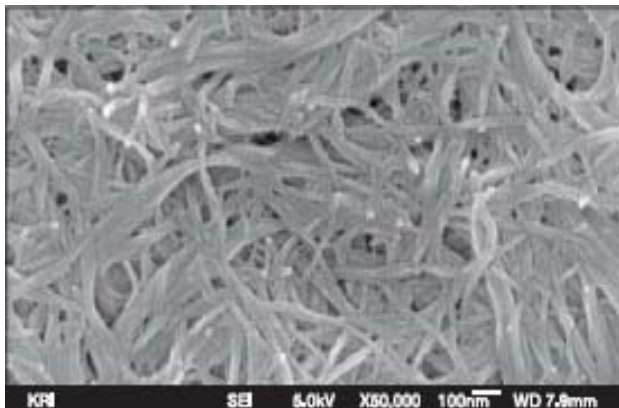


Cellulose Microfibril (CMF)

A unique technology has been developed for making cellulose microfibrils



SEM image of the cellulose microfibril

Specialties

- Process is simple. Just need to dissolve and remove the amorphous part and leave the high-crystalline microfibrils.
- The surface of CMF can easily be modified in the same time
- The CMF can disperse in the organic solvents or polymers after it is dried.



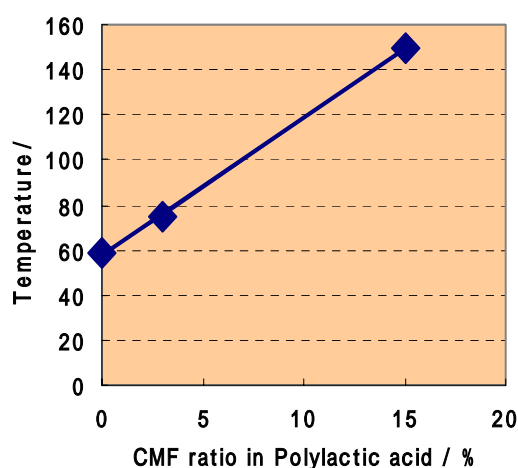
CMF powder

Application Fileds

- Reinforcement materials for plastics, coatings, adhesives
- Make it possible to produce the all-biomass-based composites
- Suitable for the molten processing
- Improve strength, modulus, heat-resistance



SEM image of the PLA/CMF



	Material	Color	Density	Strength (GPa)	Elasticity (GPa)	Thermal expansivity (ppm/°C)
Organic	Cellulose Microfibril	White	1.6	7.5	145	0.1
	Alamido (Kevlar) fiber	Chromatism	1.4	3	70	-4
	Zylon fiber	Chromatism	1.5	5.8	180	-6
Inorganic	Glass fiber	White	2.6	4.8	86	6
	Carbon fiber	Black	1.7	3~5	200~280	-1