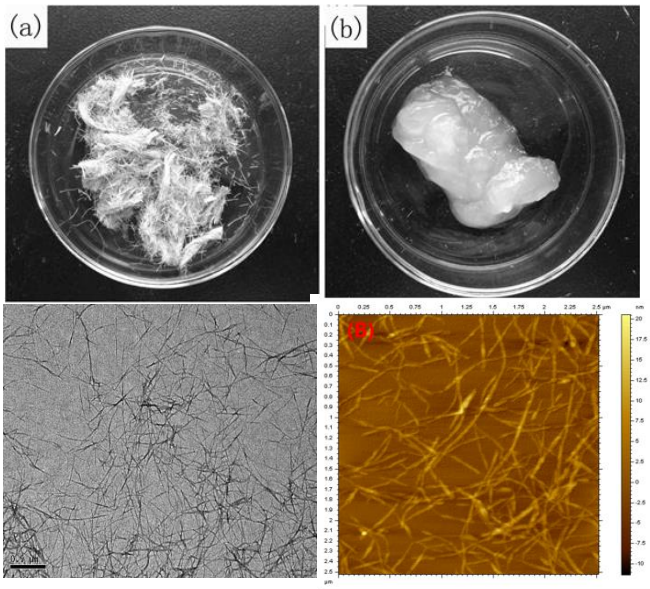
BoraRome

纳米纤维素

本产品纳米纤维素是以竹、木、棉、麻、海藻等多种天然生物质为原料，通过绿色组分分离、纳米纤丝化处理技术，开发出的具有轻质、高强、可再生、生物可降解、生物相容性好等性能的一种高长径比纤维状材料，可应用于造纸、透明薄膜、气凝胶、隐身衣、生物组织工程、柔性及可穿戴电子等产业。



植物原料及纳米纤维素（TEM/AFM照片）

➢ 特点

- 优异的机械性能
- 生物可降解
- 表面可控修饰
- 易于功能性复合

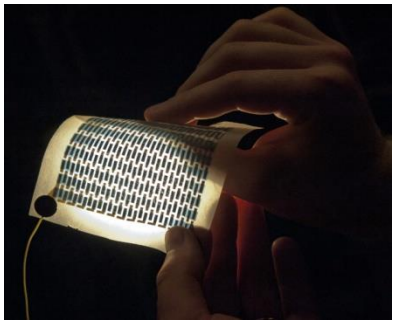
➢ 应用

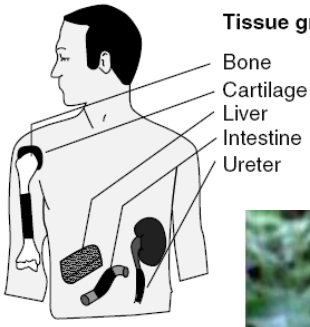
- 纳米复合材料：多孔材料，透明光学薄膜；
- 医学材料：组织工程支架，人工血管，人工皮肤；
- 柔性电子：柔性显示，柔性传感，柔性电极，能量存储、智能皮肤；
- 纸张和纸板：防伪标签；
- 其他领域：隐身衣，化妆品，催化剂，建筑材料，等；

➢ 指标

纳米纤维素技术指标

项目	指标
直径	20~40nm
长度	500~3000nm
结晶度	70~90%
固含量	0.1~3%
热稳定性	300℃
弹性模量	150GPa


柔性电子



生物组织工程


透明薄膜


隐身衣

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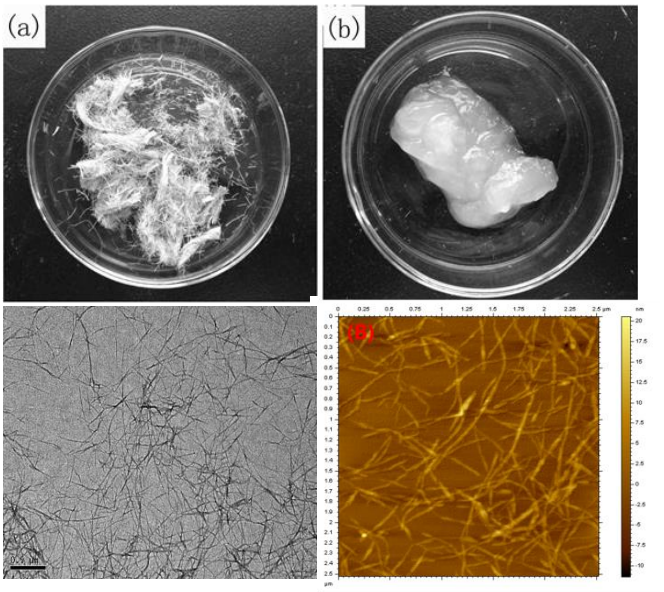
Nanocellulose

Nanocellulose was prepared using bamboo, hemp, cotton, wood, and seaweeds as source materials according to the removal of non-cellulosic components and the subsequent mechanical fibrillation. It could be used in the transparent film, aerogel, invisible cloak, tissue texture, flexible and wearable electronics.



Biomass resources and nanocellulose (TEM/AFM images)

➢ Characteristic

- Excellent mechanical properties;
- Biodegradability;
- Controlled surface modification;
- Easily Functionalized with other materials;

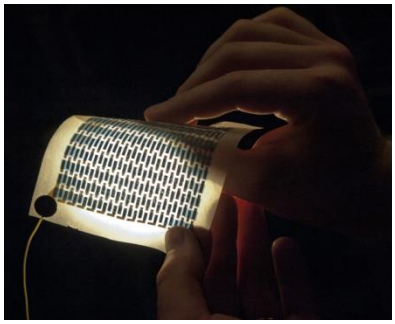
➢ Application

- Nanocomposites: porous materials, transparent optical film;
- Medical materials: tissue engineering scaffolds, blood vessel substitute, artificial skin;
- Flexible electronics: flexible display, flexible electrode, sensors, electrical skin;
- Paper & Board: anti-counterfeit label;
- Other industries: invisible cloak, cosmetics, catalysts, construction materials, etc;

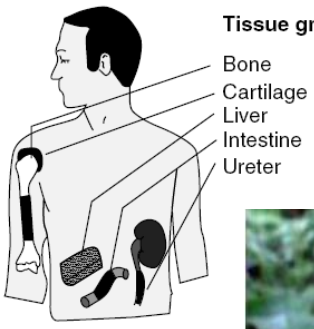
➢ Index

Nanocellulose

Item	Index
diameter	20~40nm
length	500~3000nm
crystallinity	70~90%
solid content	0.1~3%
thermal stability	300℃
elasticity modulus	150GPa



Flexible electronics



Tissue engineering

Transparent film

Invisible cloak

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