

Candidate supervisor's information summary form

Name and surname, degree, title: Andrzej Antczak, BEng, PhD, DSc	
Discipline/ disciplines of science	Forestry sciences
Professional development (degrees and titles) in chronological order	<p>Master engineer of chemistry (2005, Faculty of Chemistry Warsaw University of Technology, chemical technology course, speciality: technology of high-energetic materials and safety of chemical processes);</p> <p>Doctor engineer of forestry sciences (2010, Faculty of Wood Technology Warsaw University of Life Sciences);</p> <p>Postdoctoral engineer of forestry sciences (2019, Faculty of Wood Technology Warsaw University of Life Sciences).</p>
Most important publications/patens over the last 3 years (maximum 10)	<p>Akus-Szylberg F., Antczak A., Zawadzki J., 2021: „Effect of soaking aqueous ammonia pretreatment on selected properties and enzymatic hydrolysis of poplar (<i>Populus trichocarpa</i>) wood”. <i>BioResources</i>, 16(3), 5618-5627.</p> <p>Krutul D., Radomski A., Antczak A., Drożdżek M., Kłosińska T., Szadkowska D., Zawadzki J., 2021: „Influence of the environmental pollution on the distribution and polymerization degree of cellulose in bark and wood from Scots pine (<i>Pinus sylvestris</i> L.) stem”. <i>Wood Research</i>, 66(2), 203-210.</p> <p>Balan R., Antczak A., Brethauer S., Zielenkiewicz T., Studer M.H., 2020: „Steam explosion pretreatment of beechwood. Part 1: comparison of the enzymatic hydrolysis of washed solids and whole pretreatment slurry at different solid loadings”. <i>Energies</i>, 13(14), 1-15.</p> <p>Brethauer S., Antczak A., Balan R., Zielenkiewicz T., Studer M.H., 2020: „Steam explosion pretreatment of beechwood. Part 2: quantification of cellulase inhibitors and their effect on Avicel hydrolysis”. <i>Energies</i>, 13(14), 1-17.</p> <p>Gliszczyński T., Antczak A., 2020: „The study of selected properties of black poplar wood (<i>Populus nigra</i> L.) subjected to furfurylation and polymerization in lumen”. <i>Annals of Warsaw University of Life Sciences, Forestry and Wood Technology</i>, 112, 11-21.</p> <p>Antczak A., Świerkosz R., Szeniawski M., Marchwicka M., Akus-Szylberg F., Przybysz P., Zawadzki J., 2019: „The comparison of acid and enzymatic hydrolysis of pulp obtained from poplar wood (<i>Populus</i> sp.) by the Kraft method”. <i>Drewno</i>, 63(203), 1-14.</p>
Experience in work with doctoral students (defended doctoral dissertations, doctoral programmes opened) in chronological order	<p>Marchwicka M. "The influence of selected methods of poplar wood processing on the efficiency of enzymatic hydrolysis", Institute of Wood Sciences and Furniture, Warsaw University of Life Sciences, defended doctoral dissertation on November 27, 2020.</p> <p>Akus-Szylberg F. "The study of the impact of selected pre-treatment methods on the chemical composition and efficiency of enzymatic hydrolysis of poplar wood and corn stover", Institute of Wood Sciences</p>

	and Furniture, Warsaw University of Life Sciences, opening of the doctoral dissertation 2018.
Project/grants achievements (from the last 10 years)	<p>Research project of WULS “The development of selected modern methods of wood analysis” – head – 2011</p> <p>Research project of WULS “Elaboration of chemical microanalysis methods of lignocellulosic materials” – head – 2012</p> <p>Research project of WULS “The study of physico-chemical properties of tropical wood” – researcher – 2013</p> <p>Research project of WULS “The possibilities of using birch wood (Betula L.) in modern technologies used in wood science” – researcher – 2014</p> <p>Research project of the National Centre for Research and Development “A program to improve the level of the didactic approach to the question of how to obtain raw plant materials for the purposes of energy production in the context of the Europe 2020 Strategy objectives” – researcher – 2014/2015</p> <p>Research project of the National Centre for Research and Development “The use of poplar lines with increased potential of biomass growth and improved chemical composition of wood in technology of paper production and biofuels” PBS1/A8/16/2013 – researcher – 2013/2016</p> <p>Research project of the National Centre for Research and Development “Intelligent farming and cultivation systems for wheat, maize and poplars for optimized production, biomass, biofuels and modified wood” BIOSTRATEG2/298241/10/NCBR/2016 – researcher – 2016/2019</p> <p>Research project of the National Centre for Research and Development “Technologies of using agricultural by-products” PASZA PRO, POIR.01.01.01-00-0224/19-00 – researcher – 2019/2022</p>
Topic – research problem – for which the candidate supervisor seeks a doctoral student	<p>Study of pretreatment, enzymatic hydrolysis and fermentation processes towards the production of bioethanol from wood and other lignocellulosic biomass</p> <p>Study of chemical modification influence on selected physico-chemical properties of wood (density, colour, hardness, dimensional stability or chemical composition).</p>
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