Research outputs:

**A general overview of support materials for enzyme immobilization: Characteristics, properties, practical utility**
Research output: Research - peer-review › Review – Annual report year: 2018

**Alcohol dehydrogenase on inorganic powders: Zeta potential and particle agglomeration as main factors determining activity during immobilization**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Developments in support materials for immobilization of oxidoreductases: A comprehensive review**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Directing filtration to narrow molecular weight distribution of oligodextran in an enzymatic membrane reactor**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Efficient ionic liquid-based platform for multi-enzymatic conversion of carbon dioxide to methanol**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Enzyme Immobilization on Inorganic Surfaces for Membrane Reactor Applications: Mass Transfer Challenges, Enzyme Leakage and Reuse of Materials**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Immobilization of alcohol dehydrogenase on ceramic silicon carbide membranes for enzymatic CH3 OH production**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Ionic Liquids as Bifunctional Cosolvents Enhanced CO2 Conversion Catalysed by NADH-Dependent Formate Dehydrogenase**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Lignin from hydrothermally pretreated grass biomass retards enzymatic cellulose degradation by acting as a physical barrier rather than by inducing nonproductive adsorption of enzymes**
Research output: Research - peer-review › Journal article – Annual report year: 2018
Membrane separation of enzyme-converted biomass compounds: Recovery of xylose and production of gluconic acid as a value-added product
Research output: Research - peer-review › Journal article – Annual report year: 2018

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)
Research output: Research - peer-review › Journal article – Annual report year: 2018

Surface modification of polysulfone membranes applied for a membrane reactor with immobilized alcohol dehydrogenase
Research output: Research - peer-review › Journal article – Annual report year: 2018

Sustainable downstream routes for bio-manufacturing processes
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2018

Systematic Decision-Support Methodology for Resource Recovery
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

Upgrading of biomass monosaccharides by immobilized glucose dehydrogenase and xylose dehydrogenase
Research output: Research - peer-review › Journal article – Annual report year: 2018

Advanced fabrication of porous ceramic multilayers for membrane applications
Research output: Research › Conference abstract in proceedings – Annual report year: 2017

Development of a thiol-ene based screening platform for enzyme immobilization demonstrated using horseradish peroxidase
Research output: Research - peer-review › Journal article – Annual report year: 2017

Enzymatic conversion of CO2 to CH3OH via reverse dehydrogenase cascade biocatalysis: Quantitative comparison of efficiencies of immobilized enzyme systems
Research output: Research - peer-review › Review – Annual report year: 2017

Enzyme recycling in lignocellulosic biorefineries
Jørgensen, H. & Pinelo, M. 2017 In : Biofuels, Bioproducts and Biorefining. 11, p. 150-167
Research output: Research - peer-review › Review – Annual report year: 2017

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

High-performance removal of acids and furans from wheat straw pretreatment liquid by diananofiltration
Directing filtration to optimize enzyme immobilization in reactive membranes
Research output: Research - peer-review › Journal article – Annual report year: 2014

Enzymatic production and purification of prebiotic oligosaccharides by chromatography and membrane systems
Michalak, M., Mikkelsen, J. D., Jonsson, G. E. & Pinelo, M. 2014 Technical University of Denmark, Department of Chemical and Biochemical Engineering. 125 p.
Research output: Research › Ph.D. thesis – Annual report year: 2014

Filtration behavior of casein glycomacropeptide (CGMP) in an enzymatic membrane reactor: fouling control by membrane selection and threshold flux operation
Research output: Research - peer-review › Journal article – Annual report year: 2014

Functionalization of a Membrane Sublayer Using Reverse Filtration of Enzymes and Dopamine Coating
Research output: Research - peer-review › Journal article – Annual report year: 2014

Predicting optimal back-shock times in ultrafiltration hollow fibre modules through path-lines
Research output: Research - peer-review › Journal article – Annual report year: 2014

Reactive membrane technology: Two case studies
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Mechanisms controlling retention during ultrafiltration of charged saccharides: Molecular conformation and electrostatic forces
Research output: Research - peer-review › Journal article – Annual report year: 2013

Production of lipids and docosahexaenoic acid (DHA) by a native Thraustochytrium strain
Research output: Research - peer-review › Journal article – Annual report year: 2013

Controlling the rejection of protein during membrane filtration by adding selected polyelectrolytes
Research output: Research - peer-review › Journal article – Annual report year: 2012

In vitro activity on human gut bacteria of murta leaf extracts (Ugni molinae Turcz.), a native plant from southern chile.
Research output: Research - peer-review › Journal article – Annual report year: 2012

Statistical modelling of the interplay between solute shape and rejection in porous membranes
Research output: Research - peer-review › Journal article – Annual report year: 2012
A continuous membrane microbioreactor system for development of integrated pectin modification and separation processes
Research output: Research - peer-review › Journal article – Annual report year: 2011

A Laboratory Exercise To Understand the Importance of Enzyme Technology in the Fruit-Processing Industry: Viscosity Decrease and Phenols Release from Apple Mash
Research output: Research - peer-review › Journal article – Annual report year: 2011

Research output: Research - peer-review › Journal article – Annual report year: 2011

Enzymatisk udvinding af RG-II fra sukkerroepektin i membranreaktor
Research output: Communication › Journal article – Annual report year: 2011

Recovery of volatile fruit juice aroma compounds by membrane technology: Sweeping gas versus vacuum membrane distillation
Research output: Research - peer-review › Journal article – Annual report year: 2012

Juice clarification by protease and pectinase treatments indicates new roles of pectin and protein in cherry juice turbidity
Research output: Research - peer-review › Journal article – Annual report year: 2010

Membrane microbioreactor prototype for enzyme-catalyzed degradation of pectin
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2010

Membrane technology for purification of enzymatically produced oligosaccharides: Molecular and operational features affecting performance
Research output: Research - peer-review › Journal article – Annual report year: 2009

Plant location and extraction procedure strongly alter the antimicrobial activity of murta extracts
Research output: Research - peer-review › Journal article – Annual report year: 2009

Enzyme-assisted extraction of antioxidants: Release of phenols from vegetal matrixes
Research output: Research - peer-review › Journal article – Annual report year: 2008

Personlige netværk giver succes for globaliseringen
Research output: Communication › Journal article – Annual report year: 2008

Selective release of phenols from apple skin: Mass transfer kinetics during solvent and enzyme extraction
Supercritical Fluid and Solid-Liquid Extraction of Bioactive Substances from Grape Pomace: a Comparative Study

Effect of Cellulases, Solvent Type and Particle Size Distribution on the Extraction of Chlorogenic Acid and Other Phenols from Spent Coffee Grounds

Ethanolic Extraction of Rosa rubiginosa Soluble Substances: Oil Solubility Equilibrium and Kinetic Studies

Processing of Rosa rubiginosa: Extraction of oil and antioxidant substances
Franco, D., Pinelo, M., Sineiro, J. & Núñez, M. J. 2007 In : Bioresource Technology. 98, 18, p. 3506-3512

Applicability of NIR spectroscopy to determine oil and other physicochemical parameters in Rosa mosqueta and Chilean hazelnut
Franco, D., Núñez, M. J., Pinelo-Jiménez, M. & Sineiro, J. 2006 In : European Food Research and Technology. 222, 3-4, p. 443-450

A Simple Method to Separate Red Wine Nonpolymeric Phenols and Tannins by Solid-Phase Extraction
Pinelo-Jiménez, M., Laurie, F. & Waterhouse, A. L. 2006 In : Journal of Agricultural and Food Chemistry. 54, 8, p. 2839-2844

Effect of bubbling nitrogen and pulsed flow on the antiradical activity of grape residues
Pinelo-Jiménez, M., Rubilar, M., Sineiro, J. & Núñez, M. J. 2006 In : Journal of Food Engineering. 73, 3, p. 269-275

Effect of enzymatic clarification and rat intestinal extracts incubation on phenolic composition and antioxidant activity of black currant juice

Influence of extraction conditions on phenolic yields from pine bark: assessment of procyanidins polymerization degree by thiolysis

Mass Transfer during Continuous Solid-Liquid Extraction: Obtaining Antioxidants from Grape Byproducts
Pinelo-Jiménez, M., Sineiro, J. & Núñez, M. J. 2006 In : Jornal of Food Engineering. 77, 1, p. 57-63

Murta Leaves (Ugni molinae Turcz) as a Source of Antioxidant Polyphenols
Protease assisted clarification of black currant juice
Research output: Research - peer-review › Journal article – Annual report year: 2006

Upgrading of grape skins: Significance of plant cell-wall structural components and extraction techniques for phenol release
Research output: Research - peer-review › Journal article – Annual report year: 2006

Projects:

Membrane reactors for industrial applications
Su, Z., Pinelo, M., Kaiser, A., Luo, J. & Zhang, W. (.
01/12/2018 → 30/11/2021
Project: PhD

Developing Novel Systematic Strategies for Downstream Bioprocess Design
Mancini, E., Pinelo, M., Gernaey, K. V. & Mansouri, S. S.
Samfinansieret - Andet
01/06/2018 → 31/05/2021
Project: PhD

Modification of ultrafiltration membranes to create high performance filtration/reaction matrixes
Ji, M., Pinelo, M., Daugaard, A. E., Luo, J. & Woodley, J.
Stipendie fra udlandet
01/02/2018 → 31/01/2021
Project: PhD

Tubular membrane reactions for immobilization of enzymes
Zverina, L., Daugaard, A. E., Pinelo, M. & Woodley, J.
Forskningsrådsfinansiering
01/03/2018 → 28/02/2021
Project: PhD

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

High performance immobilization of enzymes in inorganic membranes
Sigurdardóttir, S. B., Pinelo, M., Della Negra, M. & Kaiser, A.
Forskningsrådsfinansiering
01/06/2017 → 31/05/2020
Project: PhD

New Concepts for Efficient Immobilization of Enzymes in Inorganic Membrane Reactors
Lehmann, J., Kaiser, A., Pinelo, M., Pinelo, M. & Zhang, W. (.
Grundforskningsfonden
01/06/2017 → 31/05/2020
Project: PhD

CFD Modelling of dynamic microfiltration for application in biotechnology processes
Marke, H. S., Krühne, U., Hansen, E. & Pinelo, M.
Industrial PhD
01/02/2017 → 31/01/2020
Project: PhD

Use of Ionic Liquids and Support Materials for High Performance Enzymatic Conversion of CO2 into Formic Acid and Formaldehyde
Zhang, Z., Pinelo, M., Zhang, S. & von Solms, N.
Stipendie fra udlændet
01/12/2015 → 28/02/2019
Project: PhD

Development of Large-Scale Processes Using Alcohol Oxidases
Dias Gomes, M., Woodley, J., Krühne, U., Pinelo, M., Bommarius, A. S. & Grosser, S. T.
Anden EU-finansiering
01/09/2015 → 14/01/2019
Project: PhD

Application of forward osmosis for water recovery and effluent up-concentration: the case of fermentative butanol production from crude glycerol
Kalafatakis, S., Gavala, H. N., Skiadas, I. V., Pinelo, M., Christensen, M. L., Venus, J. & Venus, J.
Samfinansieret - Andet
01/06/2015 → 30/09/2017
Project: PhD

Aqueous Ammonia Soaking as a pretreatment of lignocellulosic biomasses for improving manurebafor enhancing biogas yield from lignocellulosic biomass sed anaerobiv digestion
Lymperatou, A., Skiadas, I. V., Gavala, H. N., Pinelo, M., Carrere, H., Holm-Nielsen, J. B., Carrere, H. & Holm-Nielsen, J. B.
Offentlig finansiering
01/06/2015 → 13/11/2017
Project: PhD

Fractionation and enzymatic processing of biomass for biorefinery applications
Samfinansieret - Andet
01/02/2015 → 12/11/2018
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. & Gardossi, L.
Samfinansieret - Andet
01/08/2014 → 13/12/2017
Project: PhD

Developments in enzyme immobilization with downstream renewable energy applications
Stipendie fra udlændet
15/12/2013 → 25/08/2017
Project: PhD

Forward osmosis biomimetic membranes for sensor and separation applications
Bajraktari, N., Helix-Nielsen, C., Pinelo, M., Christensen, M. L. & Jönsson, A.
Offentlig finansiering
01/01/2014 → 15/03/2017
Project: PhD

Experimental evaluation of carbonic anhydrase as a biocatalyst for implementation in CO2 removal from flue gas
Samfinansieret - Andet
15/09/2013 → 24/01/2018
Project: PhD

**Substrate-based selection of enzymes**
Dominik, M. M., Mikkelsen, J. D., Sworm, G., Pinelo, M., Schols, H., Ulvskov, P., Schols, H. & Ulvskov, P.
Stipendie fra udlandet
15/08/2010 → 23/04/2014
Project: PhD

**SILP enzyme catalysis technology for upgrading of biomass C5 monomers**
1/3 FUU, 1/3 inst 1/3 Andet
15/12/2009 → 23/04/2014
Project: PhD

**Enzymatic Production of Human Milk Oligosaccharides**
Forskningsrådskifinansiering
15/08/2010 → 24/09/2014
Project: PhD

**Structural characterization and enzymatic modification of soy polysaccharides**
Industrial PhD
15/11/2013 → 25/08/2017
Project: PhD

**Production and purification of prebiotic oligosaccharides by chromatography and membrane systems**
Globaliseringsmidler
01/11/2008 → 28/05/2014
Project: PhD

**Discovery, Characterization and Design of a thermostable RGI Lyase for production of Bio-Functional Fibers**
Globaliseringsmidler
01/02/2009 → 18/12/2013
Project: PhD

**Integration between enzyme technology and membrane separation in biorefinery processes**
Samfinansieret - Andet
01/05/2014 → 25/08/2017
Project: PhD

**Chemical Bioreaction Engineering methods for Plant Seed Upgrading: Literature review and introductory experimental work**
Ale, M. T., Meyer, A. S. & Pinelo, M.
06/01/2014 → 24/01/2014
Project: Research

**Extraction of protein and amino acid from hemp seed meal**
Ale, M. T., Meyer, A. S. & Pinelo, M.
GUDP projects
01/06/2012 → 30/06/2014
Enzymatic catalysis for increased extraction and positive modulation of phenolic antioxidants in functional juice and wine production
Pinelo, M. & Meyer, A. S.  
[Ordinær drift UK 10]  
01/10/2005 → 30/09/2007  
Project: Research

Activities:

Advanced fabrication of porous ceramic multilayers for membrane applications
Kaiser, A. (Keynote speaker), Zhang, W. (Invited speaker), Pinelo, M. (Invited speaker), Della Negra, M. (Other)  
2 Oct 2017  
Activity: Talks and presentations › Conference presentations

Surface properties and chemistry correlate to the digestibility of biomass following hydrothermal pretreatment at different severities
Djajadi, D. T. (Guest lecturer), Aleksander R. Hansen (Guest lecturer), Anders Jensen (Guest lecturer), Lisbeth G. Thygesen (Guest lecturer), Pinelo, M. (Guest lecturer), Meyer, A. S. (Guest lecturer), Jørgensen, H. (Guest lecturer)  
1 May 2017 → 4 May 2017  
Activity: Talks and presentations › Conference presentations