

NANOCELLULOSE:

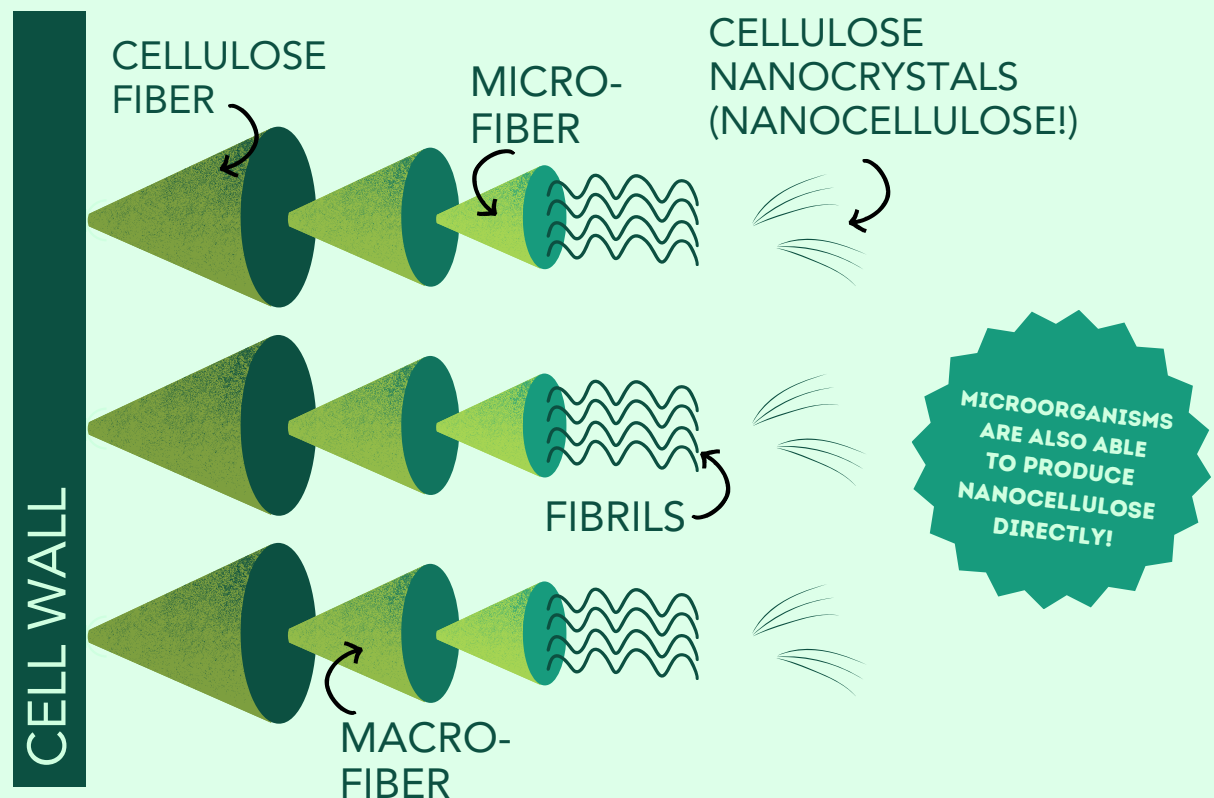
bye bye, plastic!

WHAT IS IT?

Nanocellulose derives from cellulose, which is what plants rely on to maintain the strength and structure of their cell walls.

Scientists have been aware of the tiny microfibers (nanocellulose) that make up cellulose for centuries. With the help of technological advances, nanocellulose was discovered in the early 1980s.

Nanocellulose is a pseudo-plastic that derives from plants and possesses the property of specific kinds of fluids or gels that are generally thick in normal conditions.



HOW IS IT MADE?



Nanocellulose is extracted by taking raw material like wood, cotton, or hemp and mechanically pulping them to make homogenous “whisker-like” fibers. Then, it is gently mixed to form a paste. This paste can then be shaped or used to laminate surfaces, such as paper takeout boxes.

WHAT IS IT USED FOR?

Nanocellulose can be used in many fields, such as the food and beverage industry, biomedicine, pharmaceuticals, cosmetics, electronics, paper products, and oil recovery.

PROPERTIES

- biodegradable
- lightweight
- conductive
- non-toxic
- biocompatible (can be used in medical settings)
- gas impermeable
- produced in large quantity in a cost-effective manner
- tensile strength 8 times higher than steel
- cellulose is the most abundant polymer on Earth



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