

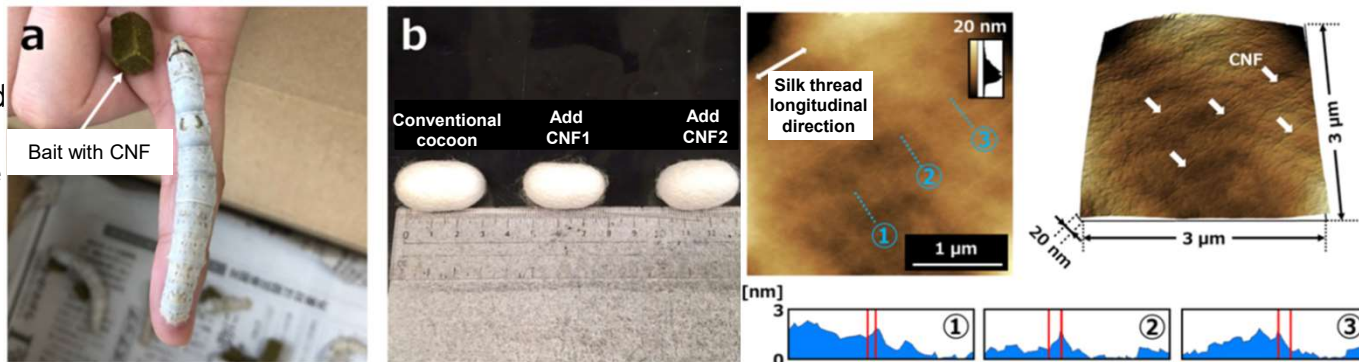
Silk thread with dispersion reinforced cellulose nanofibers and high strength / ultra low human impact on the environment

Realization of silk thread with uniformly dispersed CNF!
Increased mechanical strength by feeding techniques!!

Summary

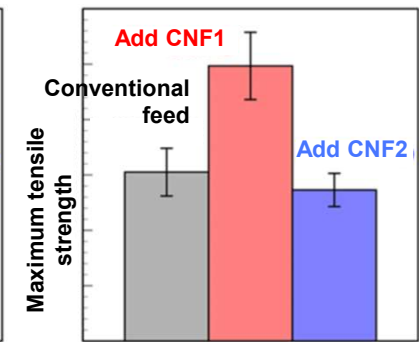
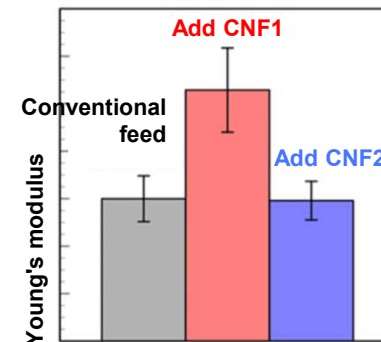
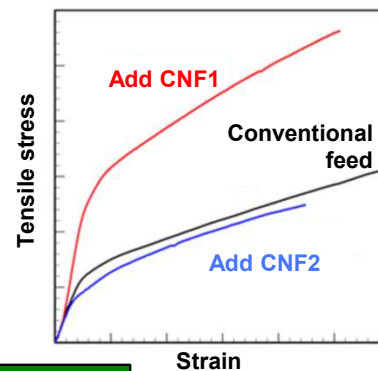
In the recent years, the cellulose nanofibers (CNF) are getting a lot of attention as a new material. It is developed as a filler which can improve mechanical strength, etc by dispersing on resin, etc. However, the orientation and the dispersion inside the material still remain as a challenge. The aim of this invention is to provide a technology to obtain a silk thread with uniformly dispersed CNF by focusing on these themes.

Effect



Effect / Application

- x1.5 to x2.0 increase of Young's modulus and tensile strength
- Uniformly dispersed CNF at nano-level
- Possible to create composite material with this silk thread and resin, etc.
- 100% naturally-derived and ultra low human impact on the environment
- 2 possibilities of usage : continuous fibers and short fibers



Patent Data Sheet

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