John Woodley - DTU Orbit (01/12/2017)

Woodley, John
jw@kt.dtu.dk
Department of Chemical and Biochemical Engineering - Professor
KT Consortium
PROSYS - Process and Systems Engineering Centre

Publications:

CO2 Mass transfer model for carbonic anhydrase-enhanced aqueous MDEA solutions
Publication: Research - peer-review › Journal article – Annual report year: 2018

A generic methodology for processing route synthesis and design based on superstructure optimization
Publication: Research - peer-review › Journal article – Annual report year: 2017

A Reaction Database for Small Molecule Pharmaceutical Processes Integrated with Process Information
Publication: Research - peer-review › Journal article – Annual report year: 2017

Automated Determination of Oxygen-Dependent Enzyme Kinetics in a Tube-in-Tube Flow Reactor
Ringborg, R. H., Pedersen, A. T. & Woodley, J. 2017 In : Chemcatchem. 9, p. 3285 – 3288
Publication: Research - peer-review › Journal article – Annual report year: 2017

Bioprocess intensification for the effective production of chemical products
Publication: Research - peer-review › Journal article – Annual report year: 2017

Characterization of a continuous agitated cell reactor for oxygen dependent biocatalysis
Publication: Research - peer-review › Journal article – Annual report year: 2017

Computational chemical product design problems under property uncertainties
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Design and simulation of rate-based CO2 capture processes using carbonic anhydrase (CA) applied to biogas
Publication: Research - peer-review › Conference article – Annual report year: 2016

Development of a thiol-ene based screening platform for enzyme immobilization demonstrated using horseradish peroxidase
Publication: Research - peer-review › Journal article – Annual report year: 2017
Development of in-situ product removal strategies in biocatalysis applying scaled-down unit operations
Publication: Research - peer-review › Journal article – Annual report year: 2016

Effect of Water Clustering on the Activity of Candida antarctica Lipase B in Organic Medium
Publication: Research - peer-review › Journal article – Annual report year: 2017

Experimental and computational evaluation of area selectively immobilized horseradish peroxidase in a microfluidic device
Publication: Research - peer-review › Journal article – Annual report year: 2017

Influence of temperature and solvent concentration on the kinetics of the enzyme carbonic anhydrase in carbon capture technology
Publication: Research - peer-review › Journal article – Annual report year: 2016

Integrated computer-aided framework for chemical product and process application design and optimization for waste heat recovery
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Integrated working fluid-thermodynamic cycle design of organic Rankine cycle power systems for waste heat recovery
Publication: Research - peer-review › Journal article – Annual report year: 2017

Integrating protein engineering with process design for biocatalysis
Publication: Research - peer-review › Journal article – Annual report year: 2017

Model-based design and analysis of glucose isomerization process operation
Papadakis, E., Pedersen, S., Kumar Tula, A., Fedorova, M., Woodley, J. & Gani, R. 2017 In : Chemical Engineering. 98, p. 128-142
Publication: Research - peer-review › Journal article – Annual report year: 2017

Modification of polymer surfaces to enhance enzyme activity and stability
Publication: Research › Ph.D. thesis – Annual report year: 2017

Online Measurement of Oxygen-Dependent Enzyme Reaction Kinetics
Publication: Research - peer-review › Journal article – Annual report year: 2017

Operating considerations of ultrafiltration in enzyme enhanced carbon capture
Publication: Research - peer-review › Conference article – Annual report year: 2016

Oxygen Dependent Biocatalytic Processes
Publication: Research › Ph.D. thesis – Annual report year: 2017
Pilot absorption experiments with carbonic anhydrase enhanced MDEA
Publication: Research - peer-review › Conference article – Annual report year: 2016

Prediction of properties of new halogenated olefins using two group contribution approaches
Publication: Research - peer-review › Journal article – Annual report year: 2016

Rate-based modelling and validation of a pilot absorber using MDEA enhanced with carbonic anhydrase (CA)
Publication: Research - peer-review › Conference article – Annual report year: 2016

Reaction Equilibrium of the ω-Transamination of (S)-Phenylethylamine: Experiments and ePC-SAFT Modeling
Publication: Research - peer-review › Journal article – Annual report year: 2017

Role of Biocatalysis in Sustainable Chemistry
Publication: Research - peer-review › Journal article – Annual report year: 2017

Shape optimization as a tool to design biocatalytic microreactors
Publication: Research - peer-review › Journal article – Annual report year: 2017

Simple preparation of thiol-ene particles in glycerol and surface functionalization by thiol-ene chemistry (TEC) and surface chain transfer free radical polymerization (SCT-FRP)
Publication: Research - peer-review › Journal article – Annual report year: 2017

Ultrasound-assisted production of biodiesel FAME from rapeseed oil in a novel two-compartment reactor
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Upscaling of enzyme enhanced CO2 capture
Publication: Research › Ph.D. thesis – Annual report year: 2017

A Correlation between the Activity of Candida antarctica Lipase B and Differences in Binding Free Energies of Organic Solvent and Substrate
Publication: Research - peer-review › Journal article – Annual report year: 2016

A microfluidic toolbox for the development of in-situ product removal strategies in biocatalysis
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Application of NAD(P)H oxidase for cofactor regeneration in dehydrogenase catalyzed oxidations
Publication: Research - peer-review › Journal article – Annual report year: 2016
A Rapid Selection Procedure for Simple Commercial Implementation of omega-Transaminase Reactions
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Publication: Research › Ph.D. thesis – Annual report year: 2016

Bioinspired Multifunctional Membrane for Aquatic Micropollutants Removal
Publication: Research - peer-review › Journal article – Annual report year: 2016

Bioprocess Development of (R)-Perillic Acid Production with a Whole-Cell Biocatalyst
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2017

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Publication: Research - peer-review › Poster – Annual report year: 2016

Continuous production of chitooligosaccharides by an immobilized enzyme in a dual-reactor system
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Enzymatic network for production of ether amines from alcohols
Publication: Research - peer-review › Journal article – Annual report year: 2016

Enzymatic pretreatment of low-grade oils for biodiesel production
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Enzyme Characterization in Microreactors by UV-Vis Spectroscopy
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Publication: Communication › Journal article – Annual report year: 2016

Generic Model-Based Tailor-Made Design and Analysis of Biphasic Reaction Systems
Application of Enzyme Coupling Reactions to Shift Thermodynamically Limited Biocatalytic Reactions
Publication: Research › peer-review › Journal article – Annual report year: 2015

Application of microfluidics for the development of intensified aminotransferase (ATA) processes
Publication: Research › Ph.D. thesis – Annual report year: 2015

A Practical and Fast Method To Predict the Thermodynamic Preference of omega-Transaminase-Based Transformations
Meier, R. J., Gundersen Deslauriers, M., Woodley, J. & Schürmann, M. 2015 In : ChemCatChem. 7, 17, p. 2594-2597
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Mansouri, S. S., Sales-Cruz, M., Huusom, J. K., Woodley, J. & Gani, R. 2015
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Seita, C. S., Rehdorf, J. & Woodley, J. 2015
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Economic Considerations for Selecting an Amine Donor in Biocatalytic Transamination
Publication: Research › peer-review › Journal article – Annual report year: 2015

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Lundemo, M. T. & Woodley, J. 2015 In : Applied Microbiology and Biotechnology. 99, 6, p. 2465-2483
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Immobilisation of ω-transaminase for industrial application: Screening and characterisation of commercial ready to use enzyme carriers
Lima Afonso Neto, W., Schürmann, M., Panella, L., Vogel, A. & Woodley, J. 2015 In : Journal of Molecular Catalysis B: Enzymatic. 117, p. 54-61
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Integrated Process Design and Control of Reactive Distillation Processes

Kinetic modeling of multi-component crystallization of industrial-grade oils and fats

Microscale technology and biocatalytic processes: Opportunities and challenges for synthesis

Model-Based Analysis and Efficient Operation of a Glucose Isomerization Reactor Plant

Oxygen transfer rates and requirements in oxidative biocatalysis
Pedersen, A. T., Rehn, G. & Woodley, J. 2015

Process Alternatives for Second Generation Ethanol Production from Sugarcane Bagasse

Process considerations for use of galactose oxidase as an industrial biocatalyst

Process development for the production of 15β-hydroxycycroterone acetate using Bacillus megaterium expressing CYP106A2 as whole-cell biocatalyst

Process requirements of galactose oxidase catalyzed oxidation of alcohols

Real-Time Model Based Process Monitoring of Enzymatic Biodiesel Production
Rules for biocatalyst and reaction engineering to implement effective, NAD(P)H-dependent, whole cell bioreductions
Kratzer, R., Woodley, J. & Nidetzky, B. 2015 In : Biotechnology Advances. 33, 8, p. 1641–1652

Shape and topology optimization of enzymatic microreactors

Study of wettability of calcite surfaces using oil-brine-enzyme systems for enhanced oil recovery applications

Sustainable process synthesis–intensification

Synthesis of 5-hydroxymethylfurfural (HMF) by acid catalyzed dehydration of glucose-fructose mixtures

Synthesis of biorefinery networks using a superstructure optimization based approach
Bertran, M-O., Anaya-Reza, O., Lopez-Arenas, M. T., Woodley, J. & Gani, R. 2015

The coupling of ω-transaminase and Oppenauer oxidation reactions via intra-membrane multicomponent diffusion – A process model for the synthesis of chiral amines

Thermodynamic Calculations for Systems Biocatalysis

Thermodynamic Modeling of Multi-phase Solid–Liquid Equilibria in Industrial-Grade Oils and Fats

Topology optimization for biocatalytic microreactor configurations

Use of operating windows for assessment of continuous plug flow slurry reactor
Early-Stage Bioprocess Analysis (ESBA)
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2014

Engineering of Biocatalysts and Biocatalytic Processes
Publication: Research - peer-review › Journal article – Annual report year: 2014

Enzymatically Assisted CO₂ Removal from Flue-Gas
Publication: Research - peer-review › Conference article – Annual report year: 2014

Enzyme characterisation in microreactors by multivariate data analysis
Ringborg, R. H., Krühne, U. & Woodley, J. 2014
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2014

Fed-Batch Feeding Strategies for Enzymatic Biodiesel Production
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Filamentous Fungi Fermentation
Publication: Research - peer-review › Book chapter – Annual report year: 2014

Identification and use of an alkane transporter plug-in for application in biocatalysis and whole-cell biosensing of alkanes
Publication: Research - peer-review › Journal article – Annual report year: 2014

Identification of Critical Parameters in Liquid Enzyme-Catalyzed Biodiesel Production
Publication: Research - peer-review › Journal article – Annual report year: 2014

Inhibition of Gas Hydrate Nucleation and Growth: Efficacy of an Antifreeze Protein from the Longhorn Beetle Rhagium mordax
Publication: Research - peer-review › Journal article – Annual report year: 2014

Introducing an In Situ Capping Strategy in Systems Biocatalysis To Access 6-Aminohexanoic acid
Publication: Research - peer-review › Journal article – Annual report year: 2014

Introducing an In Situ Capping Strategy in Systems Biocatalysis To Access 6-Aminohexanoic acid
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Kinetic study on the enzymatic esterification of octanoic acid and hexanol by immobilized Candida antarctica lipase B
Lopresto, C. G., Calabro, V., Woodley, J. M. & Tufvesson, P. 2014 In : Journal of Molecular Catalysis B: Enzymatic. 110, p. 64–71
Publication: Research - peer-review › Journal article – Annual report year: 2014

Systematic Process Design and Operation of Intensified Processes
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2014

Thermodynamic Evaluation of the Production of Chiral Amines from Long-Chain Aliphatic Alcohols
Abu, R., Lima Ramos, J. & Woodley, J. 2014
Publication: Research - peer-review › Poster – Annual report year: 2014

μ-structured devices as tools for screening process intensification in biocatalysis
Publication: Research › Ph.D. thesis – Annual report year: 2014

A flexible modular process design for enzymatic biodiesel production
Seita, C. S., Nordblad, M. & Woodley, J. 2013
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

A Framework for Process Synthesis integrated with Sustainability and Process Intensification
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A future perspective on the role of industrial biotechnology for chemicals production
Woodley, J., Breuer, M., Mink, D. & Gani, R. (ed.) 2013 In : Chemical Engineering Research and Design. 91, 10, p. 2029-2036
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A methodology for development of biocatalytic processes
Lima Ramos, J., Woodley, J. & Tufvesson, P. 2013 Technical University of Denmark, Department of Chemical and Biochemical Engineering. 281 p.
Publication: Research › Ph.D. thesis – Annual report year: 2013

A methodology for process design in biocatalysis
Lima Ramos, J. & Woodley, J. 2013
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Applications, benefits and challenges of flow chemistry
Mitic, A., Heintz, S., Ringborg, R. H., Bodla, V. K., Woodley, J. & Gernaey, K. 2013 In : Chimica Oggi. 31, 4, p. 4-8
Publication: Research - peer-review › Journal article – Annual report year: 2013

A rational approach for ω-transaminase-catalyzed process design: Synthesis of p-Br-1-phenylethylamine
T. Gundersen, M., Lloyd, R., Tufvesson, P. & Woodley, J. 2013
Publication: Research - peer-review › Poster – Annual report year: 2013

Biokatalysatorens vej til industrien
Publication: Research › Journal article – Annual report year: 2013

CAPEC-PROCESS Research Report 2013
Gani, R. & Woodley, J. 2013 Technical University of Denmark, Department of Chemical and Biochemical Engineering. 81 p.
Publication: Research - peer-review › Report – Annual report year: 2013

Considerations for a methodology for selection of cascades for co-product removal in ω-transaminase systems
Janes, K., Gernaey, K., Tufvesson, P. & Woodley, J. 2013
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Design of sustainable blended products using an integrated methodology
Yunus, N. A. B., Gernaey, K., Woodley, J. & Gani, R. 2013
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Design of Sustainable Blended Products using an Integrated Methodology
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Effect of critical process parameters on the synthesis of chiral amines
Publication: Research - peer-review › Poster – Annual report year: 2013
Enzymatic process intensification across scales
Heintz, S., Woodley, J., Krühne, U. & Gernaey, K. 2013
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Enzymatic Production of FAME Biodiesel with Soluble Lipases
Publication: Research - peer-review › Poster – Annual report year: 2013

Framework for assessing stability of biocatalytic oxidations
Ramesh, H. & Woodley, J. 2013
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Implementing the next-generation of biocatalytic processes
Woodley, J. 2013
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Kinetic model of biodiesel production using immobilized lipase Candida antarctica lipase B
Publication: Research - peer-review › Journal article – Annual report year: 2013

Life cycle assessment in green chemistry: overview of key parameters and methodological concerns
Publication: Research - peer-review › Journal article – Annual report year: 2013

Lipase-catalysed formation of sugar fatty acid ester surfactants using supercritical carbon dioxide as a reaction medium
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Microreactors and CFD as Tools for Biocatalysis Reactor Design: A case study
Bodla, V. K., Seerup, R., Krühne, U., Woodley, J. M. & Gernaey, K. 2013 In : Chemical Engineering and Technology. 36, 6, p. 1017-1026
Publication: Research - peer-review › Journal article – Annual report year: 2013

Miniaturized experimental toolbox for ω-transaminase technology (BIOINTENSE)
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Miniaturized Experimental Toolbox for ω-Transaminase Technology (BIOINTENSE)
Publication: Research - peer-review › Poster – Annual report year: 2014

Model-Based Blend Design: Application to Lubricant Oils
Yunus, N. A. B., Gernaey, K., Woodley, J. & Gani, R. 2013
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Optimization of Substrate Feeding for Enzymatic Biodiesel Production
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Optimization of Substrate Feeding for Enzymatic Biodiesel Production
Publication: Research - peer-review › Sound/Visual production (digital) – Annual report year: 2013
Optimization of Substrate Feeding for Enzymatic Biodiesel Production
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2013

Phenomena based Methodology for Process Synthesis incorporating Process Intensification
Publication: Research - peer-review › Journal article – Annual report year: 2013

Process Considerations for the Asymmetric Synthesis of Chiral Amines using ω-Transaminase
Lima Afonso Neto, W., Woodley, J. & Tufvesson, P. 2013 Technical University of Denmark, Department of Chemical and Biochemical Engineering. 242 p.
Publication: Research › Ph.D. thesis – Annual report year: 2013

Process intensification for bioprocesses
Woodley, J. 2013
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Process strategies for implementing ω-transaminase catalysed reactions
Lima Afonso Neto, W., Tufvesson, P. & Woodley, J. 2013
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Process strategies for implementing ω-transaminase catalysed reactions
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

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Process Technology for Immobilized Lipase-catalyzed
Xu, Y., Woodley, J. & Nordblad, M. 2013 Technical University of Denmark, Department of Chemical and Biochemical Engineering. 229 p.
Publication: Research › Ph.D. thesis – Annual report year: 2012

Protein engineering of enzymes for process applications
Woodley, J. M. 2013 In : Current Opinion in Chemical Biology. 17, 2, p. 310-316
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Risager, A., Jensen, J. S., Ståhlberg, T. J. B. & Woodley, J. 2013
Publication: Research › Patent – Annual report year: 2013

Reaction Engineering of Biocatalytic Enantioselective Reduction: A Case Study for Aliphatic Ketones
Publication: Research - peer-review › Journal article – Annual report year: 2013

Reactor selection for multi-step enzymatic reactions
Xue, R. & Woodley, J. 2013
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013
Scale-up and intensification of (S)-1-(2-chlorophenyl)ethanol bioproduction: Economic evaluation of whole cell-catalyzed reduction of o-Chloroacetophenone
Eixelsberger, T., Woodley, J., Nidetzky, B. & Kratzer, R. 2013 In : Biotechnology and Bioengineering. 110, 8, p. 2311-2315
Publication: Research - peer-review › Journal article – Annual report year: 2013

Simulation study of microbioreactor configurations for production of optically pure chiral amines
Pereira Rosinha, I., Gernaey, K., Woodley, J. & Krühne, U. 2013
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Sustainable Intensified Process Retrofit for the Production of MDI
Publication: Research - peer-review › Poster – Annual report year: 2013

Systematic design of tailor-made blended products
Yunus, N. A. B., Gernaey, K., Woodley, J. & Gani, R. 2013
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Systematic Design of Tailor-Made Blended Products
Yunus, N. A., Gernaey, K., Woodley, J. & Gani, R. 2013
Publication: Research - peer-review › Poster – Annual report year: 2013

Systematic Design of Tailor-Made Blended Products
Yunus, N. A. B., Gernaey, K., Woodley, J. & Gani, R. 2013
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Systematic substrate adoption methodology (SAM) for future flexible, generic pharmaceutical production processes
Publication: Research - peer-review › Journal article – Annual report year: 2013

Towards an integrated μ-factory: Integrated micro membrane packed bed reactor
Bodla, V. K., Woodley, J., Krühne, U. & Gernaey, K. 2013
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Towards an integrated μ-factory: Design and development of a microfluidic system to include fermentation and biocatalysis
Bodla, V. K., Woodley, J., Krühne, U. & Gernaey, K. 2013
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Towards an integrated μ-factory: Integrated micro membrane packed bed reactor
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Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Towards a standardized way of reporting physicochemical data and process metrics for transaminase reactions
Tufvesson, P. & Woodley, J. 2013
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Towards effective biocatalytic process development using microreactor technology
Woodley, J., Heintz, S., Ringborg, R. H., Pereira Rosinha, I., Tufvesson, P., Krühne, U. & Gernaey, K. 2013
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Towards process development for whole cell P450 hydroxylation identifying the bottlenecks using CYP153 as model system
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Use of ‘windows of operation’ to guide process design of ω-transaminase catalysed reactions
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Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

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Publication: Research › Conference abstract for conference – Annual report year: 2012

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Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

A methodology for cascade selection for co-product removal in the ω-transaminase system
Janes, K., Gernaey, K., Tufvesson, P. & Woodley, J. 2012
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An Integrated Methodology for Design of Tailor-Made Blended Products
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012
Development of continuous pharmaceutical production processes supported by process systems engineering methods and tools
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Publication: Research › Sound/Visual production (digital) – Annual report year: 2012

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Andersson, M. T., Törnvall, U., Tufvesson, P. & Woodley, J. 2012
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Immobilization of Escherichia coli containing ω-transaminase activity in LentiKats®
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Improving productivity and enzyme stability through process design: Lipase catalyzed synthesis of epoxides and esters.
Publication: Research › Poster – Annual report year: 2012

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Al-Haque, N., Woodley, J., Gani, R. & Tufvesson, P. 2012 Technical University of Denmark, Department of Chemical Engineering. 251 p.
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Ionic liquids in integrated catalytic technologies to produce furanic chemical
Risager, A., Stähilberg, T. J. B., Fu, W., Woodley, J. & Fristrup, P. 2012
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Kinetics of acetic acid synthesis from ethanol over a Cu/SiO2 catalyst
Publication: Research › Poster – Annual report year: 2012

Managing biocatalytic productivity
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Publication: Research › Poster – Annual report year: 2012

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Metrics for environmental evaluation of biocatalytic processes
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Andrade Santacoloma, P. D. G., Woodley, J., Gernaey, K. & Sin, G. 2012 Technical University of Denmark, Department of Chemical Engineering. 197 p.
Publication: Research › Ph.D. thesis – Annual report year: 2012

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Overcoming kinetic limitations in biocatalysis
Publication: Research › Poster – Annual report year: 2012

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Process Design and Evaluation for Chemicals Based on Renewable Resources
Fu, W., Woodley, J., Gani, R. & Riisager, A. 2012 Technical University of Denmark, Department of Chemical Engineering. 327 p.
Publication: Research › Ph.D. thesis – Annual report year: 2012

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Rapid, rational selection of cofactor recycling options
Thomas, K. C., Charrain, M. & Woodley, J. 1999
Publication: Research › Poster – Annual report year: 1999

Use of recombinant whole cells as biocatalysts in organic syntheses for stereo specific Baeyer Villiger oxidation of cyclic ketones
Doig, S. C. & Woodley, J. 1999
Publication: Research › Poster – Annual report year: 1999

Biocatalytic Baeyer-Villiger characterisation leading to reactor design
Publication: Research - peer-review › Article in proceedings – Annual report year: 1998

Bioprocess applications of molecularly imprinted polymers
Publication: Research › Poster – Annual report year: 1998

Choice of linked NADPH regeneration enzyme for cyclohexanone monooxygenase catalysed lactone synthesis
Hogan, M. C. & Woodley, J. 1998
Publication: Research › Poster – Annual report year: 1998

Design of feed-back control system
Publication: Research › Sound/Visual production (digital) – Annual report year: 1998

Escherichia coli transketolase-catalysed carbon-carbon bond formation: biotransformation characterization for reactor evaluation and selection
Publication: Research - peer-review › Journal article – Annual report year: 1998

In-situ product removal for biocatalytic processes
Woodley, J. & Lye, G. J. 1998
Publication: Research › Sound/Visual production (digital) – Annual report year: 1998

Rational selection of cofactor regeneration processes
Publication: Research › Poster – Annual report year: 1998

Application of FSQ spectrophotometric multicomponent analysis to bioconversion monitoring
Publication: Research - peer-review › Journal article – Annual report year: 1997

Boron based separations for in situ recovery of L-erythulose from transketolase-catalyzed condensation
Publication: Research - peer-review › Journal article – Annual report year: 1997

Increasing the productivity of bioconversion processes
Publication: Research - peer-review › Journal article – Annual report year: 1997
Development of in-situ recovery techniques for product removal from transketolase catalysed reactions
Publication: Research › Sound/Visual production (digital) – Annual report year: 1996

Enzyme-catalysed carbon-carbon bond formation: large-scale production of Escherichia coli transketolase
Publication: Research - peer-review › Journal article – Annual report year: 1996

In Situ Product Removal from E. coli Transketolase-catalyzed Biotransformations
Publication: Research - peer-review › Conference article – Annual report year: 1996

Operating windows for scale-up of biotransformations: chemoenzymatic synthesis of N-acetyl-D-neuraminic acid
Blayer, S., Woodley, J., Dawson, M. J. & Lilly, M. D. 1996
Publication: Research › Poster – Annual report year: 1996

Select and design
Woodley, J. & Lilly, M. D. 1996 In : The Chemical Engineer. 611, p. 28-30
Publication: Research - peer-review › Journal article – Annual report year: 1996

The use of windows of operation as a bioprocess design tool
Publication: Research - peer-review › Journal article – Annual report year: 1996

Transketolase from Escherichia coli: a practical procedure for using the biocatalyst for asymmetric carbon-carbon bond synthesis
Publication: Research - peer-review › Journal article – Annual report year: 1996

Determination of reactor operation for the microbial hydroxylation of toluene in a two-liquid phase process
Publication: Research - peer-review › Journal article – Annual report year: 1995

Application of in-situ product removal techniques to biotransformation
Woodley, J. 1995
Publication: Research › Sound/Visual production (digital) – Annual report year: 1995

Biotransformation process design for aromatic monohydroxylation reactions by genetically engineered yeast
Shimizu, M., Woodley, J. & Lilly, M. D. 1995
Publication: Research › Poster – Annual report year: 1995

Design of biotransformation processes: use of a knowledge-based system
Publication: Research - peer-review › Journal article – Annual report year: 1995

Process development for scale-up of biotransformations: chemoenzymatic synthesis of N-acetyleneuraminic acid
Blayer, S., Woodley, J., Dawson, M. J. & Lilly, M. D. 1995
Publication: Research › Poster – Annual report year: 1995

Process synthesis for multi-step microbial conversions
Publication: Research - peer-review › Journal article – Annual report year: 1995
Some examples of a structured approach to design and operation of biotransformation processes
Lilly, M. D. & Woodley, J. 1995
Publication: Research › Sound/Visual production (digital) – Annual report year: 1995

Tools for biotransformation process design
Woodley, J. 1995
Publication: Research › Poster – Annual report year: 1995

Use of membranes to separate emulsions for product recovery from two liquid phase biotransformations
Woodley, J., Laurence, M. B. & Lilly, M. D. 1995
Publication: Research › Sound/Visual production (digital) – Annual report year: 1995

Biotransformation reactor selection and operation
Publication: Research - peer-review › Book chapter – Annual report year: 1994

Determination of reactor operation for the microbial hydroxylation of toluene in a two-liquid phase process
Publication: Research › Sound/Visual production (digital) – Annual report year: 1994

Development of a process for transketolase catalysed carbon-carbon bond formation
Publication: Research - peer-review › Article in proceedings – Annual report year: 1994

Development of transketolase as a catalyst for carbon-carbon bond formation
Publication: Research - peer-review › Journal article – Annual report year: 1994

Enzymic dehalogenation of haloalkanes and haloalcohols
Publication: Research - peer-review › Article in proceedings – Annual report year: 1994

Kinetic characterisation of aqueous-organic biphasic enzymatic catalysis for the design of multiphasic bioreactors
Publication: Research - peer-review › Journal article – Annual report year: 1994

Polyphenylenes from biosynthetic cis-dihydroxycyclohexadiene
Publication: Research - peer-review › Book chapter – Annual report year: 1994

Process implications of solvent interaction with microbial catalysts
Publication: Research - peer-review › Article in proceedings – Annual report year: 1994

The production of Pseudomonas putida for the hydroxylation of toluene to its cis-glycol
Publication: Research - peer-review › Journal article – Annual report year: 1994

Transketolase production for use as a catalyst for carbon-carbon bond formation
Publication: Research - peer-review › Article in proceedings – Annual report year: 1994
A comparison of stirred tank and membrane bioreactors for aqueous-organic biphasic enzymatic reactions
Publication: Research - peer-review › Article in proceedings – Annual report year: 1993

Enzyme catalysed carbon-carbon bond formation: use of transketolase from Escherichia coli
Publication: Research - peer-review › Journal article – Annual report year: 1993

In situ product removal as a tool for bioprocessing
Freeman, A., Woodley, J. & Lilly, M. D. 1993 In : BIOTECHNOLOGY. 11, 9, p. 1007-1012
Publication: Research - peer-review › Journal article – Annual report year: 1993

The characterisation of fluorobenzene oxidation to fluorocatechol by Pseudomonas putida leading to bioreactor design
Publication: Research - peer-review › Article in proceedings – Annual report year: 1993

The scale-up of two-liquid phase microbially catalysed aromatic oxidations
Publication: Research - peer-review › Article in proceedings – Annual report year: 1993

Immobilised biocatalysts
Publication: Research - peer-review › Book chapter – Annual report year: 1992

Process aspects for the operation of two-liquid phase biotransformations: a comparison of a stirred tank reactor with a membrane bioreactor
Publication: Research - peer-review › Article in proceedings – Annual report year: 1992

Process engineering of two-liquid phase biocatalysis
Publication: Research - peer-review › Journal article – Annual report year: 1992

Production of naphthalene-cis-glycol by Pseudomonas putida in the presence of organic solvents
Publication: Research - peer-review › Journal article – Annual report year: 1992

Reactor engineering for multiphasic biotransformations
Publication: Research - peer-review › Article in proceedings – Annual report year: 1992

Evaluation of process options for the biotransformation of toluene to toluene cis-glycol by Pseudomonas putida
Publication: Research - Sound/Visual production (digital) – Annual report year: 1991

Lewis cell studies to determine reactor design data for two-liquid phase bacterial and enzymatic reactions
Woodley, J., Brazier, A. J. & Lilly, M. D. 1991 In : Biotechnology and Bioengineering (Print). 37, 2, p. 133-140
Publication: Research - peer-review › Journal article – Annual report year: 1991

Stirred tank two-liquid phase biocatalytic reactor studies: kinetics, evaluation and modelling of substrate mass transfer
Woodley, J., Cunnah, P. J. & Lilly, M. D. 1991 In : Biocatalysis. 5, p. 1-12
The impact of biocatalyst selection on the design of aqueous-organic biphasic biocatalytic processes

A comparison of pig liver esterase and Bacillus subtilis as catalysts for the hydrolysis of menthyl acetate in stirred two-liquid phase reactors

Extractive biocatalysis: the use of two-liquid phase biocatalytic reactors to assist product recovery
Woodley, J. & Lilly, M. D. 1990 In : Chemical Engineering Science. 45, 8, p. 2391-2396

Stirred tank power input data for the scale-up of two-liquid phase biotransformations

Two-liquid phase biocatalysis: choice of phase ratio

Two-liquid phase biocatalysis: reactor design

Development of a KBS for biotransformation process design

Biological conversions involving water-insoluble organic compounds

Denaturation and inhibition studies in a two-liquid phase biocatalytic reaction: the hydrolysis of menthyl acetate by pig liver esterase

Biocatalytic reactions involving water-insoluble organic compounds

Projects:
Continuous Biocatalytic Alkene Hydrogenation
01/11/2017 → 31/10/2020
Project: PhD

Solvent Molecular Design Process Synthesis and Energy Requirements in Chemical and Biochemical Processes
Chen, Y., Woodley, J., Gani, R. & Kontogeorgis, G.
01/11/2017 → 31/10/2020
Project: PhD

Solvent Molecular Design Process Synthesis and Energy Requirements in Chemical and Biochemical Processes
Chen, Y., Woodley, J., Gani, R. & Kontogeorgis, G.
01/11/2017 → 31/10/2020
Project: PhD

Membrane-based in-situ product removal
Jaksland, A., Woodley, J., Pinelo, M. & Wan, Y.
01/09/2017 → 31/08/2020
Project: PhD

Chemical & Biochemical Sustainable Process Synthesis - Intensification
Garg, N., Woodley, J., Gani, R. & Kontogeorgis, G.
15/10/2016 → 14/10/2019
Project: PhD

Systematic computer aided methods and tools for lipids process technology
Ana Perederic, O., Woodley, J., Gani, R., Kontogeorgis, G. & Sarup, B.
15/09/2015 → 14/09/2018
Project: PhD

Development of Large-Scale Processes Using Alcohol Oxidases
Dias Gomes, M., Woodley, J. & Nordblad, M.
01/09/2015 → 31/08/2018
Project: PhD

Development of large-scale processes for baeyer-Villiger Biocatalysis
Meissner, M. P., Woodley, J. & Nordblad, M.
15/07/2015 → 14/07/2018
Project: PhD

Sustainable process design with process intensification
Frauzem, R., Gani, R., Woodley, J., Kontogeorgis, G., Bode, A. & Zondervan, E.
01/10/2014 → 14/12/2017
Project: PhD

Computer-aided Mixture and Blend Design
Cignitti, S., Woodley, J., Abildskov, J., Gernaey, K. V., Kontogeorgis, G., Camarda, K. V. & Kate, A. J. B. T.
15/09/2014 → 13/10/2017
Project: PhD

Modelling, Synthesis and Analysis of Biorefinery Networks
01/09/2014 → 30/11/2017
Project: PhD
Modification of polymer surfaces to enhance enzyme activity and stability
Hoffmann, C., Daugaard, A. E., Pinelo, M., Woodley, J., Szabo, P., Gardossi, L. & Malkoch, M.
01/08/2014 → 31/07/2017
Project: PhD

Biooxidation reactor and process design
01/04/2014 → 13/11/2017
Project: PhD

enzyme-enhanced CO2 Absorption - rate-based modeling and pilot-scale validation
01/03/2014 → 25/08/2017
Project: PhD

Improved LCA Methodology and software tool for biorenewable products and processes
15/12/2013 → 25/01/2017
Project: PhD

Environmental and economical evaluation tools for novel bioprocesses
01/12/2013 → 26/04/2017
Project: PhD

Experimental Implementation and model-based optimization for multi-enzyme processes
Abu, R., Woodley, J., Gernaey, K. V., Nordblad, M., Blazevic, Z. F. & Riva, S.
01/10/2013 → 15/03/2017
Project: PhD

Modeling and Synthesis of Pharmaceutical processes: Moving from Batch to Continuous Manufacturing
01/10/2013 → 16/11/2016
Project: PhD

Experimental evaluation of carbonic anhydrase as a biocatalyst for implementation in CO2 removal from flue gas
Deslauriers, M. G., Woodley, J., von Solms, N., Pinelo, M., Liese, A. & Wentzel, A.
15/09/2013 → 05/10/2017
Project: PhD

Design, control and analysis of intensified biochemical processes
01/09/2013 → 16/11/2016
Project: PhD

Generic model-based tailor-made design and analysis of biphasic reacting systems
Anantpinijwatna, A., Gani, R., Woodley, J., Huusom, J. K., Grosjean, C. & Manenti, F.
01/08/2013 → 24/10/2016
Project: PhD

Property Modelling and Process Design involving complex chemical systems
01/06/2013 → 18/08/2016
Project: PhD
Mixing and oxygen transfer processes in bioreactors
Nørregaard, A., Gernaey, K. V., van den Berg, F. W., Madsen, B., Stocks, S. M. & Woodley, J.
15/01/2013 → 30/06/2016
Project: PhD

Topology optimization in biocatalytic reactions using miniaturized reactors
01/11/2012 → 20/04/2016
Project: PhD

Mastering bioprocess Integration and Intensification across scales
01/10/2012 → 02/12/2015
Project: PhD

Process intensification in biocatalytic reactions
01/09/2012 → 22/02/2016
Project: PhD

Bioprocess engineering for the application of P450s
01/02/2012 → 02/12/2015
Project: PhD

Enhanced Oil Recovery with Application of Enzymes
Khusainova, A., Shapiro, A., Woodley, J., Yan, W., Ivar Andersen, S. & Skauge, A.
01/12/2011 → 26/05/2016
Project: PhD

Microalgae with increased synthesis or diminished breakdown of triacylglycerol for efficient biodiesel production
Favrholdt, C. E., Brandt, A. B., Gernaey, K. V., Gjermansen, C. & Woodley, J.
01/12/2011 → 30/11/2013
Project: PhD

Process Technology for Oxidase-based Biocatalysis
Ramesh, H., Woodley, J., Krühne, U., Huusom, J. K., Archer, I. & Micheletti, M.
01/10/2011 → 26/11/2014
Project: PhD

Control of Enzymatic Biodiesel Production
01/09/2011 → 26/11/2014
Project: PhD

Phenomena based process intensification
01/09/2011 → 04/02/2015
Project: PhD

Inhibition of gas hydrate formation by ice-structuring proteins
Malmos Perfeldt, C., von Solms, N., Woodley, J., Thomsen, K., Li, X. & Svartås, T. M.
01/08/2011 → 10/11/2015
Project: PhD
Integrated microfactories for enzyme production
Bodla, V. K., Gernaey, K. V., Krühne, U., Woodley, J., Nordblad, M., Baganz, F. & Bouwes, D.
01/03/2011 → 11/03/2015
Project: PhD

Reactor and Process Design for Multi-enzymatic Synthesis
Xue, R., Woodley, J., Meyer, A. S. & Mikkelsen, J. D.
01/12/2010 → 01/11/2016
Project: PhD

Scale-up of biocatalytic cascade reactions for the synthesis of chiral amines
Janes, K., Gernaey, K. V., Tufvesson, P., Woodley, J., Krühne, U., Pedersen, L. H. & Vasic-Racki, D.
01/12/2010 → 24/09/2014
Project: PhD

Tailor-made design of chemical products: Bio-fuels and other blended products
Yunus, N. A. B., Gani, R., Gernaey, K. V., Woodley, J., Sin, G., Harper, P. M. & Kate, A. J. B. T.
15/07/2010 → 07/05/2014
Project: PhD

Process Considerations for Asymmetric Synthesis of Chiral Amines using Omega-Transaminase
Lima Afonso Neto, W., Woodley, J., Tufvesson, P., Krühne, U., Adlercreutz, P. & Howard, R. M.
01/06/2010 → 11/12/2013
Project: PhD

Guiding biocatalytic process improvements using engineering evaluation tools
01/03/2010 → 24/06/2013
Project: PhD

Modelling controlled release of substrate and removal of products in biocatalysis
01/11/2009 → 21/05/2013
Project: PhD

Population balance models and computational fluid dynamics: a model framework to describe heterogeneity in fermentors
01/11/2009 → 19/03/2013
Project: PhD

Evaluation of new process technology for lipase-catalyzed biodiesel production
Xu, Y., Woodley, J., Nordblad, M., Hobley, T. J., Basheer, S. & Hua, L.
01/03/2009 → 27/06/2012
Project: PhD

Green Chemistry based innovative process-operation synthesis and design
01/12/2008 → 18/04/2012
Project: PhD

Multi-enzyme process modelling
Andrade Santacoloma, P. D. G., Woodley, J., Gernaey, K. V., Sin, G., Jørgensen, S. B., Pedersen, S. & Vasic-Racki, D.
01/11/2008 → 27/06/2012
Project: PhD
Optimization of Tailor-made Chemicals from Renewable and non-renewable sources
Swangkotchakorn, C., Gani, R., Grunwaldt, J. & Woodley, J.
01/09/2008 → 01/02/2010
Project: PhD

Systematic Modelling, Simulation and Design of Intensified Bio-Chemical Processes
Roman Martinez, A., Gani, R., Woodley, J., Gernaey, K. V., Sales Cruz, A. M. & Wiebe, L.
01/08/2008 → 29/11/2011
Project: PhD

Catalytic Routes to Renewable Polymer Building Blocks
01/06/2008 → 14/12/2011
Project: PhD

Valu-added Chemicals from Biomass by Heterogeneous Catalysis
Voss, B., Woodley, J., Grunwaldt, J., Schjødt, N. C., Jensen, A. D., Jakobsson, N. & Patience, G. S.
01/05/2008 → 21/09/2011
Project: PhD

Bio-Petrochemicals
Gorbanev, Y., Riisager, A., Woodley, J., Fristrup, P., Grunwaldt, J. & Herbst, K.
01/04/2008 → 08/02/2012
Project: PhD

Membrane Assisted Enzyme Fractionation
15/03/2008 → 08/02/2012
Project: PhD

reactor and process design for chem.-enzymatic synthesis of FDA
Fu, W., Woodley, J., Riisager, A., Gernaey, K. V., Lye, G. J. & Wiebe, L.
01/03/2008 → 18/04/2012
Project: PhD

Process-Product Synthesis, Design and Analysis through the Group-Contributions Approach
01/04/2007 → 01/09/2010
Project: PhD

Enzymatic Opening of Diferulate Cross-Links in Plant Cell Walls
15/03/2007 → 15/06/2011
Project: PhD

Mechanisms of Enzymatic Inactivation in the Animal Feed Pelleting Process
Puder, K., Jensen, A. D., Jørgensen, C. I., Simonsen, O., Woodley, J., Hansen, T. T. & Lee, G.
01/01/2007 → 17/06/2010
Project: PhD

Model-Based Computer Aided Framework for Design of Process Monitoring and Analysis Systems
Project: PhD
Continuous Culture Microbioreactors
01/05/2006 → 29/09/2010
Project: PhD

Micro-sensor based on Click Chemistry
Daugaard, A. E., Hvilsted, S., Woodley, J., Binder, W. H. & Hult, A.
01/03/2006 → 27/09/2009
Project: PhD

Controlled Release of Environmentally Friendly Antifouling Agents from Marine Coatings
Olsen, S. M., Kiil, S., Dam-Johansen, K., Pedersen, L. T., Woodley, J., Swain, G. W. & Erik Weinell, C.
01/11/2005 → 01/04/2009
Project: PhD

Module Design and Performance in Microfiltration, Ultrafiltration and Membrane Contactors
Beier, S., Jonsson, G. E., Woodley, J., Aimar, P. & Kristensen, S.
01/09/2005 → 19/12/2008
Project: PhD

Scaleable Assembly of Protein Machines using Magnetic Adsorbents
Ottow, K. E., Hobley, T. J., Woodley, J., Regenberg, B. & Thomas, O. R. T.
Project: PhD

Influence of Formulation in Formation of Enzyme Granules by Spray Drying
01/09/2004 → 28/01/2007
Project: PhD