

Allkirjastati roheasfaldi rakendusuuuringute leping

Reinla, Siim Viimsi Teataja 2024 / Lk. 3 <https://dea.digar.ee/article/viimsiteataja/2024/03/08/4.3>

Antibacterial Properties of Heteronium Lignin Containing Materials Against ESKAPE Pathogens

Mohan, Mahendra Kothottil; Bragina, Olga; Mosjakina, Sofija; Raimundo, Jean-Manuel; Karpichev, Yevgen ChemRxiv 2025 <https://doi.org/10.26434/chemrxiv-2025-zmlgw-v2>

Aqueous photocatalytic oxidation of lignin : the influence of mineral admixtures

Portjanskaja, Elina; Preis, Sergei International journal of photoenergy 2007 / [7] p

Aqueous photocatalytic oxidation of lignin : the influence of mineral admixtures

Portjanskaja, Elina; Preis, Sergei; Kallas, Juha Solar Chemistry and Photocatalysis : Environmental Applications 2006 (SPEA) : Spain, Las Palmas, November 2006 2006 / ? p

Aqueous photocatalytic oxidation of lignin and humic acids with supported TiO₂

Portjanskaja, Elina; Preis, Sergei; Kallas, Juha International journal of photoenergy 2006 / [7] p

Aqueous photocatalytic oxidation of lignin and humic substances with supported TiO₂

Portjanskaja, Elina; Preis, Sergei; Kallas, Juha 6th European Meeting Environmental Chemistry : December 6-10, 2005, Belgrade, Serbia and Montenegro 2005 / p. 145

Carbon materials obtained from self-binding sugar cane bagasse and deciduous wood residues plastics

Zandersons, J.; Gravitis, J.; Zhurins, A.; Kokorevics, A.; Kallavus, Urve; Suzuki, C.K. Biomass and bioenergy 2004 / 4, p. 345-360 : ill https://www.fem.unicamp.br/~liqcqits/publications/paper_files/BiomBioe2004v26-4p345-360_Zandersons.pdf

Characterization of bacterial dye-decolorizing peroxidases = Bakteriaalsete värvi pleegitavate peroksüdaaside iseloomustamine

Pupart, Hegne 2024 https://www.ester.ee/record=b5713840*est <https://digikogu.taltech.ee/et/Item/d40055e9-2600-4e49-8aec-3f561267772e> <https://doi.org/10.23658/taltech.72/2024>

Characterization of organosolv lignins and their application in the preparation of aerogels

Jõul, Piia; Ho, Thi Thuy Tran; Kallavus, Urve; Konist, Alar; Leiman, Kristiina; Salm, Olivia-Stella; Kulp, Maria; Koel, Mihkel; Lukk, Tiit Materials 2022 / art. 2861 <https://doi.org/10.3390/ma15082861> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Characterization of the ensemble of lignin-remodeling DyP-type Peroxidases from Streptomyces coelicolor A3(2)

Pupart, Hegne; Jõul, Piia; Bramanis, Melissa Ingela; Lukk, Tiit Energies 2023 / art. 1557, 15 p. : ill <https://doi.org/10.3390/en16031557> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Chemicals and lignin from black liquor by a wet oxidation process

Melin, Johan Kristian; Mudassar, Hassan Raja; Hurme, Markku; Koskinen, Jukka; Kallas, Juha SustainChem2011 : International Conference on Materials and Technologies for Green Chemistry jointly with Workshop of COST Action CM0903 (UBIOCHEM-II) : September 5-9, 2011, Tallinn, Estonia : abstract book and program 2011 / p. 154

Chloromethylation of lignin as a route to functional material with catalytic properties in cross-coupling and click reactions

Mohan, Mahendra Kothottil; Silenko, Oleg; Krasnou, Illia; Volobujeva, Olga; Kulp, Maria; Ošeka, Maksim; Lukk, Tiit; Karpichev, Yevgen ChemSusChem 2024 / art. e202301588 <https://doi.org/10.1002/cssc.202301588> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Chloromethylation of lignin as a route to functional material with catalytic properties in cross-coupling and click reactions : preprint

Mohan, Mahendra Kothottil; Silenko, Oleg; Krasnou, Illia; Volobujeva, Olga; Kulp, Maria; Ošeka, Maksim; Lukk, Tiit; Karpichev, Yevgen ChemRxiv 2023 / 20 p <https://doi.org/10.26434/chemrxiv-2023-w98xc>

A compared study of esterified lignin for thermoplastic applications

Ho, Tran; Mohan, Mahendra Kothottil; Köster, Carmen; Järvik, Oliver; Kulp, Maria; Karpichev, Yevgen Baltic Polymer Symposium 2025 : 23d International Scientific Conference BPS 2025 "Baltic Polymer Symposium 2025" : Book of abstracts 2025 / p. 83 <http://woodval.taltech.ee/wp-content/uploads/2025/07/BPS2025-Book-of-abstracts.pdf>

Direct conversion of lignin into antibacterial carbon nanomaterials without organofunctionalization

Mikhrallieva, Albina; Bragina, Olga; Zaitsev, Volodymyr; Karpichev, Yevgen Baltic Polymer Symposium 2025 : 23d International Scientific Conference BPS 2025 "Baltic Polymer Symposium 2025" : Book of abstracts 2025 / p. 52 <http://woodval.taltech.ee/wp-content/uploads/2025/07/BPS2025-Book-of-abstracts.pdf>

Dye-decolorizing peroxidase of Streptomyces coelicolor (ScDyPB) exists as a dynamic mixture of kinetically different oligomers

Pupart, Hegne; Vastšjonok, Darja; **Lukk, Tiit**; Väljamäe, Priit ACS Omega 2024 / p. 3866-3876 : ill
<https://doi.org/10.1021/acsomega.3c07963> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Dye-decolorizing peroxidases from *Streptomyces coelicolor* show organosolv lignin remodeling activity

Pupart, Hegne; Ojangu, Eve-Ly; Zovo, Kairit; **Lukk, Tiit** FEBS Open Bio 2021 / p. 63
<https://febs.onlinelibrary.wiley.com/doi/epdf/10.1002/2211-5463.13206> <https://doi.org/10.1002/2211-5463.13206>

Efficient lignin fractionation from Scots pine (*Pinus sylvestris*) using ammonium-based protic ionic liquid : process optimization and characterization of recovered lignin

Khan, Sharib; Rauber, Daniel; Shanmugam, Sabarathinam; Kay, Christopher W. M.; **Konist, Alar**; Kikas, Timo Polymers 2022 / art. 4637, 13 p. : ill <https://doi.org/10.3390/polym14214637> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Enhanced bioremediation of pulp effluents through improved enzymatic treatment strategies : a greener approach

Dixit, Mandeep; Gupta, Guddu Kumar; **Usmani, Zeba**; Sharma, Minaxi; Shukla, Pratyosh Renewable and Sustainable Energy Reviews 2021 / Art. 111664 <https://doi.org/10.1016/j.rser.2021.111664> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Enzymatic conversion of hydrolysis lignin - a potential biorefinery approach

Khan, Sharib; Puss, Kait Kaarel; **Lukk, Tiit**; Loog, Mart; Kikas, Timo; Salmar, Siim Energies 2023 / art. 370, 13 p. : ill
<https://doi.org/10.3390/en16010370> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Estonia's transport authority testing out bioasphalt on national road

Kenk, Olev news.err.ee 2024 [Estonia's transport authority testing out bioasphalt on national road](#)

Fibenol katsetab ligniini sobivust bituumeni asendajana

Kontson, Karli; Peebo, Karl Teejuht : maal, vees ja õhus : Transpordiameti digiajakiri 2022 / lk. 93-98 : fot
<https://transpordiamet.ee/digiajakiri/nr4#Teejuht> https://www.ester.ee/record=b5495900*est

Genome description of *Phlebia radiata* 79 with comparative genomics analysis on lignocellulose decomposition machinery of phlebioid fungi

Mäkinen, Mari; Kuuskeri, Jaana; Laine, Pia; **Smolander, Olli-Pekka** BMC genomics 2019 / art. 430, 22 p. : ill
<https://doi.org/10.1186/s12864-019-5817-8> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Green non-destructive approach for quantitation of hydroxyl groups in lignin using atr-ftir spectroscopy and chemometric methods

Salm, Olivia-Stella; Kudrjašova, Marina; Kulp, Maria Baltic Polymer Symposium 2025 : 23d International Scientific Conference BPS 2025 "Baltic Polymer Symposium 2025" : Book of abstracts 2025 / p. 74 <http://woodval.taltech.ee/wp-content/uploads/2025/07/BPS2025-Book-of-abstracts.pdf>

Greener protocol for chloromethylation of lignin and its diverse applications

Mohan, Mahendra Kothottil; Karpichev, Yevgen 2024 MRS Spring Meeting & Exhibit : abstract book 2024 / 1 p
https://www.mrs.org/docs/default-source/meetings-events/spring-meetings/2024/2024-mrs-spring-meeting-abstract-program-3-28-2024.pdf?sfvrsn=d2ef1b09_10

Humiinainete ja ligniinide fotokatalüütiline oksüdatsioon veefaasis kinnitatud TiO₂-ga

Portjanskaja, Elina; Preis, Sergei; Kallas, Juha XXIX Eesti keemiapäevad : teaduskonverentsi ettekannete teesid = 29th Estonian Chemistry Days : abstracts of scientific conference 2005 / lk. 89

Imaveres paigaldati Eesti esimene roheasfalt

tehnika.postimees.ee 2023

Ligniini – puidutööstuse prügist tulevikumaterjaliks

Vaaks, Eveliis Trialoog 2025 <https://trialoog.taltech.ee/ligniini-puidutoostuse-prugist-tulevikumaterjaliks/>

Ligniini sisaldava asfaltseguga on maailmas kaetud juba kümneid katselõike

Kukebal, Johannes Teejuht : maal, vees ja õhus : Transpordiameti digiajakiri 2022 / lk. 99-103 : fot
<https://transpordiamet.ee/digiajakiri/nr4#Teejuht> <https://digikogu.taltech.ee/et/Item/78229d9d-fbbe-46b2-90f2-572ebb288bf1>

Lignin ozonation at different pH values of water [Electronic resource]

Kuosa, Markku; **Kallas, Juha** Environmental Applications of Advanced Oxidation Processes : Chania, September 7-9, 2006 : book of abstracts 2006 / [CD-ROM]

Lignin valorization via chloromethylation as a versatile approach towards sustainable materials

Mohan, Mahendra Kothottil; Karpichev, Yevgen Baltic Polymer Symposium 2025 : 23d International Scientific Conference BPS 2025 "Baltic Polymer Symposium 2025" : Book of abstracts 2025 / p. 38 <http://woodval.taltech.ee/wp-content/uploads/2025/07/BPS2025->

Lugeja küsib: miks puit alati tumedamaks läheb? [Võrguväljaanne]

novaator.err.ee 2021 / fot [Lugeja küsib: miks puit alati tumedamaks läheb?](#)

Novel softwood lignin esters as advanced filler to PLA for 3D printing

ACS omega 2024 / p. 44559-44567 <https://doi.org/10.1021/acsomega.4c06680> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Novel treatment method for black liquor and biomass hydrolysate with partial wet oxidation

Muddassar, Hassan Raja; Melin, Kristian; Kuppa, Sarada; Koskinen, Jukka; Hurme, Markku; De Kokkonen, Daniela; **Kallas, Juha** Cellulose chemistry and technology 2015 / p. 347-360 : ill [https://www.cellulosechemtechnol.ro/pdf/CCT3-4\(2015\)/p.347-360.pdf](https://www.cellulosechemtechnol.ro/pdf/CCT3-4(2015)/p.347-360.pdf) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Ozonation of lignin aqueous solutions

Kamenev, Inna; Velts, Olga; Viiraja, Andres; Häkkinen, Antti; **Kallas, Juha** Executive summaries : 5th International Conference. 10th IOA-EA3G Berlin Conference on Oxidation Technologies for Water and Wastewater Treatment : Berlin, Germany, March 30 - April 2, 2009 2009 / p. 39-40/PC223(1-8)

Peep Pitk: läbipaistvus tootmises ja tarneahelates peab saama normiks

Pitk, Peep delfi.ee 2024 [Peep Pitk: läbipaistvus tootmises ja tarneahelates peab saama normiks](#)

Photocatalytic oxidation of natural polymers in aqueous solutions = Looduslike polümeeride fotokatalüütiline oksüdatsioon vesilahustes

Portjanskaja, Elina 2009 https://www.ester.ee/record=b2491725*est

Preparation and characterization of lignin-derived carbon aerogels

Jõul, Piia; Järvik, Oliver; Lees, Heidi; Kallavus, Urve; Koel, Mihkel; Lukk, Tiit Frontiers in chemistry 2023 / art. 1326454 <https://doi.org/10.3389/fchem.2023.1326454> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Processing of lignocellulose in ionic liquids : a cleaner and sustainable approach

Qasim, Umair; Rafiq, Sikander; Jamil, Farrukh; Ahmed, Ashfaq; Ali, Touqeer; **Kers, Jaan;** Khurram, M. Shahzad; Hussain, Murid; Inayat, Abrar; Park, Young-Kwon Journal of cleaner production 2021 / art. 129189, 17 p. : ill <https://doi.org/10.1016/j.jclepro.2021.129189> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Rapid semi-quantitative determination of aspen lignin in lignocellulosic products

Kallavus, Urve; Kärner, Kristi; Kärner, Kärt; Elomaa, Matti Antero Proceedings of the Estonian Academy of Sciences 2015 / p. 105-112 : ill <https://doi.org/10.3176/proc.2015.1S.06> https://artiklid.elnet.ee/record=b2716368*est [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Roheasfalt on leidnud koha ka ülikoolide lõputöödes

jarvateataja.postimees.ee 2023 [Roheasfalt on leidnud koha ka ülikoolide lõputöödes](#)

Studies on the structure of the steam explosion and swelling-solvation cellulose and lignin using ¹³C CP/MAS NMR

Gravitis, Janis; Andersons, Bruno; Teeäär, Raivo; **Kallavus, Urve** Third European Workshop on Lignocellulosics and Pulp (EWLP '94), Stockholm, Sweden, August 28-31, 1994 : extended abstracts 1994 / p. 5-7: ill

Sustainable formulations from biomass : making lignin processing greener

Karpichev, Yevgen Current chemical problems (CCP-2024) : book of abstracts 2024 / p. 80

Synthesis and antibacterial properties of lignin-based amino and quaternary ammonium surfactants

Kothottil Mohan, Mahendra; Duvanova, Ella; Lukk, Tiit; Karpichev, Yevgen 5th International Caparica Symposium on Nanoparticles, Nanomaterials and Applications 2022 : book of abstracts 2022 / p. 208

Synthesis and antibacterial properties of lignin-based quaternary ammonium and phosphonium salts

Mohan, Mahendra Kothottil; Kaur, Harleen; **Duvanova, Ella;** Rosenberg, Merilin; Dahlem, Marcos; Ivask, Angela; Raimundo, Jean-Manuel; **Lukk, Tiit; Karpichev, Yevgen** International Conference EcoBalt 2023 "Chemicals&Environment" 2023 / 2 p. <https://doi.org/10.3390/proceedings2023092058>

Synthesis and antibacterial properties of novel quaternary ammonium lignins

Mohan, Mahendra Kothottil; Kaur, Harleen; Rosenberg, Merilin; **Duvanova, Ella; Lukk, Tiit;** Ivask, Angela; **Karpichev, Yevgen** ACS omega 2024 / p. 39134-39145 : ill <https://doi.org/10.1021/acsomega.4c06000> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

TalTechi teedelaboris uuritakse keskkonnasõbralikuma asfaldi tootmise võimalusi

Lill, Kristjan ehitusleht.ee 2025 [TalTechi teedelaboris uuritakse keskkonnasõbralikuma asfaldi tootmise võimalusi](#)

The cost evaluation of advanced oxidation processes in laboratory and pilot-scale experiments

Kritševskaja, Marina; Klauson, Deniss; Portjanskaja, Elina; Preis, Sergei Ozone : science & engineering 2011 / p. 211-223
<https://www.tandfonline.com/doi/full/10.1080/01919512.2011.554141>

The influence of titanium dioxide modifications on photocatalytic oxidation of lignin and humic acids

Portjanskaja, Elina; Stepanova, Kristina; Klauson, Deniss; Preis, Sergei Catalysis today 2009 / 1/2, p. 26-30 : ill
<https://www.sciencedirect.com/science/article/abs/pii/S0920586109000029>

The influence of titanium dioxide modifications on photocatalytic oxidation of lignin and humic acids

Portjanskaja, Elina; Stepanova, Kristina; Klauson, Deniss; Preis, Sergei The 5th European Meeting on Solar Chemistry and Photocatalysis : Environmental Applications (SPEA5) : 04-08 October 2008, Palermo, Italy : book of abstracts 2008 / p. PP3.37

Transpordiamet katsetab Koeru lähisel nn roheasfalti

Kenk, Olev err.ee 2024 [Transpordiamet katsetab Koeru lähisel nn roheasfalti](#)

Tuning ester derivatives of organosolv vs technical lignin for improved thermoplastic materials

Mohan, Mahendra Kothottil; Ho, Thi Thuy Tran; Köster, Carmen; Järvik, Oliver; Kulp, Maria; Karpichev, Yevgen Faraday Discussions 2025 <https://doi.org/10.1039/d5fd00068h>

Utilization of phenolic lignin dimer models for the quantification of monolignols in biomass and in its derived organosolv lignins via thioacidolysis and GC-MS analysis

Ho, Thi Thuy Tran; Salm, Olivia-Stella; Lukk, Tiit; Kulp, Maria Analytical methods 2025 / p. 3283-3289
<https://doi.org/10.1039/D5AY00073D>

Water delignification by advanced oxidation processes : homogeneous and heterogeneous Fenton and H2O2 photo-assisted reactions

Makhotkina, O.; Preis, Sergei; Parkhomchuk, E. Applied catalysis B : environmental 2008 / 3/4, p. 821-826 : ill
<https://www.sciencedirect.com/science/article/pii/S0926337308002348>

Vene naftast bituumeni asendaks osaliselt puidujääk

Kontson, Karli novaator.err.ee 2024 [Vene naftast bituumeni asendaks osaliselt puidujääk](#)

Wet oxidation of debarking water : changes in lignin content and biodegradability

Kindsigo, Merit; Kallas, Juha Environmental chemistry letters 2009 / 2, p. 121-126

Wet oxidation of recalcitrant lignin water solution : experimental and reaction kinetics [Electronic resource]

Kindsigo, Merit; Hautaniemi, Marjaana; Kallas, Juha Environmental Applications of Advanced Oxidation Processes : Chania, September 7-9, 2006 : book of abstracts 2006 / [CD-ROM] <https://link.springer.com/article/10.1007/s10311-008-0151-4>

Wet oxidation of recalcitrant lignin water solutions : experimental and reaction kinetics

Kindsigo, Merit; Hautaniemi, Marjaana; Kallas, Juha Environmental chemistry letters 2009 / 2, p. 155-160
<https://link.springer.com/article/10.1007/s10311-008-0151-4>

Ülemiste keskuse roheasfalt: esimene eksperiment õnnestus, nüüd tuleb isegi tähtsam katse = «Зеленый асфальт» центра Ülemiste: первый эксперимент удался

goodnews.ee 2023 [Ülemiste keskuse roheasfalt: esimene eksperiment õnnestus, nüüd tuleb isegi tähtsam katse «Зеленый асфальт» центра Ülemiste: первый эксперимент удался](#)

Исследование совместимости лигнина с геницеллюлозами в их смесях методом сканирующей электронной микроскопии

Andersons, Bruno; Kallavus, Urve; Grāvītis, Jānis Химия древесины 1984 / с. 106-108 : ил https://www.ester.ee/record=b2158897*est

Коалесценция лигнина в результате взрывного автогидролиза

Polmanis, A.; Kulkevica, I.; Grāvītis, Jānis; Kallavus, Urve 7-я Всесоюзная конференция по химии и использованию лигнина : тезисы докладов 1987 / с. 41-42 https://www.ester.ee/record=b3798415*est

Связывание серы золой и шлаками венгерских каменных и бурых углей и лигнитов

Remeni, K. Исследование работы парогенераторов электростанций 1987 / с. 17-22