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Habilitation thesis title: Lignocellulosic Materials. Characterization, properties and uses  
Domain: Forestry Engineering

## PUBLICATIONS LIST

### RELEVANT PAPERS

1. Barbu, M.C.; Buresova, K.; Tudor, E.M.; Petutschnigg, A. (2022): Physical and Mechanical Properties of Paulownia tomentosa x elongata Sawn Wood from Spanish, Bulgarian and Serbian Plantations. *Forests*, 13, 1543.  
IF (2022) = 3,282  
<https://doi.org/10.3390/f13101543>  
WOS:000874260900001
2. Urstöger, J.; Barbu, M.C.; Pacher, T.; Petutschnigg, A.; Jorda, J.; Tudor, E.M (2021). Selected Properties of Cement Bound Spruce and Larch Bark Bio-Aggregates. *Polymers* 2021, 13(24), 4438.  
<https://doi.org/10.3390/polym13244438>  
WOS:000745273200001
3. Herzog, A.; Kerschbaumer, T.; Schwarzenbrunner, R.; Barbu, M.-C.; Petutschnigg, A.; Tudor, E.M. (2021): Efficiency of High-Frequency Pressing of Spruce Laminated Timber Bonded with Casein Adhesives. *Polymers*, 13, 4237. IF (2021) = 4,967  
<https://doi.org/10.3390/polym13234237>  
WOS:000734523800001
4. Kristak, L.; Ruziak, I.; Tudor, E.M.; Barbu, M.C.; Kain, G.; Reh, R. (2021) Thermophysical Properties of Larch Bark Composite Panels. *Polymers*, 13, 2287. IF (2021) = 4,967  
<https://doi.org/10.3390/polym13142287>  
WOS:000676970600001
5. Tudor, E.M.; Kristak, L.; Barbu, M.C.; Gergel, T.; Němec, M.; Kain, G.; Réh, R. (2021) Acoustic Properties of Larch Bark Panels. *Forests*, 12, 887. IF (2021) = 4,967  
<https://doi.org/10.3390/f12070887>  
WOS:000676273100001
6. Barbu, M.C.; Montecuccoli, Z.; Förg, J.; Barbeck, U.; Klímek, P.; Petutschnigg, A.; Tudor, E.M. (2021): Potential of Brewer's Spent Grain as a Potential Replacement of Wood in pMDI, UF or MUF Bonded Particleboard. *Polymers* 13, 319. IF (2021) = 4,967  
<https://doi.org/10.3390/polym13030319>  
WOS:000615459400001
7. Schwarzenbrunner, R.; Barbu, M.C.; Petutschnigg, A.; Tudor, E.M. (2020): Water-resistant casein-based adhesives for veneer bonding in biodegradable ski cores. *Polymers* 12(8): 1745. IF (2020) = 4,329  
<https://doi.org/10.3390/polym12081745>  
WOS:000564735500001
8. Tudor, E.M.; Zwickl, C.; Eichinger, C.; Petutschnigg, A.; Barbu, M.C. (2020): Performance of softwood bark comminution technologies for determination of targeted particle size in further upcycling applications. *Journal of Cleaner Production* 269: 122412. IF (2020) = 9,297  
<https://doi.org/10.1016/j.jclepro.2020.122412>  
WOS:000561603100100

9. Barbu, M.C.; Tudor, E.M. (2021): State of the art of the Chinese forestry and wood industry and its markets,. Wood Material Science & Engineering, 17(6):1030-1039. IF (2021) =2,907

<https://doi.org/10.1080/17480272.2021.1891457>

WOS:000623061100001

10. Tudor, E.M.; Barbu, M.C.; Petutschnigg, A.; Réh, R.; Krišťák, Ľ. (2020): Analysis of Larch-Bark Capacity for Formaldehyde Removal in Wood Adhesives Int. J. Environ. Res. Public Health, 17, 764. IF (2020) = 2,468

<https://doi.org/10.3390/ijerph17030764>

WOS:000517783300089

#### PhD THESIS

Titlul lucrării: Decorative panels based on larch bark. Universitatea Tehnică din Zvolen, Facultatea de Știința și Tehnologia Lemnului, Catedra de Tehnologia Lemnului. Îndrumător: Prof. Ing. Roman Réh, CSc.

<https://drive.unitbv.ro/s/BkigPdj6nWCLZKX>

#### BOOKS / BOOK CHAPTERS

1. Tudor, E.M., Huber, H. (2022): Construction materials made of bark. In: Bauphysik-Kalender 2022, Edited by Fouad, Nabil A, Leibniz Universität Hannover,

ISBN 9783433611074

<https://doi.org/10.1002/9783433611081.ch4>

2. Tudor, E.M. (2023). Alternative Adhesives for Composites Made of Annual Plants. In: Khiari, R., Jawaid, M., Belgacem, M.N. (eds) Annual Plant: Sources of Fibres, Nanocellulose and Cellulosic Derivatives. Composites Science and Technology . Springer, Singapore.

[https://doi.org/10.1007/978-981-99-2473-8\\_9](https://doi.org/10.1007/978-981-99-2473-8_9)

Print ISBN: 978-981-99-2472-1; Online ISBN: 978-981-99-2473-8

3. Schnabel T., Barbu M.C., Tudor E.M. Petutschnigg A. (2022): Changing in larch sapwood extractives due to distinct ionizing radiation sources. Vutova K. (Ed.): Electron Beam Processing of Materials. MDPI Basel, Beijing, Wuhan, Barcelona, Belgrade, Manchester, Tokyo, Cluj, Tianjin. pp:41-47;

ISBN 978-3-0365-4933-0; open access;

<https://doi.org/10.3390/books978-3-0365-4934-7>

#### JOURNAL ARTICLES

Peer-reviewed articles published in Web of Science (WOS)

1. Barbu, M.C.; Buresova, K.; Tudor, E.M.; Petutschnigg, A. (2022): Physical and Mechanical Properties of Paulownia tomentosa x elongata Sawn Wood from Spanish, Bulgarian and Serbian Plantations. Forests, 13, 1543. IF (2022) = 3,282

<https://doi.org/10.3390/f13101543>

WOS:000874260900001

[Forests - Clarivate](#)

2. Herzog, A.; Kerschbaumer, T.; Schwarzenbrunner, R.; Barbu, M.-C.; Petutschnigg, A.; Tudor, E.M. (2021): Efficiency of High-Frequency Pressing of Spruce Laminated Timber Bonded with Casein Adhesives. Polymers, 13, 4237. IF (2021) = 4,967

<https://doi.org/10.3390/polym13234237>

WOS:000734523800001

[Polymers - Clarivate](#)

3. Barbu, M.C.; Tudor, E.M. (2021): State of the art of the Chinese forestry and wood industry and its markets, *Wood Material Science & Engineering* 17(6): 1030-1039.  
<https://doi.org/10.1080/17480272.2021.1891457>  
WOS:000623061100001  
[Wood Material Science and Engineering - Clarivate](#)
4. Tudor, E.M.; Kristak, L.; Barbu, M.C.; Gergeľ, T.; Němec, M.; Kain, G.; Réh, R. (2021) Acoustic Properties of Larch Bark Panels. *Forests*, 12, 887. IF (2021) = 4,967  
<https://doi.org/10.3390/f12070887>  
WOS:000676273100001  
[Forests - Clarivate](#)
5. Kristak, L.; Ruziak, I.; Tudor, E.M.; Barbu, M.C.; Kain, G.; Reh, R. (2021) Thermophysical Properties of Larch Bark Composite Panels. *Polymers*, 13, 2287. IF (2021) = 4,967  
<https://doi.org/10.3390/polym13142287>  
WOS:000676970600001  
[Polymers - Clarivate](#)
6. Gößwald, J.; Barbu, M.C.; Petutschnigg, A.; Tudor, E.M. (2021): Binderless thermal insulation panels made of spruce bark fibres, 13(11), 1799, *Polymers*. IF (2021) = 4,967  
<https://doi.org/10.3390/polym13111799>  
WOS:000660517500001  
[Polymers - Clarivate](#)
7. Barbu, M.C.; Montecuccoli, Z.; Förg, J.; Barbeck, U.; Klímek, P.; Petutschnigg, A.; Tudor, E.M. (2021): Potential of Brewer's Spent Grain as a Potential Replacement of Wood in pMDI, UF or MUF Bonded Particleboard. *Polymers* 13, 319. IF (2021) = 4,967  
<https://doi.org/10.3390/polym13030319>  
WOS:000615459400001  
[Polymers - Clarivate](#)
8. Barbu, M.C.; Lohninger, Y.; Hofmann, S.; Kain, G.; Petutschnigg, A.; Tudor, E.M. (2020): Larch bark as a formaldehyde scavenger in thermal insulation panels. *Polymers* 12: 2362. IF (2020) = 4,329  
<https://doi.org/10.3390/polym12112632>  
WOS:000593806400001  
[Polymers - Clarivate](#)
9. Kain, G.; Tudor, E.M.; Barbu, M.C. (2020): Bark thermal insulation panels: an explorative study on the effects of bark species. *Polymers* 12(8): 2140. IF (2020) = 4,329  
<https://doi.org/10.3390/polym12092140>  
WOS:000581231200001  
[Polymers - Clarivate](#)
10. Réh, R.; Krišťák, Ľ.; Sedliačik, J.; Bekhta, P.; Božiková, M.; Kunecová, D.; Vozárová, V.; Tudor, E.M.; Antov, P.; Savov, V. (2021): Utilization of Birch Bark as an Eco-Friendly Filler in Urea-Formaldehyde Adhesives for Plywood Manufacturing. *Polymers*, 13(4), 511. IF (2021) = 4,329  
<https://doi.org/10.3390/polym13040511>  
WOS:000624253600001  
[Polymers - Clarivate](#)

11. Barbu, M.C.; Sepperer, T.; Tudor, E.M. Petutschnigg, A.(2020): Walnut and hazelnut shells: Untapped industrial resources and their suitability in lignocellulosic composites. Applied Sciences 10: 6340. IF (2020) = 2,679

<https://doi.org/10.3390/app10186340>

WOS:000581383700001

[Applied Sciences - Clarivate](#)

12. Schwarzenbrunner, R.; Barbu, M.C.; Petutschnigg, A.; Tudor, E.M. (2020): Water-resistant casein-based adhesives for veneer bonding in biodegradable ski cores. Polymers 12(8): 1745. IF (2020) = 4,329

<https://doi.org/10.3390/polym12081745>

WOS:000564735500001

[Polymers - Clarivate](#)

13. Tudor, E.M.; Scheriau, C.; Barbu, M.C.; Reh, R.; Kristak, L.; Schnabel, T. (2020): Enhanced resistance to fire of the bark-based panels bonded with clay. Applied Sciences 10: 5594. IF (2020) = 2,679

<https://doi.org/10.3390/app10165594>

WOS:000567211000001

[Applied Sciences - Clarivate](#)

14. Tudor, E.M.; Zwickl, C.; Eichinger, C.; Petutschnigg, A.; Barbu, M.C. (2020): Performance of softwood bark comminution technologies for determination of targeted particle size in further upcycling applications. Journal of Cleaner Production 269: 122412. IF (2020) = 9,297

<https://doi.org/10.1016/j.jclepro.2020.122412>

WOS:000561603100100

[Jurnal of Cleaner Production - Clarivate](#)

15. Tudor, E.M.; Dettendorfer, A.; Kain, G.; Barbu, M.C.; Reh, R.; Kristak, L. (2020): Sound-Absorption Coefficient of Bark-Based Insulation Panels. Polymers 12(5): 1012. IF (2020) = 4,329

<https://doi.org/10.3390/polym12051012>

WOS:000541431100017

[Polymers - Clarivate](#)

16. Medved, S.; Gajšek, U.; Tudor, E.M.; BARBU, M.C.; Antonović, A. (2019): Efficiency of bark for reduction of formaldehyde emission from particleboards. Wood Research 64(2): 307-316. IF (2019) = 0,713

<http://www.woodresearch.sk/articles.php?volume=19&issue=75>

[www.woodresearch.sk/wr/201902/12.pdf](http://www.woodresearch.sk/wr/201902/12.pdf)

WOS:000467016100012

[Wood Research - Clarivate](#)

#### Peer-reviewed articles published in international databases

1. Barbu, M.C.; Radauer, H.; Petutschnigg, A.; Tudor, E.M.; Kathriner, M. (2023): Lightweight Solid Wood Panels Made of Paulownia Plantation Wood., Appl. Sci., 13, 11234.

<https://doi.org/10.3390/app132011234>

WOS:001093953400001

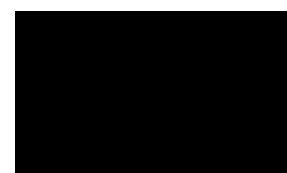
[Applied Sciences - Clarivate](#)

2. Barbu, M.C.; Stüger, G.; Karl, J.; Tudor, E.M. (2023): Highly Densified Laminated Composites with Pre-Compressed Veneers, ProLigno 19(4), pp.78-90

[https://proligno.ro/ro/articles/2023/4/BARBU\\_Final\\_01.pdf](https://proligno.ro/ro/articles/2023/4/BARBU_Final_01.pdf)

[Pro Ligno – DOAJ](#)

3. Sepperer, T.; Barbu, M.C.; Tudor, E.M.; Fürmann, S.; Petutschnigg, A. (2023): Recyclability of tannin-furanic foams, *Materials Letters*, Volume 345, 134483, ISSN 0167-577X  
<https://doi.org/10.1016/j.matlet.2023.134483>  
[Materials Letters - DOAJ](#)
4. Barbu, M.C.; Tudor, E.M.; Buresova, K.; Petutschnigg, A. (2023): Assessment of Physical and Mechanical Properties within Stem Height and Cross-Section of *Paulownia tomentosa* x *elongata* Wood, *Forests* 14(3), 589  
<https://doi.org/10.3390/f14030589>  
WOS:000958912300001  
[Forests - Clarivate](#)
5. Mühlbacher, D.; Tudor, E.M. (2022): Consumer's expectations and sustainable thinking towards timber construction in Austria. *ProLigno*, 18(4), pp. 16-25  
[www.proligno.ro/en/articles/2022/4/MUHLBACHLER\\_Final.pdf](http://www.proligno.ro/en/articles/2022/4/MUHLBACHLER_Final.pdf)  
[Pro Ligno – DOAJ](#)
6. Pacher, T.; Barbu, M.C.; Urstöger, J.; Petutschnigg, A.; Tudor, E.M. (2022): Fire retardancy of cementitious panels with larch and spruce bark as bio-admixtures. *Polymers*, 14(7), 1469.  
<https://doi.org/10.3390/polym14071469>  
WOS:000780613900001  
[Polymers - Clarivate](#)
7. Kain, G.; Morandini, M.; Stamminger, A.; Granig, T.; Tudor, E.M.; Schnabel, T.; Petutschnigg, A. (2021): Production and physical-mechanical characterization of peat moss (Sphagnum) insulation panels, *Materials*, 14(21):6601  
<https://doi.org/10.3390/ma14216601>  
WOS:000718491400001  
[Materials - Clarivate](#)
8. Medved, S.; Tudor, E.M.; Barbu, M.C.; Young, T. (2021): Thermal conductivity of different bio-based insulation; *Les/Wood* 71(1)  
<https://doi.org/10.26614/les-wood.2021.v70n01a05>  
[Les – DOAJ](#)
9. Urstöger, J.; Barbu, M.C.; Pacher, T.; Petutschnigg, A.; Jorda, J.; Tudor, E.M. (2021). Selected Properties of Cement Bound Spruce and Larch Bark Bio-Aggregates. *Polymers* 2021, 13(24), 4438.  
<https://doi.org/10.3390/polym13244438>  
WOS: 000745273200001  
[Polymers - Clarivate](#)
10. Gößwald, J.; Barbu, M.C.; Petutschnigg, A.; Krišťák, Ľ.; Tudor, E.M. (2021): Oversized planer shavings for the core layer of lightweight particleboard, 13(7): 1125, *Polymers*  
<https://doi.org/10.3390/polym13071125>  
WOS:000638766900001  
[Polymers - Clarivate](#)
11. Medved, S.; Jambrekov, V.; Tudor, E.M.; Barbu, M.C. (2020): Creep behaviour of particle-based panels and its relation towards density profile. *ProLigno*16(2):11-17, ISSN 2069-7430  
[www.proligno.ro/en/articles/2020/2/MEDVED\\_Final.pdf](http://www.proligno.ro/en/articles/2020/2/MEDVED_Final.pdf)  
[Pro Ligno – DOAJ](#)



12. Tudor, E.M.; Barbu, M.C. (2020): Cost analysis of larch bark coatings for flooring tiles. *ProLigno* 16(1): 46-51, ISSN 2069-7430  
[www.proligno.ro/en/articles/2020/1/TUDOR.pdf](http://www.proligno.ro/en/articles/2020/1/TUDOR.pdf)  
[Pro Ligno – DOAJ](#)

13. Medved, S.; Jambreković, V.; Španić, N.; Ščernjavič, R.; Barbu, M.C.; Tudor, E.M.; Antonović, A. (2019): Bark, What Can We Do With It, What Is It Good For. 30th International Conference on Wood Science and Technology - ICWST 2019 "IMPLEMENTATION OF WOOD SCIENCE IN WOODWORKING SECTOR", 119-127, WOS indexed  
ISBN: 978-953-292-062-8  
[https://www.researchgate.net/publication/342834601\\_Bark\\_What\\_Can\\_We\\_Do\\_With\\_It\\_What\\_Is\\_It\\_Good\\_For](https://www.researchgate.net/publication/342834601_Bark_What_Can_We_Do_With_It_What_Is_It_Good_For)  
[Drvna Industrija – DOAJ](#)

14. Kain, G.; Tudor, E.M.; Dettendorfer, A.; Barbu, M.C. (2020): Potenzial von Baumrinde für den Einsatz als Schallabsorptions-material. *Bauphysik* 42(3), 124-130  
<https://doi.org/10.1002/bapi.202000007>  
WOS:000540756900005  
[Bauphysik - Clarivate](#)

15. Kain, G., Stratev, D., Tudor, E.M; Lienbacher, B.; Weigl, M.; Barbu, M.C.; Petutschnigg, A. (2020): Qualitative investigation on VOC-emissions from spruce (*Picea abies*) and larch (*Larix decidua*) loose bark and bark panels. *Eur. J. Wood Prod.* 78, 403–412  
<https://doi.org/10.1007/s00107-020-01511-2>  
WOS:000516288500001  
[European Journal Wood And Wood Products - Clarivate](#)

16. Medved, S.; Tudor, E.M.; Barbu, M.C.; Jambreković, V.; Španić, N. (2019): Effect of Pine (*Pinus Sylvestris*) Bark Dust on Particleboard Thickness Swelling and Internal Bond. *Drvna Industrija* 70(2), 141-147  
<https://hrcak.srce.hr/221569>  
[Drvna Industrija – DOAJ](#)

#### PAPERS IN INTERNATIONAL CONFERENCES

---

1. Tudor, E. M.; Barbu, M. C.; Petutschnigg, A.; Réh, R. (2016): Thin wear layers of tree bark as a substitute for cork in flooring tiles. *Proceedings of the World Conference on Timber Engineering (WCTE)*, 22-25.08, Vienna, Austria. pp.434-442  
<https://drive.unitbv.ro/s/dKsynXmQQQK5Pz7>

2. Young, T. M.; Barbu, M. C.; Hindman, D.; Weissensteiner, J.; Tudor, E.M. (2016): Comparisons of the production standards for cross laminated timber (CLT) in Europe versus USA. *Proceedings of the World Conference on Timber Engineering (WCTE)*, 22-25.08, Vienna, Austria. pp. 4380-4388  
<https://drive.unitbv.ro/s/dKsynXmQQQK5Pz7>

3. Medved, D.; Jambreković, V.; Tudor, E.M.; Barbu, M.C. (2018): Creep behaviour of particle-based panels and its relation towards density profile. *Proceedings of the 5th International Conference on Processing Technologies for the Forest and Bio-based Products Industries (PTF BPI 2018)*. TUM, School of Life Sciences Weihenstephan, Freising/Munich, Freising, Germany, pp. 69-74  
<https://drive.unitbv.ro/s/DX27PjdxYmAHf4E>



4. Medved, S.; Lesar, B.; Tudor, E.M.; Humar, M. (2014): Thermal insulation panels from cellulosic fibres. Proceedings of the 3rd International Conference on Processing Technologies for the Forest and Bio-based Products Industries (PTF BPI 2016). Published in Forest Products Journal, 65 (3/4): S54-S58.  
<https://drive.unitbv.ro/s/g2j2zcybHE77ccR>

#### OTHER PAPERS / RELEVANT ACHIEVEMENTS

1. Tudor, E.M.; Barbu, M.C.; Petutschnigg, A.; Réh, R.; Krišťák, Ľ. (2020): Analysis of Larch-Bark Capacity for Formaldehyde Removal in Wood Adhesives Int. J. Environ. Res. Public Health, 17, 764.  
<https://doi.org/10.3390/ijerph17030764>  
WOS:000517783300089

2. Barbu, M.C.; Tudor, E.M. (2023): Potential of Paulownia Wood from European Plantations. Keynote at The 13th International Conference "Wood Science and Engineering in the Third Millennium", 2-4 November, Brasov, Romania.

[www.proligno.ro/en/articles/2023/4/BARBU\\_Final.pdf](http://www.proligno.ro/en/articles/2023/4/BARBU_Final.pdf)

3. Tudor, E.M. (2023): Characterization and use of Paulownia from European plantations for different modern wood-based products, ASFORCLICK Evaluation Conference 2, Brno, Keynote speech.  
<https://drive.unitbv.ro/s/kA5NH2Y8ZC948Wo>

4. Tudor, E.M. (2021): New ways of using bark for composites, QUALITAS" Development of Higher Education in Sopron, Szombathely and Tata, EFOP-3.4.3-16-2016-00022" project in the framework of the Széchenyi 2020 Program. This project was supported by the European Union, co-financed by the European Social Fund, presentation 14.06.2021  
<https://drive.unitbv.ro/s/3EFYfABef3qnCWL>

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Semnatura

