**:343-356

(294) R. Olivares-Hernandez; S. Bordel; **J. Nielsen** (2011) Codon usage variability determines the correlation betweem proteome and transcriptome fold changes. *BMC Systems Biol.* **5**:33

(295) S. Pabinger; R. Rader; R. Agren; **J. Nielsen**; Z. Trajanoski (2011) MEMOSys: Bioinformatics platform for genome-scale metabolic models. *BMC Systems Biol.* **5**:20

(296) T.B. Reguira; K.R. Kildegaard; B.G. Hansen; U.H. Mortensen; C. Hertweck; **J. Nielsen** (2011) Molecular basis for mycophenolic acid biosynthesis of *Penicillium brevicompactum*. *Appl. Environ. Microbiol.* **77**:3035-3043

(297) B.G. Hansen; B. Salomonsen; M.T. Nielsen; N. B. Hansen; J.B. Nielsen; K.F. Nielsen; T.B. Reguira; **J. Nielsen**; K.R. Patil; U.H. Mortensen (2011) A versatile gene expression and characterization system for *Aspergillus*: heterologous expression of the gene encoding the polyketide synthase from the mycophenolic acid gene cluster from *Penicillium brevicompactum* as a case study. *Appl. Environ. Microbiol.* **77**:3044-3051

(298) S.E. van Mulders; C. Stassen; L. Daenen; B. Devreese; V. Siewers; R.G.E. van Eijsden; **J. Nielsen**; F.R. Delvaux; R. Willaert (2011) The influence of microgravity on invasive growth in *Saccharomyces cerevisiae*. *Astrobiol.* **11**:45-55

(299) F.H. Karlsson; D.W.Ussery; **J. Nielsen**; I. Nookaew (2011) A closer look at *Bacteroides*: Phylogenetic relationship and genomic implications of a life in the human gut. *Microb. Ecol.* **61**:473-485

(300) M.R. Andersen; M.P- Salazar; ……; **J. Nielsen**; Scott Baker (2011) Comparative genomics of citric-acid producing *Aspergillus niger* ATCC 1015 versus enzyme-producing CBS 513.88. *Genome Res.* **21**:885-897

(301) K.M. Madsen; G.D.B.R.K. Udatha; S. Semba; J.M. Otero; P. Koetter; **J. Nielsen**; Y. Ebizuka; T. Kushiro; G. Panagiotou (2011) Linking genotype and phenotype of *Saccharomyces cerevisiae* strains reveals metabolic engineering targets and leads to triterpene hyper-producers. *PLoS One* **6**:e14763

(302) W.A. Rodriguez-Limas; K.E.J. Tyo; **J. Nielsen**; O.T. Ramirez; L.A. Palomares (2011) Molecular and process design for rotavirus-like particle production in *Saccharomyces cerevisiae*. *Microbial. Cell Factory* **10**:33

(303) M.P. Piddocke; A. Fazio; W. Vongsangnak; M.L.Wong; H.P. Heldt-Hansen; C. Workman; **J. Nielsen**; L. Olsson (2011) Revealing the beneficial effect of protease supplementation to high gravity beer fermentations using "-omics" techniques. *Microbial Cell Factory* **10**:27

(304) M. Lindqvist; I. Nookaew; I. Brinkenberg; E. Samuelson; K. Thörn; **J. Nielsen**; A.M.Harandi (2011) Unraveling molecular signatures of immunostimulatory adjuvants in the female genital tract through systems biology. *PLoS One* **6**:e20448

(305) K.-K. Hong; W. Vongsangnak; G.N. Vemuri; **J. Nielsen** (2011) Unravelling evolutionary strategies of yeast for improving galactose utilization through integrated systems level analysis. *Proc. Nat. Acad. Sci. USA* **108**:12179-12184

(306) J.S. Rokem; W. Vongsangnak; **J. Nielsen** (2011) Comparative metabolic capabilities for *Micrococcus luteus* NCTC 2665, the "Fleming" Strain, and Actinobacteria. *Biotechnol. Bioeng.* **108**:2770-2775

(307) L. Pedersen; K. Hansen; **J. Nielsen**; A. Eliasson Lantz; J. Thykaer (2011) Industrial glucoamylase fed-batch benefits from oxygen limitation and high osmolarity. *Biotechnol. Bioeng.*, in press

(308) P. Chumnapuen; C. Brackmann; S.K. Nandy; S. Chatzipapdopoulos; **J. Nielsen**; A. Enejder (2011) Lipid biosynthesis monitored at single cell level in *Saccharomyces cerevisiae*. *Biotechnol. J.* **6**:1-8

(309) J. Zhang; S. Vaga; P. Chumnapuen; R. Kumar; G.N. Vemuri; R. Aebershold; **J. Nielsen** (2011) Mapping the interaction of Snf1 with Tor1 in *Saccharomyces cerevisiae*. *Mol. Systems Biol.* **7**:545

(310) E. Larsson; V. Tremaroli; Y.S. Lee; O. Koren; I. Nookaew; A. Fricker; **J. Nielsen**; R. E. Ley; F. Bäckhed (2011) Analysis of the gut microbial regulation of host gene expression along the length of the gut and regulation of gut microbial ecoloty through MyD88. *Gut*, in press

2012

(311) W. Vongsangnak; L.F. Figueiredo; J. Förster; T. Weber; J. Thykaer; E. Stegmann; W. Wohlleben; **J. Nielsen** (2012) Genome-scale metabolic representation of *Amycolatopsis balhamycina*. *Biotechnol. Bioeng.*, in press

(312) L. Zihe; K.E.J. Tyo; J.L. Martinez; D. Petranovic; **J. Nielsen** (2012) Differential expression systems for production of recombinant proteins in *Saccharomyces cerevisiae*. *Biotechnol. Bioeng.*, in press

Reviews in international journals with peer review

(1) **J. Nielsen**; J. Villadsen (1992) Modelling of microbial kinetics. *Chem. Eng. Sci*. **47**:4225-4270
(2) **J. Nielsen** (1996) Modelling the morphology of filamentous microorganisms. *Trends Biotechnol.* **14**:438-443
(3) L. Olsson; **J. Nielsen** (1997) On-line and *in-situ* monitoring of biomass in submerged cultivations. *Trends Biotechnol* **15**:517-522
(4) C. Klein; L. Olsson; **J. Nielsen** (1998) Glucose control in *Saccharomyces cerevisiae*. The role of *MIG1*on metabolic functions. *Microbiol* **144**:13-24
(5) L. Olsson; U. Schulze; **J. Nielsen** (1998) On-line bioprocess monitoring - an academic discipline or an industrial tool? *Trends Anal. Chem*. **17**:88-95
(6) C. M. Henriksen; **J. Nielsen**; J. Villadsen (1998) Cyclization of α-aminoadipic acid into the δ-lactam 6-oxo-piperidine-2-carboxylic acid by *Penicillium chrysogenum*. *J. Antibio*. **51**:99-106
(7) **J. Nielsen** (1998) The role of metabolic engineering in the production of secondary metabolites. *Curr. Opion Microbiol*. **1**:330-336
(8) S. Ostergaard; L. Olsson; **J. Nielsen** (2000) Metabolic engineering of *Saccharomyces cerevisiae*. *Microb. Mol. Biol. Rev.* **64**:34-50
(9) A. K. Gombert; **J. Nielsen** (2000) Mathematical modelling of metabolism. *Curr. Opinion Biotechnol.* **11**:180-186
(10) **J. Nielsen** (2001) Metabolic engineering. *Appl. Microbiol. Biotechnol.* **55**:263-283
(11) J. Zaldivar; **J. Nielsen**; L. Olsson (2001) Metabolic engineering of biocatalysts for fuel ethanol production. *Appl. Microbiol. Biotechnol.* **56**:17-34
(12) J. Thykær; **J. Nielsen** (2003) Metabolic engineering of β-lactam production. *Metabolic Eng.* **5**:56-69
(13) G. Hofmann; M. McIntyre; **J. Nielsen** (2003) Fungal genomics beyond *Saccharomyces cerevisiae*. *Curr. Op. Biotechnol*. **14**:226-231
(14) K. Patil; M. Åkesson; **J. Nielsen** (2004) Use of genome scale microbial models for metabolic enginereing. *Curr. Op. Biotechnol.* **15**:64-69
(15) I. Borodina; **J. Nielsen** (2005) From genomes to *in silico* cells via metabolic networks. *Curr. Op. Biotechnol.* **16**:1-6
(16) S. G. Villas-Bôas; S. Mas; M. Åkesson; J. Smedsgaard; **J. Nielsen** (2005) Mass spectrometry in metabolome analysis. *Mass Spec. Rev.* **24**:613-646
(17) **J. Nielsen**; S. Oliver (2005) The next wave in metabolome analysis. *Trends Biotechnol.* **23**:544-546
(18) M. C. Jewett; G. Hofmann; **J. Nielsen** (2006) Fungal metabolite analysis in genomics and phenomics. *Curr. Op. Biotechnol.* **17**:1-7
(19) S. Rokem; A. Eliasson; J. Nielsen (2007) Systems biology of secondary metabolism in microorganisms. *Nat. Prod. Rep.* **24**:1262-1287
(20) **J. Nielsen**; M. Jewett (2008) Impact of systems biology on metabolic engineering of *Saccharomyces cerevisiae*. *FEMS Yeast Res.* **8**:122-131
(21) V. Mapelli; L. Olsson; **J. Nielsen** (2008) Metabolic footprinting in microbiology: methods and applications in functional genomics and biotechnology. *Trends Biotechnol.* **26**:490-497
(22) D. Petranovic; **J. Nielsen** (2008) Can yeast systems biology contribute to the understanding of human disease? *Trends Biotechnol.* **26**:584-590
(23) M. R. Andersen; **J. Nielsen** (2009) Current status of systems biology in Aspergilli. *Fun. Gen. Biol.* **46**:S180-S190
(24) G. Panagiotou; **J. Nielsen** (2009) Nutritional systems biology: Definitions and approaches. *Annual Rev. Nutr.* **29**:329-339
(25) **J. Nielsen** (2009) Systems biology of lipid metabolism: From yeast to human. *FEBS Lett.* **583**:3905-3913
(26) J. M. Otero; **J. Nielsen** (2010) Industrial Systems Biology. *Biotechnol. Bioeng.* **105**:439-460
(27) K. Tyo; K. Kocharin; **J. Nielsen** (2010) Toward Design-based Engineering of Industrial Microbes. *Curr. Op. Microbiol.* **13**:255-262
(28) L. Liu; R. Agren; S. Bordel; **J. Nielsen** (2010) Use of genome-scale metabolic models for understanding microbial physiology. *FEBS Lett.* **584**:2556-2564
(29) J. Zhang; G. Vemuri; **J. Nielsen** (2010) Systems biology of energy homeostasis in yeast. *Curr. Op. Microbiol.* **13**:382-388
(30) D. Petranovic; K. Tyo; G.N. Vemuri; **J. Nielsen** (2010) Prospects of yeast systems biology for human health: integrating lipid, protein and energy metabolism. *FEMS Yeast Res.* **10**:1046-1059
(31) A. Krivoruchko; V. Siewers; **J. Nielsen** (2011) Opportunities for yeast metabolic engineering: Lessons from synthetic biology. *Biotechnol. J.* **6**:262-276
(32) S. Shi; J.O. Valle-Rodriguez; V. Siewers; **J. Nielsen** (2011) Prospects for microbial biodiesel production. *Biotechnol. J.* **6**:277-285
(33) F. H. Karlsson; I. Nookaew; D. Petranovic; **J. Nielsen** (2011) Prospects for systems biology and modeling of the gut microbiome. *Trends Biotechnol.* **29**:251-258
(34) T. Österlund; I. Nookaew; **J. Nielsen** (2011) Fifteen years of large scale metabolic modeling of yeast: Developments and impacts. *Biotechnol. Adv.*, in press
(35) M. Cvijovic; S. Bordel; **J. Nielsen** (2011) Mathematical models of cell factories: Moving towards the cores of industrial biotechnology. *Microbiol. Biotechnol.* **4**:572-584

(36) B. de Jong; V. Siewers; **J. Nielsen** (2012) Systems biology of yeast: enabling technology for development of cell factories for production of advanced biofuels. *Curr. Opion. Biotechnol.* **23**:1-7
(37) I.-K. Kim; A. Roldao; V. Siewers; **J. Nielsen** (2012) A system-level approach for metabolic engineering of yeast cell factories. *FEMS Yeast Res.*, in press
(38) A. Mardinoglu; **J. Nielsen** (2012) Systems medicine and metabolic modeling. *J. Int. Med.* **271**:142-154
(39) **J. Nielsen** (2012) Translational and systems medicine. *J. Int. Med.* **271**:108-110

Commentaries and Short Papers

(1) B. Hahn-Hägerdal; K. van Dam; I. Spencer-Martins; **J. Nielsen** (1998) Le dédale du métabolisme. *Biofutur* **184**:81-82
(2) J. Thykaer; B. Christensen; **J. Nielsen** (2001) The application of metabolic network analysis in metabolic engineering. *BIOforum International* **5**:228-231
(3) J. M. Otero; L. Olsson; **J. Nielsen** (2007) Industrial biotech meets systems biology. *Genetic Eng. News* **1**:28-31
(4) **J. Nielsen** (2007) Principles of optimal metabolic network operation. *Mol. Sys. Biol.* **3**:126
(5) G. Vemuri; **J. Nielsen** (2008) Systems biology: Is the hope worth the hype. *SIM News* **58**:178-188
(6) **J. Nielsen** (2009) Vintage paper Introduction. *Biotechnol. Bioeng.* **103**:1
(7) **J. Nielsen** (2009) Quantification of flux control in metabolic pathways, *Biotechnol. Bioeng.* **104**: 1-2
(8) **J. Nielsen**; M. Vidal (2010) Systems biology of microorganisms. *Current Opp. Microbiol.* **13**:335-336
(9) **J. Nielsen** (2011) Transcriptional control of metabolic fluxes. *Mol. Systems Biol.* **7**:478
(10) **J. Nielsen** (2011) Chimeric Synthetic Pathways. *Nature Chem. Biol.* **7**:195-196
(11) **J. Nielsen**; J. Keasling (2011) Synergies between synthetic biology and metabolic engineering. *Nature Biotechnol.* **29**:693-695

Books

(1) M. Y. Andersen *et al.* (1991)
Bioreaktionsteknik. Metoder til fortolkning af data fra bioreaktorer. Akademiet for Tekniske Videnskaber, Lyngby
(2) **J. Nielsen**; J. Villadsen (1994)
Bioreaction Engineering Principles. Plenum Press, New York
(3) **J. Nielsen** (1997)
Physiological Engineering Aspects of *Penicillium chrysogenum*. World Scientific Publishing Co., Singapore
(4) G. Stephanopoulos; A. Aristodou; **J. Nielsen** (1998)
Metabolic Engineering. Academic Press, San Diego
(5) **J. Nielsen** (2001) (editor)
Metabolic Engineering. Advances in Biochemical Engineering/Biotechnology, Vol. 73, Springer Verlag, Heidelberg
(6) **J. Nielsen**; J. Villadsen; G. Liden (2003)
Bioreaction Engineering Principles, 2. ed., Kluywer Plenum, New York
(7) **J. Nielsen** (2006) (editor)
Frontiers in Biotechnology. Advances in Biochemical Engineering/Biotechnology, Vol. 100, Springer Verlag, Heidelberg
(8) S. G. Villas-Boas; U. Roessner; M. A. E. Hansen; J. Smedsgaard; **J. Nielsen** (2007)
Metabolome Analysis. An Introduction, Wiley, Hoboken
(9) **J. Nielsen**; M. C. Jewett (2008) (editors)
Metabolomics. Topics in Current Genetics, Vol. 18, Springer Verlag, Heidelberg
(10) J. Villadsen; **J. Nielsen**; G. Liden (2011) Bioreaction Engineering Principles, 3. ed., Springer, New York

Contribution in Books

(1) **J. Nielsen** (1992) Modelling the growth of filamentous fungi. Adv. Biochem. Eng./Biotechnol. **46**:187-223
(2) **J. Nielsen**; J. Villadsen (1993) Bioreactors : Description and modelling. pp. 77-104, Chap. 5 in Biotechnology Vol. 3 (2. ed.). Eds. H.-J. Rehm; G. Reed (volume editor G. Stephanopoulos), VCR Verlag
(3) **J. Nielsen**; M. Carlsen (1996) Fungal Pellets. pp. 273-293, Chap. 13. In: Immobilised living cell systems: Modelling and experimental methods. Eds. G. Baron, R. Willaert; L. De Backer, John Wiley & Sons, Chichester
(4) P. Krabben; **J. Nielsen** (1998) Modeling the mycelium morphology of *Penicillium* species in submerged cultures. Adv. Biochem. Eng./Biotechnol. **60**:125-152
(5) A. B. Spohr, T. Agger; M. Carlsen; **J. Nielsen** (1998) Quantitative morphology of filamentous microorganisms. pp. 373-410, Chap. 14. In: Digital analysis of Microbes. Eds. M. H. F. Wilkinson; F. Schut, John Wiley & Sons
(6) **J. Nielsen** (1999) Fermentation monitoring, design and optimization. pp. 1147-1157. In: The Encyclopedia of Bioprocess Technology: Fermentation, Biocatalysis & Bioseparations. Eds. M. C. Flickinger; S. W. Drew, John Wiley & Sons
(7) **J. Nielsen** (1999) Fermentation kinetics. pp. 69-119, Chap. 4. In: Modern Concepts in Fermentation Biotechnology. Eds. M. El-Mansi, Bryce, Taylor and Francis, London
(8) B. Christensen; **J. Nielsen** (1999) Metabolic network analysis – powerful tool in metabolic engineering. Adv. Biochem. Eng./Biotechnol. **66**:209-231

(9) **J. Nielsen** (2001) Microbial Process Kinetics. pp. 127-149, Chap. 6. In: Basic Biotechnology. 2. Edition. Eds. C. Ratledge, B. Kristiansen, Cambridge University Press, Cambridge

(10) **J. Nielsen** (2001) Metabolic Turnover. In: Encyclopaedia of Life Sciences. Nature Publishing Group, London (www.els.net)

(11) T. Agger; **J. Nielsen** (2001) Mathematical modelling of microbial processes – Motivation and means. pp. 61-75. In: Engineering and Manufacturing for Biotechnology. Eds. M. Hofman, P. Thonart, Kluwer Academic Publishers, Dordrecht

(12) S. Ostergaard; L. Olsson; **J. Nielsen** (2001) Metabolic Pathway Analysis of *Saccharomyces cerevisiae*. pp. 75-85. In: Applied Microbiology. Focus on Biotechnology Vol. 2. Eds. M. Hofman, P. Thonart, Kluwer Academic Publishers, Dordrecht

(13) M. McIntyre; C. Müller; J. Dynesen; **J. Nielsen** (2001) Metabolic engineering of the morphology of *Aspergillus*. Adv. Biochem. Eng./Biotechnol. **73**:103-128

(14) **J. Nielsen** (2002) Metabolic Engineering. pp. 391-406. In: Encyclopedia of Physical Science and Technology, Vol. 9. Academic Press, San Diego

(15) M. M. dos Santos; M. Åkesson; **J. Nielsen** (2003) Metabolic Flux Analysis in the post genomics area. pp. 89-105. In: Metabolic Engineering in the Post Genomic Era . Eds. B. Kholodenko; H. Westerhoff, Horizon Scientific Press, Norfolk

(16) C. Bro; B. Regenberg; **J. Nielsen** (2003) Yeast Functional Genomics and Metabolic Engineering; Past, present and future. pp. 331-360. In: Functional Genetics of Industrial Yeast. Ed. H. de Winde, Springer, Heidelberg

(17) A. Gombert; **J. Nielsen** (2003) Quantification of metabolic fluxes. In: Encyclopaedia of Life Sciences. Nature Publishing Group, London (www.els.net

(18) N. Gunnarsson, A. Eliasson, **J. Nielsen** (2004) Control of fluxes towards antibiotics and the role of primary metabolism in production of antibiotics. Adv. Biochem. Eng./Biotechnol. **88**:137-178

(19) **J. Nielsen**, A. Eliasson (2005) From glucose to antibiotics: What controls the fluxes? pp. 195-214. In: Biocombinatorial Approaches for Drug Finding. Ed. W. Wohlleben, T. Spelling, B. Müller-Tiemann, Springer, Heidelberg

(20) H. David, **J. Nielsen** (2005) Modelling of fungal metabolism. Pp. 195-214. In: Metabolome Analysis. Strategies for Systems Biology. Ed. S. Vaidyanathan, G. G. Harrigan, R. Goodacre, Springer, New York

(21) J. Maury, M. A. Asadollahi, K. Møller, A. Clark, **J. Nielsen** (2005) Microbial isoprenoid production: An example of green chemistry through metabolic engineering. Adv. Biochem. Eng./Biotechnol. **100**:19-51

(22) J. Højer-Pedersen; J. Smedsgaard; **J. Nielsen** (2006) Elucidating the mode-of-action of compounds from metabolite profiling studies, Pp. 103-130. In: Systems Biological Approaches in Infectious Diseases. Progress in Drug Research Vol. 64. Ed. H. I. Boshoff, C. E. Barry III, Birkhäuser, Berlin

(23) **J. Nielsen** (2006) Microbial Process Kinetics. pp. 155-180, Chap. 6. In: Basic Biotechnology. 3. Edition. Eds. C. Ratledge, B. Kristiansen, Cambridge University Press, Cambridge

(24) **J. Nielsen** (2006) Fermentation Kinetics. pp. 69-120. Chap. 4. In: Fermentation Microbiology and Biotechnology. Eds. E. M. T. El-Mansi, C. F. A. Bryce, A. L. Demain, A. R. Allman, Taylor and Francis, London

(25) I. Rocha; J. Förster, **J. Nielsen** (2007) Design and application of genome-scale reconstructed metabolic models, Pp. 409-431. In: Methods in Molecular Biology, Vol. 416: Gene Essentiality. Ed. S. Y. Gerdes, A. L. Osterman, Humana Press Inc., Totowa, USA

(26) W. de Jongh, **J. Nielsen** (2007) Filamentous fungi as cell factories for metabolite production, Pp. 163-182. In: Food Mycology. A multifaceted approach to fungi and food. Ed. J. Dijksterhuis, R. A. Samson, CRC Press, Boca Raton, USA

(27) A. P. Oliveira; M. C. Jewett; **J. Nielsen** (2007) From gene expression to metabolic fluxes, Pp. 37-66. In: Introduction to Systems Biology. Ed. S. Choi, Humana Press, Totowa, USA

(28) M. C. Jewett; **J. Nielsen** (2008) The role of Metabolomics in systems biology. Pp. 1-10. In: Metabolomics. Topics in Current Genetics. Eds. J. Nielsen and M. C. Jewett, Vol. 18, Springer Verlag, Heidelberg

(29) M. C. Jewett; M. A. E. Hansen; **J. Nielsen** (2008) Data acquisition, analysis, and mining: Integrative tools for discerning metabolic function in *Saccharomyces cerevisiae*. Pp. 159-188. In: Metabolomics. Topics in Current Genetics. Eds. J. Nielsen and M. C. Jewett, Vol. 18, Springer Verlag, Heidelberg

(30) W. Vongsangnak; **J. Nielsen** (2009) Bioinformatics and systems biology of *Aspergillus*. Pp. 61-84. In: *Aspergillus*. Molecular Biology and Genomics. Eds. M. Machida and K. Gomi. Caister Academic Press, UK

(31) G. Vemuri; **J. Nielsen** (2009) Yeast as a prototype for systems biology. Pp. 287-354. In: Systems biology and synthetic biology. Eds. P. Fu and S. Panke, Wiley, Hoboken, USA

(32) V. Siewers; U. H. Mortensen; **J. Nielsen** (2010) Genetic engineering tools for *Saccharomyces cerevisiae*. Pp. 287-301. In: Manual of Industrial Microbiology and Biotechnology (3.ed). Eds. R. H. Baltz, A. L. Demain and J. E. Davies. ASM Press, Washington, USA

(33) J. M. Otero; **J. Nielsen** (2010) Industrial Systems Biology. Pp. 79-148. In: Industrial Biotechnology. Eds. W. Soetaert and E. J. Vandamme. Wiley VCH, Weinheim, Germany

(34) M. R. Andersen; K. Rucksomtawin; G. Hofmann; **J. Nielsen** (2010) Metabolic Engineering of filamentous fungi. Pp. 25.1-25.30. In: The Metabolic Pathway Engineering Handbook. Ed. C. D. Smolke. CRC Press, Boca Raton, USA

(35) I. Borodina; A. Eliasson; **J. Nielsen** (2010) Metabolic Engineering of Streptomyces. Pp. 24.1-24.30. In: The Metabolic Pathway Engineering Handbook. Ed. C. D. Smolke. CRC Press, Boca Raton, USA

(36) **J. Nielsen** (2010) Developing appropriate hosts for metabolic engineering. Pp. V.1-V.8. In: The Metabolic Pathway Engineering Handbook. Ed. C. D. Smolke. CRC Press, Boca Raton, USA

(37) K. R. Patil; P. M. Bapat; **J. Nielsen** (2010) Structure and flux analysis of metabolic networks. Pp. 17.1-17.18. In: The Metabolic Pathway Engineering Handbook. Ed. C. D. Smolke. CRC Press, Boca Raton, USA

(38) M. Papini; M. Salazar; **J. Nielsen** (2010) Systems Biology of Industrial Microorganisms. *Adv. Biochem. Eng./Biotechnol.* **120**:51-99

Papers in Conference Proceedings

(1) **J. Nielsen**; K. Nikolajsen; J. Villadsen (1989) Computer controlled system for on-line monitoring of a fermentation process. pp. 53-57. In Computer Applications in Fermentation Technology. Modelling and Control of Biotechnological Processes, eds. N. M. Fish; R. I. Fox; N. F. Thornhill, Elsevier Applied Science, London

(2) J. Villadsen; **J. Nielsen** (1990) Modelling of fermentation kinetics. pp. 259-266. Proc. V'th European Congress on Biotechnology, Lyngby

(3) **J. Nielsen** (1991) Application of structured fermentation models. pp. 843-848. Proc. European Simulation Multiconference, Copenhagen

(4) S. Benthin; **J. Nielsen**; J. Villadsen (1992) Transmembrane transport systems, studied on actively growing cells. pp. 351-355. In Harnessing Biotechnology for the 21st Century (Proc. IX'th International Biotechnology Symposium, Crystal City), eds. M. R. Ladisch; A. Rose,

(5) **J. Nielsen** (1993) Modelling of filamentous microorganisms. pp. 45-52. In Computer Applications in Fermentation Technology. Modelling and Control of Biotechnological Processes, eds. M. N. Karim; G. Stephanopoulos, Pergamon Press

(6) H. S. Jørgensen; H. Møllgaard; **J. Nielsen**; J. Villadsen (1993) Identification of rate controlling enzymes in the metabolic pathway of penicillin in a high yielding strain of *P. chrysogenum*. pp. 251-254. In Computer Applications in Fermentation Technology. Modelling and Control of Biotechnological Processes, eds. M. N. Karim; G. Stephanopoulos, Pergamon Press

(7) **J. Nielsen** (1993) Modelling the morphology of filamentous fungi. pp. 131-142. Proc. Bioreactor Performance, eds. U. Mortensen; H. J. Noorman, Elsingore

(8) S. Frandsen; **J. Nielsen**; J. Villadsen (1993) Application of regimen analysis of yeast fermentation for down-scaling. pp. 171-179. Proc. Bioreactor Performance, eds. U. Mortensen; H. J. Noorman, Elsingore

(9) S. Frandsen; **J. Nielsen**; J. Villadsen (1993) Dynamics of *Saccharomyces cerevisiae* in continuous culture. pp. 887-890. In Progress in Biotechnology, Vol. 9. Proc. VI'th European Congress on Biotechnology, Florence. Elsevier

(10) A. G. Pedersen; **J. Nielsen**; J. Villadsen (1993)Characterization of bioreactors using isotope techniques. pp. 931-934. In Progress in Biotechnology, Vol. 9. Proc. VI'th European Congress on Biotechnology, Florence. Elsevier

(11) **J. Nielsen** (1994) Physiological Engineering - Towards a new science. pp. 30-38. In Proc. The 1994 IChemE Research Event, London, Vol. I

(12) M. Carlsen; A. Spohr; R. Mørkeberg; **J. Nielsen**; J. Villadsen (1994) Growth and protein formation of recombinant Aspergillus: Utility of morphological characterization by image analysis. pp. 197-202. In Proc. Advances in Bioprocess Engineering, Cuernavaca. Kluwer Academic Publishers

(13) **J. Nielsen** (1994) Physiological aspects of *Penicillium chrysogenum.* pp. 15-18. Proc. Modelling of filamentousfungi, Otocek.

(14) G. Lidén; U. Schulze; **J. Nielsen**; J. Villadsen (1995) On the optimization of ethanol production in nitrogen limited yeast fermentations. In Proc. VII'th European Congress on Biotechnology, Nice

(15) **J. Nielsen**; H. Jørgensen (1995) A kinetic model for the penicillin biosynthetic pathway in *Penicillium chrysogenum*. pp. 136-141. In Proc. Computer Application in Biotechnology 6, Garmisch-Partenkirchen

(16) P. N. Pissarra; M. J. Bazin; K. Schmidt; **J. Nielsen** (1995) A user-friendly and interactive methodology for simulation and non-linear parameter estimation of biotechnological process models using SIMULINK. Proc. Nordic Matlab Conference '95, Stockholm

(17) K. Schmidt: P. N. Pissarra; **J. Nielsen** (1995) The evolutionary strategy: A simple and straightforward optimization algorithm for parameter estimation in structured biochemical models. Proc. Nordic Matlab Conference '95, Stockholm

(18) **J. Nielsen** (1995) Metabolic control analysis of the penicillin biosynthetic pathway. Proc. National Biotechnology and Bioengineering Conference, Ixtapa, Mexico

(19) U. Schulze; T. L. Nissen; **J. Nielsen**; J. Villadsen (1996) Application of Metabolic Flux Analysis in physiological studies. Proc. V'th World Congress on Chemical Engineering, San Diego, USA

(20) P. de N. Pissarra; **J. Nielsen** (1996) Kinetic and thermodynamic analysis of the penicillin biosynthetic pathway. Proc. V'th World Congress on Chemical Engineering, San Diego, USA

(21) D. L. Bogle et al. (1996) Process synthesis, design and simulation of integrated biochemical processes. Proc. V'th World Congress on Chemical Engineering, San Diego, USA

(22) **J. Nielsen**; I. Spencer Martins (1997) Metabolic Engineering. Proc. European Cell Factory Conference, Lund, Sweden

(23) S. Østergaard; L. Olsson; **J. Nielsen** (1998) Metabolic control analysis of the Leloir pathway in *Saccharomyces cerevisiae*. BioThermoKinetics in the post genomic era. Proc. 8'th BTK Meeting, Fiskebäckskil, Sweden

(24) H. Aae Theilgaard; **J. Nielsen** (1998) The influence of the LLD-ACV:bisACV ration on a MCA of the penicillin biosynthetic pathway in *Penicillium chrysogenum*. BioThermoKinetics in the post genomic era. Proc. 8'th BTK Meeting, Fiskebäckskil, Sweden

(25) **J. Nielsen** (1998) Mathematical modelling of biochemical pathways. BioThermoKinetics in the post genomic era. Proc. 8'th BTK Meeting, Fiskebäckskil, Sweden

Other Publications

(1) **J. Nielsen** (1990) Post doc på Universität Hannover. Dansk Kemi **5**:178-179
(2) **J. Nielsen** (1990) On-line måling af biomasse i bioreaktorer. Dansk Kemi **8**:260-265
(3) **J. Nielsen**; J. Gram; L. Foldager (1990) Bioreaktionsteknik: Kendte metoder anvendt på nye processer. Dansk Kemi **12**:430-431
(4) **J. Nielsen** (1993) Physiological Engineering. Dansk Kemi **11**:14-17
(5) **J. Nielsen**; A. G. Pedersen; M. Bundgaard-Nielsen; H. Andersen (1994) Anvendelse af radioaktive isotoper til karakterisering af bioreaktorer. Dansk Kemi **4**:28-31
(6) **J. Nielsen** (1995) Doktorafhandling om industriel penicillinproduktion. Dansk Kemi **11**:20-23
(7) **J. Nielsen** (1995) Penicillinets historie. Dansk Kemi **12**:24-28
(8) U. Schulze; **J. Nielsen** (1997) Massachusetts Institute of Technology. Dansk Kemi
(9) T. Agger; **J. Nielsen** (1999) Optimering af enzymproduktion med skimmelsvampe. Dansk Kemi **1**:14-15
(10) B. Christensen; **J. Nielsen** (1999) Metabolsk flux analyse – en kvantitativ beskrivelse af mikroorganismers primære metabolisme. Dansk Kemi **1**:16-18
(11) **J. Nielsen** (1999) Functional genomics og dens rolle i udviklingen af fremtidige bioteknologiske processer. Dansk Kemi **1**:20-27
(12) C. Bro; B. Regenberg; **J. Nielsen** (2001) DNA Arrays. Dansk Kemi **1**:18-20
(13) M. R. Andersen; M. L. Nielsen; **J. Nielsen** (2006) Genomet – systembiologiens rygrad. Dansk Kemi **3**:15-17
(14) J. Højer-Pedersen; J. Smedsgaard; **J. Nielsen** (2006) Metabolomet: Et indirekte produkt af genomet. Dansk Kemi **3**:18-20

Patents and Patent Applications by Jens Nielsen

Issued Patents

1. Srivastava A, Piskur J, Nielsen J, Eagel -Mitani M (2000) Method fort he production of heterologous polypeptides in transformed yeast cells. **AU5504099**
2. Nielsen J, Nissen TL, Kielland-Brandt MC (2000) Metabolically engineered microbial cell comprising a modified redox activity. **AU4897999**
3. Nielsen J, Nissen TL, Kielland-Brandt MC (2000) Metabolically engineered microbial cell comprising a modified redox activity. **CA2379034**
4. Nielsen J, Nissen TL, Kielland-Brandt MC (2000) Metabolically engineered microbial cell with an altered metabolite profile. **CA2379023**
5. Hjort C, Pedersen H, Nielsen J (2000) Oxaloacetate hydrolase deficient fungal host cells. **AU2658200**
6. Srivastava A, Piskur J, Nielsen J, Eagel-Mitani M (2001) Method fort he production of heterologous polypeptides in transformed yeast cells. **US6190883**
7. Nielsen J, Nissen TL, Kielland-Brandt MC (2001) New metabolically altered microbial cell linked with an altered production of a metabolite such as ethanol or glycerol used for generating an alternative intracellular reoxidation, **ZA200100866**
8. Nielsen J, Nissen TL, Kielland-Brandt MC (2001) Metabolically engineered microbial cell with an altered metabolite profile. **BR9912014**
9. Hjort C, Pedersen H, Nielsen J (2002) Oxaloacetate hydrolase deficient fungal host cells. **CN1341149**
10. Hjort C, Pedersen H, Nielsen J (2003) Oxaloacetate hydrolase deficient fungal host cells. **US6544765**
11. Nielsen J, Nissen TL, Kielland-Brandt MC (2003) Metabolically engineered microbial cell with an altered metabolite profile. **NZ509728**
12. Srivastava A, Piskur J, Nielsen J, Eagel -Mitani M (2004) Method fort he production of heterologous polypeptides in transformed yeast cells. **AT266733**
13. Nielsen J, Nissen TL, Kielland-Brandt MC (2004) Metabolically engineered microbial cell with an altered metabolite profile. **AU773874**
14. Bro C, Regenberg B, Nielsen J (2004) Metabolically engineered microorganisms having reduced production of undesired metabolic products. **CA2506195**
15. Srivastava A, Piskur J, Nielsen J, Eagel-Mitani M (2005) Method fort he production of heterologous polypeptides in transformed yeast cells. **DE69917294**
16. Hjort C, Pedersen H, Nielsen J (2005) Method of producing a polypeptide using oxaloacetate hydrolase deficient fungal host cells. **US6936438**
17. Bro C, Regenberg B, Nielsen J (2005) Metabolically engineered microorganisms having reduced production of undesired metabolic products. **BR0316552**
18. Forster J, Gunnarsson NK, Nielsen JB (2005) Metabolically engineered cells for the production of polyunsaturated fatty acids. **CA2568689**
19. Hjort C, Pedersen H, Nielsen J (2006) Oxaloacetate hydrolase deficient fungal host cells. **DE60025467**
20. Hjort C, Pedersen H, Nielsen J (2006) Oxaloacetate hydrolase deficient fungal host cells. **DK1157100**
21. Nielsen J, Nissen TL, Kielland-Brandt MC (2006) Metabolically engineered microbial cell with an altered metabolite profile. **AT325196**
22. Nielsen J, Nissen TL, Kielland-Brandt MC (2006) Metabolically engineered microbial cell with an altered metabolite profile. **US7018829**
23. Hjort C, Pedersen H, Nielsen J (2006) Oxaloacetate hydrolase deficient fungal host cells. **AT315638**
24. Bro C, Regenberg B, Nielsen J (2006) Metabolically engineered microorganisms having reduced production of undesired metabolic products. **CN1717481**
25. Forster, J, Smits HP, Nielsen JB, Katz M (2006) Metabolically engineered cells fort he production of resveratrol or and oligomeric or glycosidically-bound derivative thereof. **CA2598414**
26. Nielsen J, Nissen TL, Kielland-Brandt MC (2007) Metabolically engineered microbial cell with an altered metabolite profile. **DE69931162**
27. Nielsen J, Nissen TL, Kielland-Brandt MC (2007) Metabolically engineered microbial cell with an altered metabolite profile. **ES2267274**
28. Forster J, Gunnarsson NK, Nielsen JB (2007) Metabolically engineered cells for the production of polyunsaturated fatty acids. **BRPI0511236**
29. Forster J, Gunnarsson NK, Nielsen JB (2008) Metabolically engineered cells for the production of polyunsaturated fatty acids. **NZ552254**
30. Forster, J, Smits HP, Nielsen JB, Katz M (2008) Metabolically engineered cells fort he production of resveratrol or and oligomeric or glycosidically-bound derivative thereof. **CN101160393**
31. Bro C, Regenberg B, Nielsen J (2008) Metabolically engineered microorganisms having improved galactose uptake. **US7393669**
32. Palsson BO, Famili I, Fu P, Nielsen JB, Forster J (2010) In silico model for detecting Saccharomyces cerevisiae physiological functions e.g. growth, includes a data structure relating several Saccharomyces cerevisiae reactants to several Saccharomyces cerevisiae reactions **US patent under issuing**

Patent Applications (including patent families)

1. Srivastava A, Piskur J, Nielsen J, Eagel-Mitani M (1998) Method fort he production of heterologous polypeptides in transformed yeast cells. **JP2002524082**
2. Hjort C, Pedersen H, Nielsen J (1999) Oxaloacetate hydrolase deficient fungal host cells. **JP2002536993**
3. Bro C, Regenberg B, Nielsen J (2002) Metabolically engineered microorganisms having reduced production of undesired metabolic products. **AU2003292106**
4. Bro C, Regenberg B, Nielsen J (2002) Metabolically engineered microorganisms having reduced production of undesired metabolic products. **EP1565554**
5. Bro C, Regenberg B, Nielsen J (2002) Metabolically engineered microorganisms having reduced production of undesired metabolic products. **US2006257983**
6. Forster J, Gunnarsson NK, Nielsen JB (2004) Metabolically engineered cells for the production of polyunsaturated fatty acids. **AU2005250074**
7. Forster J, Gunnarsson NK, Nielsen JB (2004) Metabolically engineered cells for the production of polyunsaturated fatty acids. **EP1766023**
8. Forster J, Gunnarsson NK, Nielsen JB (2004) Metabolically engineered cells for the production of polyunsaturated fatty acids. **JP2008501323**
9. Forster J, Gunnarsson NK, Nielsen JB (2004) Metabolically engineered cells for the production of polyunsaturated fatty acids. **US2006051847**
10. Forster, J, Smits HP, Nielsen JB, Katz M (2006) Metabolically engineered cells fort he production of resveratrol or and oligomeric or glycosidically-bound derivative thereof. **AU2006217963**
11. Forster, J, Smits HP, Nielsen JB, Katz M (2006) Metabolically engineered cells fort he production of resveratrol or and oligomeric or glycosidically-bound derivative thereof. **EP1856251**
12. Forster, J, Smits HP, Nielsen JB, Katz M (2006) Metabolically engineered cells fort he production of resveratrol or and oligomeric or glycosidically-bound derivative thereof. **JP2008530994**
13. Forster, J, Smits HP, Nielsen JB, Katz M (2006) Metabolically engineered cells fort he production of resveratrol or and oligomeric or glycosidically-bound derivative thereof. **US2008286844**
14. Forster, J, Smits HP, Nielsen JB, Katz M (2006) Metabolically engineered cells fort he production of resveratrol or and oligomeric or glycosidically-bound derivative thereof. **ZA200707942**
15. De Jong W, Nielsen J (2006) Enhanced citrate production
16. Reguira TB, Nielsen J (2007) Synthesis of mycophenolic acid (MPA)
17. Panagioutou G, Reguira TB, Olsson L, Nielsen J (2007) Genetically engineered Aspergillus
18. Siewers V, Zhang J, Chen X, Nielsen J (2008) Production of non-ribosomal peptides in yeast
19. Shi S, Nielsen J (2010) Production of biodiesel in yeast
20. Daviet L, Schalk M, Nielsen J, Siewers V, Knuf C, Scalcinati G (2011) Modified microorganisms and use thereof for terpene production

List of Presentations by Jens Nielsen

Invited conference presentations

1. *Modelling of fermentation kinetics,* European Congress on Biotechnology 5, Lyngby (1990)
2. *Modelling of the lactic acid fermentation,* European Congress on Biotechnology 5, Lyngby (1990)
3. *Modelling of fermentation processes,* European Simulation Multiconference, Copenhagen (1991)
4. *On-line monitoring of microbial processes,* FACSS, Anaheim, California (1991)
5. *Modelling the growth of filamentous microorganisms,* IFAC/ICCAFT, Keystone, Colorado (1992)
6. *On-line monitoring of fermentation processes,* Bioreactor Performance, Annual Conference of a Nordic Industrial programme, Stockholm, Sweden (1992)
7. *On-line måling af bioprocesser,* 2. Danske Symposium i Analytisk Kemi, Lyngby, Denmark (1992)
8. *On-line monitoring of penicillin fermentations,* AnaBiotec'92, Noordwijkerhout, Holland (1992)
9. *Modelling the morphology of filamentous fungi,* Bioreactor Performance, Elsingore, Denmark (1993)
10. *Simulation of bioreactions,* ESCAPE-3, Graz, Austria (1993)
11. *Pellet formation,* Process Integration in Biochemical Engineering, European Science Foundation Workshop, Sitges, Spain (1993)
12. *Physiological Engineering - Towards a new science,* The 1994 IChemE Research Event, London (1994)
13. *Modelling the growth and product formation of Penicillium chrysogenum,* IUMS Congresses '94, Prague (1994)
14. *Mathematical models: An excellent tool in physiological studies of filamentous fungi,* International conference on Modelling of filamentous fungi, Otocek, Slovenien (1994)
15. *In-situ and on-line analysis of cultivation processes,* International seminar on Analyses in biomass conversion to ethanol, Lund, Sweden (1994)
16. *A kinetic model for the penicillin biosynthetic pathway in Penicillium chrysogenum,* 6'th International conference on Computer Application in Biotechnology, Garmisch-Partenkirchen, Germany (1995)
17. *Modelling the growth of filamentous fungi,* National Biotechnology and Bioengineering Conference, Ixtapa, Mexico (1995)
18. *Metabolic Control Analysis of the penicillin biosynthetic pathway,* National Biotechnology and Bioengineering Conference, Ixtapa, Mexico (1995)
19. *Metabolic Control Analysis of the penicillin biosynthetic pathway,* Pacifichem'95, Honolulu, USA (1995)
20. *Fungal Morphology. Measurements and modelling,* 6th Netherlands Biotechnology Congress, Amsterdam, The Netherlands (1996)
21. *Metabolic Flux Analysis of filamentous fungi,* DECHEMA Jahrestagungen'96, Wiesbaden, Germany (1996)
22. *Metabolic Engineering: The analysis part,* rDNA Biotechnology: Focus on Metabolic Engineering, Engineering Foundation, Danvers, USA (1996)
23. *What can we learn from metabolic flux analysis,* VW-symposium on Metabolic fluxes, Hannover, Germany (1997)
24. *Metabolic engineering,* Danish Biotechnology Conference III, Vejle, Denmark (1997)
25. *Metabolic control analysis of the penicillin biosynthetic pathway based on a kinetic model and on a thermokinetic description of reaction rates,* ESF Conference on Control of Metabolic Flux, Giens, France (1997)
26. Physiological Engineering, *European Congress on Biotechnology 8, Budapest, Hungary (1997)*
27. *Mathematical modelling of biochemical pathways,* 8'th BTK meeting, Fiskebäckskil, Sweden (1998)
28. *Enzyme production by Aspergillus,* SGM meeting, Norwich, UK (1998)
29. *Metabolic engineering of Saccharomyces cerevisiae for the improvement of industrial processes,* Yeast as a cell factory, Vlaardingen, The Netherlands (1998)
30. The role of mathematical models in kinetic studies of hyphal growth, *Analysis of microbial cells at the single cell level, Como, Italy (1999)*
31. The role of mathematical models in microbial physiology, *Annual Meeting of Swedish Society of Microbiology, Lund, Sweden (1999)*
32. Modeling of cellular processes, *European Congress on Biotechnology 9, Brussels, Belgium (1999)*
33. The application of mathematical models in molecular physiology, *European Congress on Biotechnology 9, Brussels, Belgium (1999)*
34. Metabolic engineering of Saccharomyces cerevisiae for the improvement of ethanol production, IEA Bioenergy Workshop, Itala Game Reserve, South Africa (1999)
35. Yeast mixed sugar metabolism, *Cell Factory Area. Grand Finale, Graz, Austria (1999)*
36. The role of metabolic engineering in the improvement of industrial processes, *APBioChEC'99, Phuket, Thailand (1999)*
37. Transgenic microorganisms and industrial strain enhancement, *Perspectives and limitations of biotechnology in developing countries, San José, Costa Rica (2000)*
38. *Metabolic engineering of enzyme production by filamentous fungi,* 4th International Congress on Biochemical Engineering, Stuttgart, Germany (2000)
39. *Metabolic Engineering of Saccharomyces cerevisiae,* XIII SINAFERM, Teresopolis, Brasilien (2000)

40. Metabolome analysis: A powerful tool in metabolic engineering and functional genomics, *Metabolic Engineering III, Colorado Springs, USA (2000)*
41. Metabolome analysis: A powerful tool in functional genomics, *WFCS Symposium on Genomics, Wageningen, The Netherlands (2000)*
42. *Genome wide expression monitoring of metabolically engineered strains of S. cerevisiae with improved ethanol yield,* PacificChem2000, Honolulu, USA
43. *Metabolome analysis: A powerful tool in metabolic engineering and functional genomics,* MTBio Workshop, Dresden, Germany (2001)
44. The role of functional genomics in metabolic engineering, *SIM Annual Meeting, St. Louis, USA (2001)*
45. Metabolic engineering for improved β-lactam production, *Recent Advances in Fermentation Technology IV, Long Beach, USA (2001)*
46. *The role of yeast in modern biotechnology,* International Specialized Symposium on Yeast 2002, Pilansberg, South Africa (2002)
47. *Metabolic engineering and functional genomics: Moving towards systems biology,* SGM Annual Meeting, Warwick, UK (2002)
48. *Impact of Systems Biology on Modern Biotechnology,* Danish Biotechnology Conference VIII, Vejle, Denmark (2002)
49. *Metabolic engineering for improvement of β-lactam production,* Genetics of Industrial Microorganisms 2002, South Korea (2002)
50. *Carbon metabolism in Aspergillus and Penicillium,* International Mycology Congress 7, Oslo, Norway (2002)
51. *From the Genome to the Fluxome: A Metabolic Engineering challenge,* ASM Annual Meeting, Washington DC, USA (2003)
52. *Systems Biology of glucose repression in S. cerevisiae,*Yeast Genetics and Molecular Biology, Gothenburg, Sweden (2003)
53. *From Genomics to Industrial Bioprocesses: A Metabolic Engineering challenge,* European Congress on Biotechnology 11, Basel, Switzerland (2003)
54. *Systems Biology of S. cerevisiae,* First International Workshop on Yeast Systems Biology, St. Louis, USA (2003)
55. *From Glucose to Antibiotics – what controls the flux,* Ernst Schering Foundation Research Workshop, Berlin, Germany (2004)
56. *Systems Biology of S. cerevisiae,* South Africa Microbial Society's annual meeting, Stellenbosch, South Africa (2004)
57. *Aspergillus – the Ultimate Cell Factory for Production of Chemicals,* European Congress on Fungal Genetics 7, Copenhagen, Denmark (2004)
58. *Microorganisms – the Chemical Factories of the Future,* ETIF Conference, Lund, Sweden (2004)
59. *Grøn Kemi,* Konference om Ansvarlig Bioteknologi, Copenhagen, Denmark (2004)
60. *Integration of Metabolic Models and Ome Data: Lessons from S. cerevisiae,* ASM Conference on Integration of Metabolism and Genomics, Montreal, Canada (2004)
61. *Green Chemistry – the New S-curve in Biotechnology,* 35th R^3 Nordic Symposium and Exibition, Elsingore, Denmark (2004)
62. *Metabolic Engineering,* European Symposium on Biochemical Engineering Science 5, Stuttgart, Germany (2004)
63. *Metabolic Engineering: Impacts of Functional Genomics,* Metabolic Engineering V, Lake Tahoe, USA (2004)
64. *From gene expression to metabolic fluxes,* International Congress on Systems Biology 2004, Heidelberg, Germany (2004)
65. *Integration of the metabolism of S. coelicolor through genome-scale modelling,* Streptomyces Dissemination Meeting, University of Surrey, UK (2005)
66. *Design af cellefabrikker til production af nye levnedsmiddelingredienser,* LMC Congress, Lyngby, Denmark (2005)
67. *White Biotechnology: From gene expression to metabolic fluxes,* DECHEMA Bioperspectives, Wiesbaden, Germany (2005)
68. *Identification of global regulatory structures in cellular metabolism,* Biochemical Engineering XIV, Harrison Hot Springs, Canada (2005)
69. *Genome-scale models of fungi,* 13th International Meeting on Microbial Genomes (2005)
70. *The role of chemical engineering in modern biotechnology,* CHEMPOR 2005, Braga, Portugal (2005)
71. *Systems biology of the yeast Saccharomyces cerevisiae,* The Norwegian Biochemical Society, 42. Contact Meeting, Storefjell, Norway (2006)
72. *Model driven data integration in yeast systems biology,* Genomes to Systems Conference 2006, Manchester, UK (2006)
73. *Systems Biology of Industrial Microbes,* American Society for Microbiology 106th General Meeting, Orlando, USA (2006)
74. *Impacts of systems biology on industrial biotechnology,* Danish Conference on Molecular Biology and Biotechnology, Munkebjerg, Denmark (2006)
75. *Reporter features: A tool for mapping of global control in metabolism through model driven analysis of ome data,* ISSY25 Systems Biology of Yeasts – from Models to Applications, Helsinki, Finland (2006)
76. *Yeast as a versatile cell factory,* Genetics of Industrial Microorganisms, Prague, Czech Republic (2006)
77. *Metabolism of Aspergillus: Lessons from Genomics,* Society for Industrial Microbiology Annual Meeting, Baltimore, USA (2006)
78. *Production of engineered haemoglobin from yeast,* International Visions on Blood Substitutes, Parma, Italy (2006)
79. *Systems biology of lipid metabolism in Saccharomyces cerevisiae*: *Mapping of global regulatory structures,* Keystone conference on Bioactive Lipids, Taos, New Mexico, USA (2007)
80. *Yeast as a versatile chemical factory,* ASM Annual Meeting, Toronto, Canada (2007)

81. *Integrated analysis of yeast metabolism,* ASM Annual Meeting, Toronto, Canada (2007)
82. *Systems biology of the cell factory Aspergillus niger,* International Conference on Biorefinery, Beijing, China (2007)
83. *The role of chemical engineering in modern biotechnology,* European Congress on Chemical Engineering 6, Copenhagen, Denmark (2007)
84. *Integrated analysis of yeast metabolism,* FOSBE2007, Stuttgart, Germany (2007)
85. *Integrated analysis of yeast metabolism,* 9th Functional Genomics Conference: Synthetic Biology, Gothenburg, Sweden
86. *Systems biology of the cell factory Aspergillus niger,* RAFT VII, St. Petersburg, Florida, USA (2007)
87. *Systems Biology as a driver for industrial biotechnology,* 2008 BERN meeting, University College London, UK (2008)
88. *Comparative metabolic analysis of Aspergilli at the genome level,* European Conference on Fungal Genetics 9, Edinburgh, UK (2008)
89. *The role of Snf1/AMPK on regulation of lipid metabolism: Lessons from yeast,* Danish Conference on Molecular Biology and Biotechnology II, Munkebjerg, Denmark (2008)
90. *Modeling of microbial metabolic networks,* Tutzing Symposium 2008, Tutzing, Germany (2008)
91. *Systems Biology of the cell factories A. niger and A. oryzae,* FEBS2008, Athens, Greece (2008)
92. *Systems Biology of the yeast Saccharomyces cerevisiae,* International Congress on Genetics 2008, Berlin, Germany (2008)
93. *Systems Biology of lipid and energy metabolism in yeast,* International Conference on Yeast, Kiev, Ukraine (2008)
94. *Industrial systems biology: Yeast and Aspergilli as cell factories for sustainable production of chemicals,* International Conference on Systems Biology 2008, Gothenburg, Sweden (2008)
95. *Production of fine chemicals by yeast and Aspergilli,* International Biotechnology Symposium 2008, Dalian, China (2008)
96. *Integrated analysis of yeast metabolism,* 61st Annual Symposium on Cancer Research: Systems Biology of Cancer, Houston, USA (2008)
97. *The metabolic networks of Aspergilli,* Asperfest, Asilomar, USA (2009)
98. *Metabolism of Aspergilli at the genome level,* 25th Fungal Genetics Conference, Asilomar, USA (2009)
99. *Systems biology of lipid metabolism: Mapping of global regulatory structures,* 9th Yeast Lipid Conference, Berlin, Germany (2009)
100. *Integrated analysis of metabolism; From yeast to human,* Nobel Symposium on Systems Biology, Stockholm, Sweden (2009)
101. *Industrial Systems Biology: Identification of metabolic engineering targets using metabolic networks,* Foundation of Engineering in Systems Biology 2009, Denver, USA (2009)
102. *From omics data to phenotype through integrative systems biology,* ISSY 27, Paris, France (2009)
103. *Systems biology of metabolism: From yeast to mammals,* European Congress on Biotechnology 14, Barcelona, Spain (2009)
104. *Yeast Metabolomics*, Metabolomics Conference, University of Copenhagen, Copenhagen, Denmark (2009)
105. Prospects of Systems Biology for advancing our understanding of global regulation of metabolism, Annual INRA Conference, Genoscope, France (2010)
106. Genome-Scale Modeling of Fungi: Expansion from Metabolism to Protein Production, PYFF4, Rotterdam, The Netherlands (2010)
107. Yeast as a Platform Cell Factory for the Production of Fuels and Chemicals, MEVIII, Jeju Island, South Korea (2010)
108. Metabolism of Filamentous Fungi at the Genome Level, FEBS2010, Gothenburg, Sweden (2010)
109. Insight into Metabolic Diseases through Systems Biology, 8th Aegian Conference on Pathways, Networks and Systems, Rhodes, Greece (2010)
110. Genome-Scale Metabolic Models: The Core of Industrial Systems Biology, Industrial Systems Biology 2010, Gothenburg, Sweden (2010)
111. Yeast as a platform cell factory for production of fuels and chemicals. International Biotechnology Symposium 2010, Rimini, Italy (2010)
112. Yeast as a platform cell factory. Power of Microbes in Industry and Environment 2010, Island Krk, Croatia (2010)
113. The application of genome-scale metabolic models in industrial biotechnology, ICSB2010, Edinburgh, UK (2010)
114. Synthetic biology and industrial biotechnology, Green Chem Conference, Lund, Sweden (2010)
115. Development of yeast as a platform cell factory, 3rd International Conference on Biomolecular Engineering, San Fransisco, USA (2011)
116. Engineering of the Biocatalyst in Biorefineries, 3rd International Symposium for Innovation Bioproduction Kobe, Kobe, Japan (2011)
117. The Art of Making Yeast to Produce Biodiesel, Chalmers Energy Conference 2011, Gothenburg, Sweden (2011)
118. Yeast as Platform Cell Factories in Future Biorefineries, AAAS Annual Symposium 2011, Washington, USA (2011)
119. Yeast as Platform Cell Factories in Future Biorefineries, Asian Congress on Biotechnologyn 2011, Shanghai, China (2011)
120. Nutritional Systems Biology, Experimental Biology 2011, Washington, USA (2011)
121. Yeast as Platform Cell Factories in Future Biorefineries, Danish Conference on Biotechnology 6, Munkebjerg, Denmark (2011)
122. Towards The Human Metabolic Atlas, 8th Key Symposium, Stockholm, Sweden (2011)
123. Application of Genome Scale Metabolic Models in Industrial Biotechnology, 1st COBRA Conference, Reykavik, Iceland (2011)
124. Metabolic Engineering, Synthetic Biology, Systems Biology, … what is the role of Biochemical Engineering, Biochemical and Biomolecular Engineering XVII, Seattle, USA (2011)

Invited seminar presentations (not complete)

1. *Design of an on-line monitoring system for lactic acid fermentations,* Ciba Geigy, Basel, Switzerland (1987)
2. *Automation of laboratory fermentors,* Technical University of Denmark, Lyngby (1987)
3. *On-line monitoring of lactic acid fermentation,* Department of Chemical Engineering, Caltech, Pasedena, California (1988)
4. *Application of FIA for on-line monitoring of fermentation processes,* Technion, Lund, Sweden (1988)
5. *Structured modelling of microbial systems,* Technical University of Denmark, Lyngby (1989)
6. *Experimentally verification of fermentation models,* University of Lund, Sweden (1990)
7. *Structural models for fermentation processes,* Departmental seminar, Institut für Biotechnologie,Technische Universität Graz, Austria (1990)
8. *Modelling and on-line monitoring of fermentation processes,* Departmental seminar, Institut für Technische Chemie, Universität Hannover, Germany (1990)
9. *Verification of structured models for fermentation processes,* Departmental seminar, Kemisk Reaktionsteknik, Chalmars Tekniska Högskola, Gothenburg, Sweden (1991)
10. *Modelling of filamentous microorganisms,* Department of Chemical Engineering, University of Michigan, Ann Arbor, Michigan (1992)
11. *On-line monitoring and modelling of microbial processes,* Departmental seminar, Department of Biochemical Engineering, Indian Institute of Technology, New Delhi (1992)
12. *Growth of filamentous fungi - An engineers perspective,* Seminar at University of Manchester, Manchester (1992)
13. *On-line monitoring of filamentous fungi fermentations,* Meeting of EFB Working Party on "Measurement and Control", Florence (1993)
14. *Modelling of filamentous growth,* Meeting of DECHEMA Working Party on "Messung und Regelung in Biotechnologie", Frankfurt (1993)
15. *Industriel anvendelse af skimmelsvampe,* Dansk Ingeniørforening, Copenhagen (1994)
16. *Metabolic flux analysis of the penicillin fermentation,* Institute of Chemical Metalurgy, Chinese Academy of Science, Beijing (1994)
17. *Mathematical models - An excellent tool in physiological studies of filamentous fungi,* Department of Chemical Engineering, University of Minnesota, Minneapolis (1994)
18. *Physiological Engineering of filamentous fungi,* Departmental Seminar, Department of Chemical Engineering, MIT, Cambridge (1994)
19. *Physiological Engineering. The integration of microbial physiology and chemical engineering,* Department of Chemical Engineering, MIT, Cambridge, USA (1996)
20. *Modelling the growth of filamentous microorganisms,* Departmental seminar, Department of Chemical Engineering, Tufts University, Medford, USA (1996)
21. *Modelling the growth of filamentous microorganisms,* Departmental seminar, Department of Chemical and Biochemical Engineering, University of Western Ontario, London, Canada (1996)
22. *Modelling the growth of filamentous fungi,* Department of Chemical Engineering, MIT, Cambridge (1996)
23. *Metabolic Engineering,* University of Shandong, Jinan (1996)
24. *Metabolic flux analysis of filamentous fungi,* BASF, Ludwigshafen (1996)
25. *Metabolic Flux Analysis,* Departmental seminar, Department of Chemical Engineering, Xinghua University, Beijing, China (1996)
26. *Biochemical analysis of the penicillin biosynthetic pathway,* Departmental Seminar, Department of Microbiology, Technical University of Denmark, Lyngby, Denmark (1997)
27. *Biochemical characterization of the penicillin biosynthetic pathway,* Departmental Seminar, Institut für Biotechnologie, ETH, Zürich, Switzerland (1997)
28. Metabolic engineering. Methods and applications, *Institute seminar, Institut für Biotechnologie, Forschungszentrum Jülich, Germany (1998)*
29. *Enzyme production by Aspergillus*. *Biochemical engineering methods for fundamental research and process optimisation,* Seminar, Carlsberg Laboratory, Copenhagen, Denmark (1999)
30. Metabolomics, *Seminar, Biologisk Selskab, Copenhagen, Denmark (2000)*
31. Metabolic Engineering and Functional Genomics, *Seminar, Novo Nordisk, Bagsværd, Denmark (2000)*
32. Metabolic Engineering and Functional Genomics, *Seminar, Chr. Hansen, Hørsholm, Denmark (2000)*
33. Metabolic Engineering and Functional Genomics, *Bjerrum-Brøndsted-Lang lecture, Carlsberg Laboratory, Denmark (2000)*
34. *Metabolic engineering of Penicillium chrysogenum for improved β-lactam production,* Seminar, Microbia, Cambridge, USA (2001)
35. *Analysis of metabolism: Control of fluxes,* Seminar, BASF, Ludwigshafen, Germany (2001)
36. *The role of Functional Genomics in Metabolic Engineering,* Seminar, EPFL, Lausanne, Switzerland (2001)
37. *Metabolomics,* Seminar, Genomics in Food Science, KVL, Denmark (2002)
38. *From quantitative physiology to metabolic engineering and systems biology,* Sunner Memorial Lecture, Lund University, Lund, Sweden (2002)
39. *Hough Memorial Lecture,* University of Birmingham, Birmingham, UK (2004)
40. *Metabolic engineering: Impacts of functional genomics,* Seconda Università degli Studi di Napoli, Naples, Italy (2005)
41. *Linking the transcriptome and the metabolome through genome-scale metabolic models,* University Milano-Bicocca, Milan, Italy (2005)

42. *Systems Biology: Current status and future challenges,* NTNU, Trondheim, Norway (2005)
43. *Systems Biology of Yeasts: Impacts on Metabolic Engineering and Basic Sciences,* The National Hellenic Research Foundation, Athens, Greece (2006)
44. *Impacts of systems biology on biotech process based on yeast*, Merck, West Point, USA (2006)
45. *The role of metabolic engineering in the improvement of industrial processes,* BIOTEC, Bangkok, Thailand (2006)
46. *Yeast systems biology: A vehicle for medical and biotechnological research,* Department of Chemical and Biological Engineering. Chalmers University of Technology, Gothenburg, Sweden (2007)
47. *Yeast as a model organism for studying nutragenomic,* Department of Systems Biology, ETH Zürich, Switzerland (2007)
48. *Systems Biology and Synthetic Biology,* Beijing University of Chemical Technology, Beijing, China (2007)
49. *Systems Biology of lipid metabolism in yeast,* Department of Biotechnology, University of Graz, Austria (2008)
50. *Systems Biology as a driver for industrial biotechnology,* Department of Chemical Engineering, Catholic University of Chile, Santiago, Chile (2008)
51. *Systems Biology of Lipid Metabolismı,* Departmental Seminar, Institute for Molecular Biosciences, Universität Graz, Austria (2008)
52. *Industrial systems biology: Yeast and Aspergillus as cell factories for sustainable production of chemicals,* Sandoz, Kundl, Austria (2008)
53. *Industrial Systems Biology: Yeast and Filamentous Fungi as Cell Factories for Sustainable Production of Chemicals,* Departmental Seminar, Department of Chemical Engineering, Rice University, Houston, Texas, USA (2008)
54. *Yeast systems biology: Does this have any medical relevance?* Wallenberg Laboratory, Sahlgrenska Academy, Gothenburg, Sweden (2008)
55. *Industrial systems biology,* Amyris, Berkeley, USA (2009)
56. *Understanding the function of biological networks through systems biology*, Faculty of Science and Mathematics, University of Zagreb, Zagreb, Croatia (2009)
57. *Systems biology of metabolism: From yeast to mammals,* Department of Bioengineering, UC San Diego, California, USA (2009)
58. *Industrial systems biology*, Genomatica, San Diego, USA (2009)
59. *Industrial systems biology: Yeast and Aspergilli as cell factories for sustainable production of chemicals.* CJ Company, Seoul, South Korea (2010)
60. *Engineering the metabolism of yeast cell factories*, Novo Nordisk Foundation, Denmark (2010)
61. *Development of yeast as a platform cell factory for production of fuels and chemicals through industrial systems biology,* Tufts University, Boston, USA (2010)
62. *Impact of systems biology on synthetic biology,* Yale University, New Haven, USA (2010)
63. *Yeast Systems Biology*, Carlsberg Laboratory, Copenhagen, Denmark (2010)
64. *Biorefinery. Cell Factory Design and Implementation*, World Council of Industrial Biotechnology meeting, Beijing, China (2010)
65. *Development of Yeast as a Platform Cell Factory*, Joint Bioenergy Institute, Berkeley, USA (2011)
66. *Insights into Metabolic Diseases through Systems Biology*, SomaLogic, Boulder, USA (2011)
67. *Systems Biology: Integrated Analysis of Human Metabolism through the Human Metabolic Atlas*, Rigshospitalet, Copenhagen, Denmark (2011)
68. *Yeast as a Cell Factory Platform for Production of Fuels and Chemicals*, University of Umeå, Umeå, Sweden (2011)
69. *Biochemical Engineering as the Foundation of Systems Biology, Synthetic Biology and Metabolic Engineering*, Seminar in connection with Prof. Reuss, University of Stuttgart, Germany (2011)
70. *Systems Biology, Synthetic Biology and Metabolic Engineering of Yeast*, Genomatica, San Diego, USA (2011)

List of Conferences co-organized by Jens Nielsen

Chair/Co-Chair of Organizing Committee

1. Danish Biotechnology Conference I, Munkebjerg, Denmark (1995) (130 participants) **Chair**
2. Danish Biotechnology Conference II, Munkebjerg, Denmark (1996) (130 participants) **Chair**
3. Danish Biotechnology Conference III, Munkebjerg, Denmark (1997) (180 participants) **Chair**
4. Danish Biotechnology Conference IV, Munkebjerg, Denmark (1998) (130 participants) **Chair**
5. Danish Biotechnology Conference V, Munkebjerg, Denmark (1999) (120 participants) **Chair**
6. European Symposium on Biochemical Engineering Science 3, Copenhagen, Denmark (2000) (300 participants) **Chair**
7. Metabolic Engineering IV, Il Ciocco, Italy (2002) (250 participants) **Chair**
8. 7th European Conference on Fungal Genetics, Copenhagen, Denmark (800 participants) **Co-Chair**
9. European Congress on Biotechnology 12, Copenhagen, Denmark (2005) **Chair of Scientific Committee**
10. Swedish Bioinformatics Workshop, Gothenburg, Sweden (2010) (100 participants) **Chair**
11. Gothenburg Life Science Conference XI, Gothenburg, Sweden (2010) (150 participants) **Chair**

Member of Organizing Committee

1. Danish Biotechnology Conference VI, Munkebjerg, Denmark (2000)
2. Danish Biotechnology Conference VII, Munkebjerg, Denmark (2001)
3. Symposium on Physiology of Yeast and Filamentous Fungi, Hindsgavl, Denmark (2001)
4. Danish Biotechnology Conference VIII, Munkebjerg, Denmark (2002)
5. 2nd International Conference on Analysis of Microbial Cells at the Single Cell Level, Munkebjerg, Denmark (2002)
6. Danish Biotechnology Conference IX, Munkebjerg, Denmark (2003)
7. Danish Biotechnology Conference X, Munkebjerg, Denmark (2004)
8. The 9th International Conference on Systems Biology, Gothenburg, Sweden (2010)
9. 35th FEBS Congress, Gothenburg, Sweden (2010)

Member of Scientific/Advisory Committee

1. Modeling for Improved Bioreactor Performance II, Otocec, Slovenia (1994)
2. Yeast as a Cell Factory, Vlaardingen, The Netherlands (1998)
3. ISSY22: Yeast fermentations and other yeast bioprocesses, Pilansberg, South Africa (2002)
4. European Symposium on Biochemical Engineering Science 4, Delft, The Netherlands (2002)
5. Metabolic Engineering V, Taos, USA (2004)
6. European Symposium on Biochemical Engineering Science 5, Stuttgart, Germany (2004)
7. Biochemical Engineering XIV, Harrison Hot Springs, Canada (2005)
8. 8th European Conference on Fungal Genetics, Vienna, Austria (2006)
9. Metabolic Engineering VI, Noordwijkerhout, The Netherlands (2006)
10. ISSY25: Systems Biology of Yeasts – from Models to Applications, Espoo, Finland (2006)
11. FOSBE 2007, Stuttgart, Germany (2007)
12. 9th European Conference on Fungal Genetics, Edinburgh, UK (2008)
13. Metabolic Engineering VII, Puerto Vallarta, Mexico (2008)
14. 13th International Biotechnology Symosium and Exhibition, Dalian, China (2008)
15. 12th International Congress on Yeasts, Kiev, Ukraine (2008)
16. FOSBE 2009, Englewood, USA (2009)
17. ISSY27: Yeast for health and biotechnologies, Paris, France (2009)
18. PYFF4, Rotterdam, The Netherlands (2010)
19. Metabolic Engineering VIII, Jeju Island, South Korea (2010)
20. 10th European Conference on Fungal Genetics, Leiden, The Netherlands (2010)
21. 14th International Biotechnology Symposiumand Exhibition, Rimini, Italy (2010)

Research Supervision by Jens Nielsen

Post Doctoral Researchers

1. *Lars Højlund Christensen, DTU (1992-1994)*
2. *Gunnar Liden, DTU (1993-1994)*
3. *Lisbeth OIsson, DTU (1994-1996)*
4. *Morten Carlsen, DTU (1995-1997)*
5. *Anne Santerre Henriksen, DTU (1995-1999)*
6. *Aradhana Srivastava, DTU (1996-1998)*
7. *Hans Peter Smits, DTU (1996-1999; 2000-2001)*
8. *Alexei Aleksenko, DTU (1997-2001)*
9. *Philippe Duboc, DTU (1997-1999)*
10. *Fernando Bautista, DTU (1998-1999)*
11. *Ana Borges, DTU (1999-2001)*
12. *Bjarke Christensen, DTU (1999-2001)*
13. *Mhairi Workman, DTU (1999-2004)*
14. *Birgitte Regenberg, DTU (1999-2005)*
15. *Anna Eliasson Lantz, DTU (2000-2002)*
16. *Christian Müller, DTU (2001-2002)*
17. *Vsevolod Serebrianyi, DTU (2001-2002)*
18. *Mats Åkesson, DTU (2001-2003)*
19. *Kasper Møller, DTU (2001-2003)*
20. *Per Bruheim, DTU (2002)*
21. *Vasimon Ruanglek, DTU (2002)*
22. *Tamay Seker, DTU (2002-2003)*
23. *Sandrine Mas, DTU (2002-2005)*
24. *Gerald Hofmann, DTU (2004-2006)*
25. *Roberta Mustachi, DTU (2004-2007)*
26. *Jerome Maury, DTU (2004-2008)*
27. *Isabel Rocha, DTU (2004)*
28. *Jette Thykær, DTU (2005-2007)*
29. *Dongmei Bai, DTU (2005-2007)*
30. *Michael Jewett, DTU (2005-2008)*
31. *Manuel Quiros Asensio, DTU (2006-2008)*
32. *Prashant Bapat, DTU (2006-2008)*
33. *Sven Even Borgos, DTU (2007)*
34. *Dina Petranovic, DTU (2007-2008)*
35. *Subir Kumar Nandty, Chalmers (2008-2010)*
36. *Keith Tyo, Chalmers (2008-2010)*
37. *Marija Cvijovic, Chalmers (2008-2010)*
38. *Andrea Neiss, Chalmers (2009-2010)*
39. *Wanwipa Vongsangnak, Chalmers (2010)*

Graduated PhD Students (main supervisor)

1. *Henrik Jørgensen, DTU (1991-1993)*
2. *Claus Lindvad Johansen, DTU (1991-1993)*
3. *Morten Carlsen, DTU (1992-1995)*
4. *Rong Wei Min, DTU (1992-1995)*
5. *Anders Spohr, DTU (1993-1996)*
6. *Preben Krabben, DTU (1993-1997)*
7. *Claus Maxel Henriksen, DTU (1993-1996)*
8. *Christoffer Klein, DTU (1995-1998)*
9. *Karsten Schmidt, DTU (1995-1998)*
10. *Torben Nissen, DTU (1995-1998)*
11. *Henrik Pedersen, DTU (1996-1999)*
12. *Bjarke Christensen, DTU (1996-1999)*
13. *Teit Agger, DTU (1996-1999)*
14. *Hanne Theilgaard, DTU (1996-1999)*
15. *Simon Østergaard, DTU (1997-2000)*
16. *Wai Prathumpai, DTU (1998-2001)*
17. *Tina Lübbehüsen, DTU (1998-2001)*
18. *Jens Dynesen, DTU (1998-2001)*
19. *Torben Christiansen (1998-2001)*
20. *Christian Müller, DTU (1998-2001)*

21. *Jarno Robin, DTU (1998-2002)*
22. *Jochen Förster, DTU (1999-2002)*
23. *Michael Lynge Nielsen, DTU (1999-2003)*
24. *Jette Thykær, DTU (2000-2005)*
25. *Nina Gunnarsson, DTU (2000-2003)*
26. *Margarida Moreira dos Santos, DTU (1999-2003)*
27. *Christoffer Bro, DTU (2000-2003)*
28. *Gerald Hofmann, DTU (2001-2004)*
29. *Helga David, DTU (2001-2005)*
30. *Thomas Grotkjær, DTU (2001-2004)*
31. *Nadine Eckert-Boulet, DTU (2001-2004)*
32. *Vijay Raghevendrabn, DTU (2001-2005)*
33. *Steen Lund Westergaard, DTU (2002-2005)*
34. *Wian de Jongh, DTU (2002-2005)*
35. *Silas Granato Villas-Boas, DTU (2002-2005)*
36. *Kiran Patil, DTU (2003-2006)*
37. *Songsak Wattanachaisaereekul, DTU (2003-2007)*
38. *Audrey Diano, DTU (2003-2007)*
39. *Torsten Bak Reguira, DTU (2003-2007)*
40. *Irina Borodina, DTU (2004-2008)*
41. *Susan Meijer, DTU (2004-2007)*
42. *Ana Paula Oliveira, DTU (2004-2008)*
43. *Mohammad Asahollahi, DTU (2004-2008)*
44. *Mikael Rørdam Andersen, DTU (2004-2008)*
45. *Jesper Højer Pedersen, DTU (2004-2008)*
46. *Kjeld Kjeldsen, DTU (2005-2008)*
47. *Wanwipa Vongsangnak, Chalmers (2005-2009)*
48. *Jose Manuel Otero, Chalmers (2005-2009)*
49. *Margarita Salazar Pena, Chalmers (2006-2010)*
50. *Jie Zhang, Chalmers (2007-2011)*
51. *Roberto Olivares-Hernández (2005-2012)*

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2. *Stig Benthin, DTU (1989-1992)*
3. *Annemarie Gade Pedersen, DTU (1990-1992)*
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5. *Ulrik Schultze, DTU (1992-1995)*
6. *Pedro N. Pissarra, DTU (visiting PhD student) (1994-1995)*
7. *Teresa Zangorilami, DTU (1994-1998)*
8. *Kasper Møller, DTU (1998-2001)*
9. *Einar Jonsbu, DTU (visiting PhD student) (1999-2000)*
10. *Andreas Karoly Gomberg, DTU (visiting PhD student) (1998-2000)*
11. *Mikkel Nordkvist, DTU (2001-2005)*
12. *Joel Forest Moxley, DTU (visiting PhD student) (2003-2005)*
13. *Tunahan Cakir, DTU (visiting PhD student) (2004-2005)*
14. *Kazim Yalcin Arga, DTU (visiting PhD student) (2004-2005)*
15. *Renata Usaite, DTU (2004-2008)*
16. *Donatella Cimini, DTU (visiting PhD student) (2006)*
17. *Valeria Mapelli, DTU (visiting PhD student) (2006-2007)*
18. *Paula Jouhten, Chalmers (visiting PhD student) (2008-2009)*
19. *Arastoo Badoei Dalfard, Chalmers (visiting PhD student) (2009)*
20. *Lasse Pedersen, DTU (2007-2010)*
21. *Kanchana Rueksomtawin Kildegaard, DTU (2004-2011)*
22. *Xiao Chen, DTU (2007-2011)*

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2. *Lene Christiansen, Research Engineer, DTU (1992-2008)*
3. *Martin Hjortso, Visiting Professor, DTU (1992-1993, 2002-2003)*
4. *Susanne Sloth Larsen, Head of Administration, DTU (1995-1999)*
5. *Jette Mortensen, Laboratory Technician, DTU (1996-2008)*
6. *Birgitte Karsbøl, Secretary, DTU (1996-2008)*
7. *Kirsten Nielsen, Secretary, DTU (1998-2005)*

8. *Trine Bro, Head of Administration, DTU (1999-2008)*
9. *Lars K. Nielsen, Visiting Professor, DTU (2004)*
10. *Stefan Rokem, Visiting Professor, DTU (2004-2005)*
11. *Eduardo Agosin, Visiting Professor, DTU (2005)*