



Ph.D. Eng. Monika Maria Marchwicka

Contact

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Education

from October 2021 to June 2022	Warsaw University – Faculty of Chemistry Postgraduate Applications of Chemistry in Environmental Protection. Chromatography course
December 2020	Warsaw University of Life Sciences degree of doctor of agricultural sciences in the discipline of forestry
from October 2013 to December 2015	Warsaw University of Life Sciences - Faculty of Wood Science Interdisciplinary PhD Studies in Bioenergy
from February 2011 to June 2012	Warsaw University of Life Sciences - Faculty of Wood Science master of science degree
from October 2007 to January 2011	Warsaw University of Life Sciences - Faculty of Wood Science engineer's degree

Experience

from February 2022 till now	Warsaw University of Life Sciences Faculty of Wood Science / Institute of Wood Sciences and Furniture Department of Wood Science and Wood Preservation position - assistant professor
from 2021 till now	Researcher – international project ALLVIEW - Alliance of Centres of Vocational Excellence in the Furniture and Wood sector Stowarzyszenia Inżynierów i Techników Leśnictwa i Drzewnictwa (SITLiD)
2020 till now	Researcher - project PASZA PRO, Program POIR 2.1.1.1 Warsaw University of Life Sciences, Institute of Wood Sciences and Furniture
from September 2017 till February 2022	Warsaw University of Life Sciences Faculty of Wood Science / Institute of Wood Sciences and Furniture Department of Wood Science and Wood Preservation position - assistant lecturer
from 2016 to 2017	Researcher - project CROPTECH BIOSTRATEG2/298241/10/NCBR/2016 Warsaw University of Life Sciences, Faculty of Wood Science

from 2015
to 2016

Researcher - project WOODTECH PBS1/A8/16/2013
Warsaw University of Life Sciences, Faculty of Wood Science

International internships

August 2021 Department of Chemistry and Chemical Technology, Faculty of Wood Sciences and Technology, **Technical University in Zvolen, Slovakia**,
ERASMUS+ PROGRAMME – Staff Mobility for Training

from 23 June to 31 August 2019 Department of Chemistry and Chemical Technology, Faculty of Wood Sciences and Technology, **Technical University in Zvolen, Slovakia**,
research: "Influence of ultrasound pretreatment on crystallinity index of cellulose"

Publications

nr ORCID 0000-0002-1344-5629

2022

Szadkowska D, Auriga R, Lesiak A, Szadkowski J, Marchwicka M. Influence of Pine and Alder Woodchips Storage Method on the Chemical Composition and Sugar Yield in Liquid Biofuel Production. *Polymers*, nr 14, s.1–11

Siedlecka B, Marchwicka M. Influence of modification of aged spruce wood by in situ polymerization with ethyl methacrylate and methyl acrylate and paraloid B72 on color and water absorption. *Annals of Warsaw University of Life Sciences - SGGW Forestry and Wood Technology*, nr 120, s.45–56

2021

Gawron J, Marchwicka M. Color changes of ash wood (*Fraxinus excelsior* L.) caused by thermal modification in air and steam. *Annals of Warsaw University of Life Sciences - SGGW Forestry and Wood Technology*, nr 116. s.21–27

Kozakiewicz P, Dadon M, Marchwicka M. Investigation of selected properties of the black elder wood (*Sambucus nigra* L.). *Annals of Warsaw University of Life Sciences - SGGW Forestry and Wood Technology*, nr 116, s.28–38

Laskowska A., Marchwicka M., Trzaska A., Boruszewski P. Surface and Physical Features of Thermo-Mechanically Modified Iroko and Tauari Wood for Flooring Application. *Coatings*, 11, 1528

Marchwicka M., Influence of pH and Cellic® CTec2 enzymes dose on the glucose yield after enzymatic hydrolysis of cellulose at 50 °C, *Annals of Warsaw University of Life Sciences - SGGW Forestry and Wood Technology*, nr 114, s.53-58

2020

Marchwicka M., Lesiak A., Radomski A., 2020: The influence of urea and formaldehyde on enzymatic hydrolysis of cellulose, *Annals of Warsaw University of Life Sciences - SGGW Forestry and Wood Technology*, tom 110, s. 92-6

Marchwicka M., Influence of pH and Cellic® CTec2 enzymes dose on the glucose yield after enzymatic hydrolysis of cellulose at 45 °C, *Annals of Warsaw University of Life Sciences - SGGW Forestry and Wood Technology*, nr 112, s.85-91

2019

Antczak A., Świerkosz R., Szeniański M., Marchwicka M., Akus-Szylberg F., Przybysz P., Zawadzki J., The comparison of acid and enzymatic hydrolysis of pulp obtained from poplar wood (*Populus* sp.) by the Kraft method, *Drewno*, vol. 62, nr 203, s. 1-14

2018

Laskowska A., Marchwicka M., Boruszewski P., Wszyńska J., Chemical Composition and Selected Physical Properties of Oak Wood (*Quercus robur* L.) Modified by Cyclic Thermo-Mechanical Treatment, *BioResources* 13(4), s. 9005-19

Antczak A., Marchwicka M., Szadkowski J., Drożdżek M., Gawron J., Radomski A., Zawadzki J., Sugars Yield Obtained after Acid and Enzymatic Hydrolysis of Fast-growing Poplar Wood Species, *BioResources* 13(4), s. 8629-45

Antczak A., Szadkowski J., Marchwicka M., Akus-Szylberg F., Bytner O., Zawadzki J., The study of chemical composition and enzymatic hydrolysis efficiency of poplar wood (*Populus deltoides* x *maximowiczii*) after steam explosion pretreatment, *Annals of Warsaw University of Life Sciences - SGGW. Forestry and Wood Technology*, nr 104, s. 139-46

2017

Szadkowski J., Radomski A., Antczak A., Szadkowska D., Lewandowska A., Marchwicka M., Kupczyk A., Wydajność procesów hydrolizy i fermentacji w technologii wytwarzania bioetanolu z drewna topoli (*Populus sp.*), Przemysł Chemiczny nr 3, tom 96, s. 518-20

2016

Antczak A., Ziętek K., Marchwicka M., Tylko B., Gawkowski A., Gawron J., Drożdżek M., Zawadzki J., Cukry wyodrębnione z biomasy szybko rosnących topoli (*Populus sp.*) jako surowiec do otrzymywania bioetanolu, Przemysł Chemiczny nr 9, tom 95, s. 1770-3

Antczak A., Adaszewska D., Zawadzki J., Marchwicka M., The study of chemical composition of juvenile poplar branches (*Populus deltoides x maximowiczii*), Annals of Warsaw University of Life Sciences - SGGW. Forestry and Wood Technology, nr 93, s. 5-11

2015

Marchwicka M., Radomski A., Antczak A., Szadkowski J., Lewandowska A., Szadkowska D., Zielenkiewicz T., Drożdżek M., Archanowicz E.I., Wpływ obróbki wstępnej biomasy z topoli (*Populus sp.*) na wydajność hydrolizy enzymatycznej, Przemysł chemiczny nr 5, tom 94, s. 814-7

Lewandowska A., Radomski A., Marchwicka M., Szadkowska D., Archanowicz E.I., Szadkowski J., Gawron J., Zielenkiewicz T., Kłosińska T., Zawadzki J., Badanie produktów hydrolizy enzymatycznej masy celulozowej pozyskanej z drewna topoli (*Populus alba L.*), Przemysł Chemiczny nr 7, tom 94, s. 1134-7

Szadkowska D., Radomski A., Marchwicka M., Lewandowska A., Szadkowski J., Zawadzki J., Drożdżek M., Auriga R., Możliwość wykorzystania biomasy poużytkowych tworzyw drzewnych w technologii ciekłych biopaliw, Przemysł Chemiczny nr 10, tom 94, s. 1700-2

Antczak A., Spyszewska N., Zawadzki J., Marchwicka M., Kupczyk A., 2015: The study of the influence of temperature, nutrient medium and acetate buffer addition on glucose fermentation process, Annals of Warsaw University of Life Sciences - SGGW. Forestry and Wood Technology 2015, nr 91, s. 126-33

Szadkowski J., Radomski A., Szadkowska D., Zakrzewski A., Rębkowski B., Marchwicka M., Lewandowska A., Zmiana dostępnych mezoporów w drewnie topoli białej (*Populus alba L.*) w wyniku cyklicznego suszenia, EPISTEME nr 26, tom II, s.399-407

Szadkowska D., Szadkowski J., Lewandowska A., Auriga R., Marchwicka M., Drożdżek M., Wpływ sposobu składowania wiórów sosny zwyczajnej na składniki strukturalne drewna, EPISTEME nr 26, tom I, s.367-74

Marchwicka M., Radomski A., Antczak A., Lewandowska A., Szadkowska D., Szadkowski J., Wpływ dodatku azydku sodu na hydrolizę enzymatyczną holocelulozy z użyciem enzymu DYADICXYLANASE 2XP CONC, EPISTEME nr 26, tom I, s.307-12

Lewandowska A., Marchwicka M., Szadkowska D., Szadkowski J., Radomski A., Zawadzki J., Porównanie zawartości składników strukturalnych w drewnie topoli oraz płycie wiórowej z drewna topoli, EPISTEME nr 26, tom I, s.111-8

2014

Szadkowska D., Gawryółek M., Archanowicz E., Szadkowski J., Marchwicka M., Rębkowski B., Wpływ furfuralu na hydrolizę enzymatyczną holocelulozy pozyskanej z drewna topoli (*Populus sp.*), Episteme nr 22, tom 2, s. 377-83

2013

Archanowicz E., Szadkowska D., Radomski A., Kłosińska T., Archanowicz E., Marchwicka M., Zgutka S., Badanie zmian porowatości ściany komórkowej drewna topoli (*Populus sp.*) metodą odwrotnej chromatografii wykluczania przestrzennego - ISEC, Młodzi dla techniki : wybrane problemy naukowo-badawcze chemii i technologii chemicznej, 2013. s. 235-52

Conferences

Active participant of 11 scientific conferences (10 international – posters and presentations at english speaking sessions). Co-author of many posters and presentations at conferences.

Science research

- lignocellulosic biomass pretreatment in bioethanol production process
- enzymatic hydrolysis of cellulose
- chemical modification of wood (furfurylation, lumen polymerization)
- chemical composition of wood

- high-performance liquid chromatography
- photography on wood

Research offer

- **chemical composition of wood**
extractives (1%NaOH, hot water, ethanol and other), lignin, cellulose, ash, glucose, xylose
- **high-performance liquid chromatography analysis of simple sugars**