

GOURAV KAMBOJ

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EDUCATION

2022: Ph.D. Wood Processing and Forest Machinery, Czech University of Life Science, Prague, Czech Republic

2014: M.Sc. Wood Science & Technology, Forest Research Institute, Dehradun, India

201: B.Sc. Physics, Chemistry Mathematics, Kurukshetra University Kurukshetra, India

RESEARCH EXPERIENCE

- **October 2023 – Present:** Postdoctoral Research Associate, Center of Renewable Carbon, University of Tennessee, Knoxville, TN

(¹Development of Functional Lignin Additives to Replace Perfluorinated Compounds in Omniphobic Molded Fiber and Paper Packaging Products

(²Production and Valorization of Hemicellulose Biorefining Streams as Functional Feed Ingredients for the Poultry Industry)

- Mechanical characterization of nanocellulose (CNF, CNC) reinforced PVAc and PUR adhesive.
- Modification of nanocellulose to improve the dispersion in hydrophobic polymers.

ACADEMIC INTERESTS

- Lignin additives to replace PFAS
- Production and valorization of hemicellulose
- Nanocellulose production from agriculture waste
- Nanocellulose reinforced Thermoplastic Adhesive
- Biodegradable packaging material
- Chemical Modification of Nanocellulose

WORK EXPERIENCE

- Quality Controller wood products (2014 - 2018) Fabindia Overseas Pvt. Ltd, Delhi, India

SKILLS

- Statistical analysis using 'Statistica software' as well as 'R Program'
- Chemical characterization using FTIR and DSC besides basic wet chemistry
- Mechanical characterization using INSTRON UTM (Universal testing machine)
- Chemical modification of nanocellulose
- SEM analysis
- FEM Analysis (Abaqus) – basics
- DSC Analysis
- Soxhlet Apparatus, Sonication, Homogenizer

GRANTS

- Ph.D. project grant for independent project from MSMT, Czech University of Life Science, Czech Republic

PUBLICATIONS

Peer reviewed articles

- **Kamboj, G., et al.** (2022). Comparative Study on the Properties of Cellulose Nanofiber (CNF) and Cellulose Nanocrystals (CNC) Reinforced 1C-PUR Adhesive bonded Wooden Joints. *Construction and Building Material*, 344, 128262, <http://dx.doi.org/10.1016/j.conbuildmat.2022.128262>
- **Kamboj, G., et al.** (2022). Effect of nanocellulose (CNF and CNC) reinforcement on strength and stiffness of PVA bonded joints. *Composite Structure*, 295, 115821. <https://doi.org/10.1016/j.compstruct.2022.115821>.
- **Kamboj, G., et al.** (2020). Numerical and experimental investigation on the elastic stiffness of glued dovetail joint. *Construction and Building Materials*, 263:120613. [DOI: 10.1016/j.conbuildmat.2020.120613](https://doi.org/10.1016/j.conbuildmat.2020.120613)
- Rezaei, F. Gaff, M. Sethy, A. K. Niemz, P. **Kamboj, G., et al.** (2020). Surface quality of measurement by contact and laser methods on thermally modified after plain milling. *International Journal of Advance Manufacturing Technology*, 110(2). [DOI: 10.1007/s00170-020-05983-7](https://doi.org/10.1007/s00170-020-05983-7)
- Corleto, R. Gaff, M. Niemz, P. Sethy, A. K. Todaro, L. Ditomasso, G. Rezaei, F. Sikora, A. Kaplan, L. Das, S. **Kamboj, G., et al.** (2020). Effect of thermal modification on properties and milling behaviour of african Padauk (*Pterocarpus soyauxii* Taub) wood. *Journal of Materials Research and Technology* 9(4): 9315-9327. [DOI: 10.1016/j.jmrt.2020.06.018](https://doi.org/10.1016/j.jmrt.2020.06.018)
- **Kamboj, G., et al.** (2020). Surface quality and cutting power requirement after edge milling of thermally modified meranti (*Shorea spp.*) wood. *Journal of Building Engineering*, 29, 101213. [DOI: 10.1016/j.jobbe.2020.101213](https://doi.org/10.1016/j.jobbe.2020.101213)
- Ditommaso, G. Gaff, M. Kacík, F. Sikora, A. Sethy, A. Corleto, R. Rezaei, F. Kaplan, L. Kubs, G. Das, S. **Kamboj, G., et al.** (2020). Interaction of technical and technological factors on qualitative and energy/ ecological/economic indicators in the production and processing of thermally modified merbau wood. *Journal of Cleaner Production*, 252(119793). [DOI: 10.1016/j.jclepro.2019.119793](https://doi.org/10.1016/j.jclepro.2019.119793)
- Gaff, M. Rezaei, F. Sikora, A. Hýsek, Š. Sedlecký, M. Ditommaso, G. Corleto, R. **Kamboj, G., et al.** (2019). Interaction of monitored factors upon tensile glue shear strength on laser cut wood. *Composite Structures*, 2019, 234:111679. [DOI: 10.1016/j.compstruct.2019.111679](https://doi.org/10.1016/j.compstruct.2019.111679)
- **Kamboj, G. et al.** (2019). Influence of Geometry on the stiffness of corner finger joint. *Bioresources* 14(2): 2946-2960 [DOI: 10.15376/biores.14.2.2946-2960](https://doi.org/10.15376/biores.14.2.2946-2960)
- Záborský, V. **Kamboj, G., et al.** (2018). Effect of selected factors on spruce dowel joint stiffness. *Bioresources*, 2018, 14(1):14. [DOI: 10.15376/biores.14.1.1127-1140](https://doi.org/10.15376/biores.14.1.1127-1140)

Citations: 109, **h-index:** 6