

Projekta Izp-2019/1-0390 rezultāti

Dabiska bioplastmasa no lignīna, hemicelulozes un celulozes

Oriģināli zinātniskie raksti, kuru citēšanas indekss sasniedz vismaz 50 procentus no nozares vidējā citēšanas indeksa, kas iesniegti, vai pieņemti publicēšanai Web of Science Core Collection, vai SCOPUS datubāzēs iekļautajos žurnālos vai konferenču rakstu krājumos:

1. Beluns, S.; Gaidukovs, S.; Platnieks, O.; Gaidukova, G.; Mierina, I.; Grase, L.; Starkova, O.; Brazdausks, P.; Thakur, V. From Wood and Hemp Biomass Wastes to Sustainable Nanocellulose Foams. - Industrial Crops and Products, 2021, <https://doi.org/10.1016/j.indcrop.2021.113780>
2. Budtova, T.; Aguilera, D.; Beluns, S.; Berglund, L.; Chartier, C. ...Platnieks, O. ...Biorefinery approach for aerogels. - Polymers, 2020, <https://doi.org/10.3390/polym12122779>
3. Barkane, A.; Platnieks, O.; Grase, L.; Gaidukovs, S. Simultaneous wettability and stiffness control of UV-curing vegetable oil resin composites by lignocellulosic components. - Polymer, 2022, <https://doi.org/10.1016/j.polymer.2022.125154>
4. Beluns, S.; Platnieks, O.; Gaidukovs, S.; Starkova, O.; Sabalina, A.; Grase, L.; Thakur, V.; Gaidukova, G. Lignin and Xylan as Interface Engineering Additives for Improved Environmental Durability of Sustainable Cellulose Nanopapers. - International Journal of Molecular Sciences, 2021, <https://doi.org/10.3390/ijms222312939>
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6. Briede, S.; Jurinovs, M.; Nechausov, S.; Platnieks, O.; Gaidukovs, S. State-of-the-art UV-assisted 3D Printing via Rapid Syringe - Extrusion Approach for Photoactive Vegetable Oil Acrylates Produced in One-step Synthesis;. - Molecular Systems Design & Engineering, 2022, <https://doi.org/10.1039/D2ME00085G>
7. Beluns, S.; Gaidukovs, S.; Platnieks, O.; Grase, L.; Gaidukova, G.; Thakur, V. Hemp-based bioplastics with reversible cellulose thermal crosslinking: Towards sustainable materials and adhesives. - International Journal of Biological Macromolecules, 2022, <https://doi.org/10.1016/j.ijbiomac.2023.125055>
8. Platnieks, O.; Briede, S.; Grase, L.; Gaidukova, G.; Kumar, V. Thakur, Gaidukovs S. Fully bio-based thermoset composites from UV curable prepreps: Vegetable Oil Acrylate Impregnated Hemp Nanopaper. - Industrial Crops & Products, 2022, <https://doi.org/10.1002/pc.27521>

9. Barkane, A.; Kampe, E.; Gaidukovs, S. New reinforcing approach for bio-based UV-curing resins: hybrid lignocellulose fillers with improved synergy and wood structure mimics. - ACS Sustainable Chemistry & Engineering, 2022, <https://doi.org/10.1021/acssuschemeng.2c07288>
10. Nabels-Sneiders, M.; Platnieks, O.; Grase, L.; Gaidukovs, S. Lamination of Cast Hemp Paper with Bio-Based Plastics for Sustainable Packaging: Structure-Thermomechanical Properties Relationship and Biodegradation Studies. - Journal of Composites Science, 2022, <https://doi.org/10.3390/jcs6090246>
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Recenzētas zinātniskās monogrāfijas un to manuskripti:

1. Gaidukovs, S.; Barkane, A. Chapter 16 Smart Wood-like Materials Based on Lignocellulose Nanoparticles, Cellulose Nanoparticles: Volume 1: Chemistry and Fundamentals; RSC Books; Royal Society of Chemistry, <https://pubs.rsc.org/en/content/chapter/bk9781788017930-00402/978-1-78801-793-0>