

Air permeability properties of cross laminated timber

Luciani, Giovanni; Horta, R.; Kallakas, Heikko; Kers, Jaan Proceedings of the 12th Meeting of the Northern European Network for Wood Science and Engineering (WSE) : Wood Science and Engineering - a Key Factor on the Transition to Bioeconomy : September 12-13, 2016, Riga, Latvia 2016 / p. 80 <http://www.kki.lv/dokumenti/WSE2016.pdf>

Assessment of fire-retardant treatments and their impact on the fire performance and bonding properties of aspen and silver birch veneers

Alao, Percy Festus; Olusoji, Adekunle; Kallakas, Heikko; Just, Alar; Kers, Jaan European journal of wood and wood products 2025 / art. 66 <https://doi.org/10.1007/s00107-025-02223-1>

Development of hemp hurd particleboards from formaldehyde-free resins

Alao, Percy Festus; Tobias, Micah Onyedikachi; Kallakas, Heikko; Poltimäe, Triinu; Kers, Jaan; Goljandin, Dmitri Agronomy research 2020 / p. 679–688 : ill <https://doi.org/10.15159/AR.20.127> [Journal metrics at Scopus](#) [Article at Scopus](#)

Development of hemp hurd particleboards from formaldehyde-free resins

Alao, Percy Festus; Tobias, Micah Onyedikachi; Kallakas, Heikko; Poltimäe, Triinu; Kers, Jaan; Goljandin, Dmitri 11th International Conference Biosystems Engineering : May 6-8, 2020 in Tartu, Estonia : book of abstracts [Võrguteavik] 2020 / p. 99 https://www.ester.ee/record=b5347289*est

Durability of wood plastic composites : influence of weathering on the mechanical properties

Kallakas, Heikko; Poltimäe, Triinu; Süld, Tiia-Maaja; Kers, Jaan Proceedings of The Northern European Network for Wood Science and Engineering : Edinburgh, Scotland, 13-14 October 2014 2014 / p. 229

Effect of accelerated weathering on the mechanical properties of wood-plastic composites

Kallakas, Heikko; Poltimäe, Triinu; Süld, Tiia-Maaja; Kers, Jaan Baltic Polymer Symposium 2014 : programme and abstracts : Laulasmaa, Estonia, September 24-26, 2014 2014 / p. 75

Effect of birch false heartwood on the physical and mechanical properties of wood-plastic composites [Online resource]

Kallakas, Heikko; Martin, Mihkel; Ayansola, Gbenga; Poltimäe, Triinu; Krumme, Andres; Kers, Jaan Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [7-8 märtsil 2018, Tallinn : teesid] GSFMT Scientific Conference 2018 : Tallinn, March 7-8, 2018 : abstracts 2018 / 1 p <http://fmdtk.ut.ee/teesid-2018/>

Effect of chemical modification of wood flour on the mechanical properties of wood-plastic composites

Kallakas, Heikko; Shamim, M. A.; Olutubo, T.; Poltimäe, Triinu; Süld, Tiia-Maaja; Krumme, Andres; Kers, Jaan Agronomy research 2015 / p. 639-653 : ill https://agronomy.emu.ee/vol133/13_3_2_B5.pdf [Journal metrics at Scopus](#) [Article at Scopus](#)

Effect of chemical modification of wood flour on the mechanical properties of wood-plastic composites [Electronic resource]

Kallakas, Heikko; Shamim, M. A.; Olutubo, T.; Poltimäe, Triinu; Süld, Tiia-Maaja; Krumme, Andres; Kers, Jaan 6th International Conference Biosystems Engineering 2015 : 7-8 May 2015, Tartu, Estonia : book of abstracts 2015 / p. 94. [CD-ROM] http://bse.emu.ee/BSE2015_Book%20of%20ABSTRACTS_ISBN.pdf

Effect of different hardwood species and lay-up schemes on the mechanical properties of plywood

Kallakas, Heikko; Rohumaa, Anti; Vahermets, Harti; Kers, Jaan Forests 2020 / art. 649, 13 p. : ill <https://doi.org/10.3390/f11060649> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The effect of hardwood veneer densification on plywood density, surface hardness, and screw withdrawal capacity

Kallakas, Heikko; Kallakas, Heikko; Akkurt, Tolgay; Akkurt, Tolgay; Scharf, Alexander; Scharf, Alexander; Mühl, Fred; Mühl, Fred; Rohumaa, Anti; Rohumaa, Anti; Kers, Jaan; Kers, Jaan Forests 2024 / art. 1275 <https://doi.org/10.3390/f15071275> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of hemp fiber surface treatment on the moisture/water resistance and reaction to fire of reinforced PLA composites

Alao, Percy Festus; Marrot, Laetitia; Kallakas, Heikko; Just, Alar; Poltimäe, Triinu; Kers, Jaan Materials 2021 / art. 4332, 17 p. : ill <https://doi.org/10.3390/ma14154332> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of hemp fibre length on the properties of polypropylene composites

Alao, Percy Festus; Kallakas, Heikko; Poltimäe, Triinu; Kers, Jaan Agronomy research 2019 / p. 1517–1531 : ill <https://doi.org/10.15159/AR.19.146> [Journal metrics at Scopus](#) [Article at Scopus](#)

Effect of hemp fibre length on the properties of polypropylene composites [Online resource]

Alao, Percy Festus; Kallakas, Heikko; Kers, Jaan Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [4.-5. veebruar, 2019, Tartu : teesid] 2019 / 1 p.: ill <http://fmdtk.ut.ee/teesid-2019/>

Effect of lignin on veneer densification and set-recovery

Kilumets, Catherine; Kallakas, Heikko; Ralph, Sally; Zhu, J. Y.; Hunt, Christopher Glaab; Rohumaa, Anti; Kers, Jaan Construction and building materials 2024 / art. 138795 <https://doi.org/10.1016/j.conbuildmat.2024.138795> [Journal metrics at Scopus](#) [Article at Scopus](#)

The effect of prestressing and temperature on tensile strength of basalt fiber-reinforced plywood

Lõhmus, Rünno; **Kallakas, Heikko**; Tuhkanen, Eero; Gulik, Volodymyr; Kiisk, Madis; Saal, Kristjan; **Kalamees, Targo** Materials 2021 / art. 4701, 9 p. : ill <https://doi.org/10.3390/ma14164701> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of protein surface hydrophobicity and surface amines on soy adhesive strength

Kallakas, Heikko; Plaza, Nayomi; Crooks, Casey; Turner, Derek; Gargulak, Mathew; Arvanitis, Matthew A.; Frihart, Charles R.; Hunt, Christopher G. Polymers 2024 / art. 202 <https://doi.org/10.3390/polym16020202> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The effect of surface properties on bond strength of birch, black alder, grey alder and aspen veneers

Rohumaa, Anti; **Kallakas, Heikko**; Mäetalu, Marja; Savest, Natalja; **Kers, Jaan** International Journal of Adhesion and Adhesives 2021 / art. 102945 <https://doi.org/10.1016/j.ijadhadh.2021.102945> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The effect of wood flour fraction size on the properties of wood-plastic composites

Kängsepp, Kärt; **Poltimäe, Triinu**; Liimand, K.; **Kallakas, Heikko**; Süld, Tiia-Maaja; Repeshova, Irina; Goljandin, Dmitri; **Kers, Jaan** Proceedings of the 9th International Conference of DAAAM Baltic Industrial Engineering, 24-26th April 2014, Tallinn, Estonia 2014 / p. 366-371

Enhancing the bending strength, load-carrying capacity and material efficiency of aspen and black alder plywood through thermo-mechanical densification of face veneers

Akkurt, Tolgay; **Rohumaa, Anti**; **Kallakas, Heikko**; Scharf, Alexander; **Kers, Jaan** Construction and building materials 2024 / art. 138555 <https://doi.org/10.1016/j.conbuildmat.2024.138555> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Fiber-reinforced plywood: Increased performance with less raw material

Saal, Kristjan; **Kallakas, Heikko**; Tuhkanen, Eero; Just, Alar; **Rohumaa, Anti**; **Kers, Jaan**; **Kalamees, Targo**; Lõhmus, Rünno Materials 2024 / art. 3218 <https://doi.org/10.3390/ma17133218> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Fire and mechanical properties of hemp and clay boards for timber structures

Kallakas, Heikko; Liblik, Johanna; Alao, Percy Festus; **Poltimäe, Triinu**; Just, Alar; **Kers, Jaan** IOP conference series : earth and environmental science Central Europe towards Sustainable Building (CESB19) 2–4 July 2019, Prague, Czech Republic 2019 / art. 012019, 8 p. : ill <https://doi.org/10.1088/1755-1315/290/1/012019> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Impact of aspen and black alder substitution in birch plywood

Akkurt, Tolgay; **Kallakas, Heikko**; **Rohumaa, Anti**; Hunt, Christopher Glaab; **Kers, Jaan** Forests 2022 / art. 142 <https://doi.org/10.3390/f13020142>

Impact of cracks to the hygrothermal performance of cross laminated timber

Kukk, Villu; **Püssa, Martin**; **Kallakas, Heikko**; **Kers, Jaan** Proceedings of the 12th Meeting of the Northern European Network for Wood Science and Engineering (WSE) : Wood Science and Engineering - a Key Factor on the Transition to Bioeconomy : September 12-13, 2016, Riga, Latvia 2016 / p. 143 <http://www.kki.lv/dokumenti/WSE2016.pdf>

Impact of cracks to the hygrothermal properties of CLT water vapour resistance and air permeability

Kukk, Villu; Horta, R.; **Püssa, Martin**; Luciani, Giovanni; **Kallakas, Heikko**; **Kalamees, Targo**; **Kers, Jaan** Energy procedia 2017 / p. 741-746 : ill <https://doi.org/10.1016/j.egypro.2017.10.019> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Impregnated wood performance in outdoor environment

Tubli, Peeter; **Kallakas, Heikko**; **Kers, Jaan**; Brischke, C.; Humar, M.; Jones, D. Proceedings of the 12th Meeting of the Northern European Network for Wood Science and Engineering (WSE) : Wood Science and Engineering - a Key Factor on the Transition to Bioeconomy : September 12-13, 2016, Riga, Latvia 2016 / p. 115-116 <http://www.kki.lv/dokumenti/WSE2016.pdf>

The influence of accelerated weathering on the mechanical and physical properties of wood-plastic composites

Kallakas, Heikko; **Poltimäe, Triinu**; Süld, Tiia-Maaja; **Kers, Jaan**; Krumme, Andres Proceedings of the Estonian Academy of Sciences 2015 / p. 94-104 : ill <https://doi.org/10.3176/proc.2015.1S.05> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The influence of birch (Betula pendula) false heartwood on the mechanical properties of wood-plastic composites = Kase (Betula pendula) väärlülipuidu mõju puitplastkomposiitide mehaanilistele omadustele

Kallakas, Heikko 2019 <https://digi.lib.ttu.ee/i/?12253>

Influence of birch false heartwood on the physical and mechanical properties of wood-plastic composites

Kallakas, Heikko; Ayansola, Gbenga; Tumanov, Tanel; Goljandin, Dmitri; Poltimäe, Triinu; Krumme, Andres; Kers, Jaan Bioresources 2019 / p. 3554-3566 : ill <https://doi.org/10.15376/biores.14.2.3554-3566> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Introduction of the COST FP 1303 cooperative performance test [Electronic resource]

Humar, M.; Brischke, C.; **Kallakas, Heikko; Kers, Jaan** Proceedings IRG Annual Meeting 2015 / p. 1-22 : ill

Investigation of efficient alkali treatment and the effect of flame retardant on the mechanical and fire performance of frost-retted hemp fiber reinforced PLA

Alao, Percy Festus; Press, Raimond; Kallakas, Heikko; Ruponen, Jussi; Poltimäe, Triinu; Kers, Jaan Polymers 2022 / art. 2280 <https://doi.org/10.3390/polym14112280> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Mechanical and physical properties of hemp fiber-mat reinforced polyethylene film composites

Yang, Xuejian; Kallakas, Heikko; Kers, Jaan Biocomp 2016 : the 13th Pacific Rim Bio-Based Composite Symposium, Bio-Based Composites for the Sustainable Future : November 14th to 16th, 2016, Concepcion, Chile : abstracts 2016 / p. 91 : ill <http://publicaciones.udt.cl/wp-content/uploads/2017/05/Abstracts-Biocomp-2016-2.pdf>

Mechanical and physical properties of industrial hemp-based insulation materials

Kallakas, Heikko; Närep, Merili; Närep, Aivo; Poltimäe, Triinu; Kers, Jaan Proceedings of the Estonian Academy of Sciences 2018 / p. 183-192 : ill <https://doi.org/10.3176/proc.2018.2.10> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Mechanical and physical properties of silane crosslinked wood flour reinforced composites

Kallakas, Heikko; Shamim, M. A.; Poltimäe, Triinu; Süld, Tiia-Maaja; Krumme, Andres; Kers, Jaan Proceedings of the 11th Meeting of the Northern European Network for Wood Sciences and Engineering (WSE) : September 14-15, 2015, Poznan, Poland 2015 / p. 278

Mechanical and physical properties of thermally modified wood flour reinforced polypropylene composites

Kallakas, Heikko; Martin, Mihkel; Goljandin, Dmitri; Poltimäe, Triinu; Krumme, Andres; Kers, Jaan Agronomy research 2016 / p. 994-1003 : ill http://ise.elnet.ee/record=b2891902~S1*est [Journal metrics at Scopus](#) [Article at Scopus](#)

Mechanical and physical properties of thermally modified wood flour reinforced polypropylene composites [Online resource]

Kallakas, Heikko; Poltimäe, Triinu; Krumme, Andres; Kers, Jaan Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [7-8 märts 2017, Tartu : teesid] 2017 / [1] p <http://fntdk.ut.ee/teesid/>

Natural weathering of bio-based façade materials

Alao, Percy Festus; Visnapuu, Kevin; Kallakas, Heikko; Poltimäe, Triinu; Kers, Jaan Forests 2020 / art. 642, 12 p. : ill <https://doi.org/10.3390/f11060642> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Preparation of thermoplastic cellulose esters in [mTBNH][OAC] ionic liquid by transesterification reaction

Tarasova, Elvira; Savale, Nutan Bharat; Krasnou, Illia; Kudrjašova, Marina; Rjabovs, Vitalijs; Reile, Indrek; Vares, Lauri; Kallakas, Heikko; Kers, Jaan; Krumme, Andres Polymers 2023 / art. 3979 <https://doi.org/10.3390/polym15193979> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Properties of retted hemp fibres for reinforcement of composites

Marrot, Laetitia; **Alao, Percy Festus; Kallakas, Heikko; Poltimäe, Triinu; Kers, Jaan; Mikli, Valdek; Mere, Arvo** GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020 / p. 13 : ill <http://fntdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

Puidu lõiketöötus

Kallakas, Heikko; Luga, Üllar; Riistop, Märt Puidutöötlemise õpik 2025 / lk. 12-96 : ill., fot https://www.ester.ee/record=b5714083*est <https://digikogu.taltech.ee/et/Item/32f67368-0b3f-4f3d-9c57-26b8d9d7bc93>

Saematerjali ja spooni kuivatus, puidu modifitseerimine

Kallakas, Heikko; Poltimäe, Triinu; Reiska, Rein; Riistop, Märt Puidutöötlemise õpik 2025 / lk. 172-237 : ill https://www.ester.ee/record=b5714083*est <https://digikogu.taltech.ee/et/Item/32f67368-0b3f-4f3d-9c57-26b8d9d7bc93>

Saematerjali ja spooni tootmine

Kallakas, Heikko; Riistop, Märt Puidutöötlemise õpik 2025 / lk. 94-171 : ill., fot https://www.ester.ee/record=b5714083*est <https://digikogu.taltech.ee/et/Item/32f67368-0b3f-4f3d-9c57-26b8d9d7bc93>

Tensile and surface hydrophobicity investigation of the novel synthesized cellulose derivative films

Kallakas, Heikko; Kilumets, Catherine; Tarasova, Elvira; Krasnou, Illia; Savest, Natalja; Gudkova, Viktoria; Ahmadian, Iman; Krumme, Andres; Kers, Jaan Research Square 2022 / 13 p <https://doi.org/10.21203/rs.3.rs-2191830/v1>

Tensile and surface wettability properties of the solvent cast cellulose fatty acid ester films

Kallakas, Heikko; Kattamanchi, Tanuj; Kilumets, Catherine; Tarasova, Elmira; Krasnou, Illia; Savest, Natalja; **Ahmadian, Iman; Kers, Jaan;** Krumme, Andres Polymers 2023 / art. 2677 <https://doi.org/10.3390/polym15122677> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Uued inimesed ja positsioonid

Delpeche-Ellmann, Nicole Camille; Leoste, Janika; Kallakas, Heikko; Püüa, Margus; Spalatu, Nicolae; Reinsalu, Kristo Mente et Manu 2024 / lk. 60-63 : fot https://www.ester.ee/record=b1242496*est