

DESIGNING CELLULOSE FOR THE FUTURE: CELLULOSE - THE NEXT SUPER MATERIAL?

Wood based cellulose is a renewable and recyclable raw material that can be used in varying ways. Even now cellulose is used – besides in the traditional paper and packaging industry – in technical textiles, clothing and food industry. The on going material research and new production methods will significantly multiply the usage of the wood based biomaterials in the future.

The Finnish research of biomaterials is known to be top class, but the technological innovations are still far away from commercialized products. When material scientists, designers and business professionals are collaborating in early stages of the research process, the research progresses more efficiently towards end products. "It's amazing to see how immense the potential uses of nanocellulose are in the future – it can be made into soft materials, hard materials, transparent materials and even into materials with fire retarding capabilities" says Designer In Residence Pirjo Kääriäinen from Aalto University.

"Specialists from different backgrounds, combined with highly experimental working methods are now leading to completely new knowledge. This knowledge we have to take into use as widely and as soon as possible. The concept of circular economy and the growth of more sustainable consumption habits among consumers are increasing the demand for bio-based materials in the future. This gives Finland a huge potential to be the world leader in bio-based material knowledge and development" says Program Leader Anna Suurnäkki from VTT, Technical Research Center of Finland Ltd.

The exhibition stand Designing Cellulose for the Future at the SHOWROOM event is by the Design Driven Value Chains in the World of Cellulose (DWoC) research project that combines design and material science.

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DWoC (Design Driven Value Chains in the World of Cellulose) is a multidisciplinary research collaboration project funded by Tekes (the Finnish Funding Agency for Innovation) focused on finding new and innovative applications for cellulosic materials. The partners in the project are: the Technical Research Centre of Finland VTT, Aalto University, Tampere University of Technology and the University of Vaasa.

DESIGN DRIVEN VALUE CHAINS IN THE WORLD OF CELLULOSE DWoC