

### Candidate supervisor's information summary form

Name and surname, degree, title: Ph.D. D.Sc. eng. <b>Grzegorz Kowaluk</b> , associate professor	
Discipline/ disciplines of science	Forestry
Professional development (degrees and titles) in chronological order	<p>Master engineer of wood technology (2001)</p> <p>Doctor of forest sciences in the field of wood technology (2006)</p> <p>Doctor (habilitation) of forest sciences in the field of wood technology (2015)</p>
Most important publications/patens over the last 3 years (maximum 10)	<p>Wronka A., Robles E., <b>Kowaluk G. (2021)</b>: Upcycling and Recycling Potential of Selected Lignocellulosic Waste Biomass. <i>Materials</i> 2021, 14(24), 7772; <a href="https://doi.org/10.3390/ma14247772">https://doi.org/10.3390/ma14247772</a></p> <p>Gumowska A., Robles E., <b>Kowaluk G. (2021)</b>: Evaluation of Functional Features of Lignocellulosic Particle Composites Containing Biopolymer Binders. <i>Materials</i> 2021, 14(24), 7718; <a href="https://doi.org/10.3390/ma14247718">https://doi.org/10.3390/ma14247718</a></p> <p>Sala C.M., Robles E., <b>Kowaluk G. (2020)</b>: Influence of the Addition of Spruce Fibers to Industrial-Type High-Density Fiberboards Produced with Recycled Fibers. <i>Waste and Biomass Valorization</i>, (), 1-10; <a href="https://doi:10.1007/s12649-020-01250-8">https://doi:10.1007/s12649-020-01250-8</a></p> <p>Sala C.M., Robles E., <b>Kowaluk G. (2020)</b>: Influence of Adding Offcuts and Trims with a Recycling Approach on the Properties of High-Density Fibrous Composites. <i>Polymers</i> 2020, 12, 1327; <a href="https://doi:10.3390/polym12061327">https://doi:10.3390/polym12061327</a></p> <p>Auriga R., Gumowska A., Szymanowski K., Wronka A., Robles E., Ocipka P., <b>Kowaluk G. (2020)</b>: Performance properties of plywood composites reinforced with carbon fibers. <i>Composite Structures</i>, vol. 248, 112533; <a href="https://doi.org/10.1016/j.compstruct.2020.112533">https://doi.org/10.1016/j.compstruct.2020.112533</a></p> <p>Sala C. M., Robles E., Gumowska A., Wronka A., <b>Kowaluk G. (2020)</b>: Influence of Moisture Content on the Mechanical Properties of Selected Wood-based Composites. <i>BioResources</i> 15(3), 5503-5513; <a href="https://doi.org/10.15376/biores.15.3.5503-5513">https://doi.org/10.15376/biores.15.3.5503-5513</a></p> <p><b>Kowaluk G.</b>, Wronka A. (2020). "Bonding of sawmill birch wood with selected biopolymer-based glues," <i>Annals of WULS, Forestry and Wood Technology</i>, 109(109), 32–36. DOI: 10.5604/01.3001.0014.3092</p> <p>Borysiuk P., Burawska-Kupniewska I., Auriga R., <b>Kowaluk G.</b>, Kozakiewicz P., Zbieć M. (2019): Influence of Layered Structure of Composite Timber Floor Boards on Their Hardness. <i>Drvna Industrija</i>, Vol. 70 No. 4, 2019; p. 399-406; <a href="https://doi.org/10.5552/drvind.2019.1856">https://doi.org/10.5552/drvind.2019.1856</a></p> <p>Gumowska A., <b>Kowaluk G.</b>, Labidi J., Robles E. (2019): Barrier properties of cellulose nanofibers film as an external layer of particleboard. <i>Clean Technologies and Environmental Policy</i>; <a href="https://doi.org/10.1007/s10098-019-01760-7">https://doi.org/10.1007/s10098-019-01760-7</a></p> <p><b>Kowaluk G.</b>, Gumowska A. (2019): A method of pressing layered materials, especially lignocellulosic (patent admitted, patent no. Pat.234881)</p>

Experience in work with doctoral students (defended doctoral dissertations, doctoral programmes opened) in chronological order	<p><b>Doctoral programmes opened</b></p> <ol style="list-style-type: none"> <li>09.04.2019 - Influence of selected material and process factors on the properties of dry-formed fibreboards</li> </ol>
Project/grants achievements (from the last 10 years)	<ol style="list-style-type: none"> <li>Tree bark as a renewable source of wood protection materials for building applications; ForestValue 2021 Call; 2022 – 2025; manager</li> <li>Sustainable production of Cellulose-based products and additives to be used in SMEs and rural areas; Horyzont 2020; H2020-MSCA-RISE-2020; agreement no. 101007733; 2021 – 2025; manager of Polish part</li> <li>Elaboration of layered lignocellulosic composites with new biobased adhesives; NAWA; agreement no. PPN/BFR/2020/1/00042/U/00001; 2021 – 2022; manager of Polish part</li> <li>Improving process and material efficiency in the sawmill industry; BIOSTRTEG/344303/14/NCBR/2018; 2017 – 2021; main executor of WP6</li> <li>Increasing the efficiency of using wood raw material in production processes in industry; BIOSTRATEG2/298950/1/NCBR/2016; 2016 – 2018; main executor of WP1</li> <li>Ionic liquids in innovative technologies related to the processing of lignocellulosic raw materials; POIG, UDA-POIG 01.03.01-30-074/08-00; 2009 – 2012; executor</li> </ol>
Topic – research problem – for which the candidate supervisor seeks a doctoral student	<ol style="list-style-type: none"> <li>Lignocellulosic composites with defined end-of-life scenarios</li> <li>Various applications of tree bark</li> </ol> <p><i>There will be the opportunity to complete the thesis under co-supervision (including international)</i></p>
<p><u>Contact details:</u> Faculty/Institute E-mail address Tel.</p>	<p><b>Institute of Wood Sciences and Furniture</b> Warsaw University of Life Sciences - SGGW room no. 1/68, building no. 34 159 Nowoursynowska St., Warsaw 02-787, Poland e-mail: grzegorz_kowaluk@sggw.edu.pl Phone: +48 22 59 38 546</p>