

**Summary Specification of Scientific Accomplishments of a Thesis Supervisor Candidate**  
maximum 2 pages - it should be a synthesis of the most important elements of accomplishments

Name and surname, degree, scientific title: D.Sc. Andrzej Antczak, associate professor	
Scientific discipline/s	Forestry sciences
Professional development (scientific degrees and titles) chronologically	<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>Doctor engineer (with habilitation) of forestry sciences (2019, Faculty of Wood Technology Warsaw University of Life Sciences);</p> <p>Associate professor (2022, Department of Wood Science and Wood Preservation, Institute of Wood Sciences and Furniture Warsaw University of Life Sciences).</p>
Most important publications/patents from the last 3 years (max. 10)	<p>Antczak A., Szadkowski J., Szadkowska D., Zawadzki J., 2022: „Assessment of the effectiveness of liquid hot water and steam explosion pretreatments of fast-growing poplar (<i>Populus trichocarpa</i>) wood”. <i>Wood Science and Technology</i>, 56, 87-109.</p> <p>Betlej I., Antczak A., Szadkowski J., Drożdżek M., Krajewski K., Radomski A., Zawadzki J., Borysiak S., 2022: „Evaluation of the Hydrolysis Efficiency of Bacterial Cellulose Gel Film after the Liquid Hot Water and Steam Explosion Pretreatments”. <i>Polymers</i>, 14, 2032.</p> <p>Gliszczyński T., Antczak A., 2022: „The study of selected properties of pine wood (<i>Pinus sylvestris</i> L.) subjected to acetylation”. <i>Annals of Warsaw University of Life Sciences, Forestry and Wood Technology</i>, 117, 5-13.</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>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>
Experience in work with PhD students (defended dissertations, initiated dissertation procedures),	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 and Furniture, Warsaw University of

chronologically	<p>Life Sciences, defended doctoral dissertation on April 28, 2022.</p> <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>
Project/grant accomplishments (from the last 10 years)	<p>Research project financed by the National Science Centre "Spectroscopic methods for rapid phenotyping of trees reflecting their ecological resilience" DendroSpec, UMO-2021/43/I/NZ9/02809 – researcher – 2022/2025</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> <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 "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 "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>
Theme scope - research problem - for the solving of which the PhD student is sought	<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, chemical composition).</p>
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