



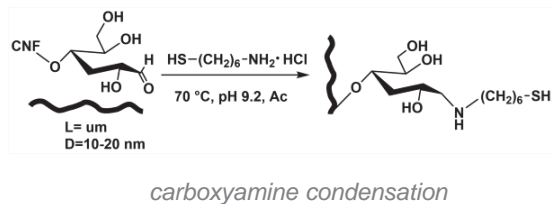
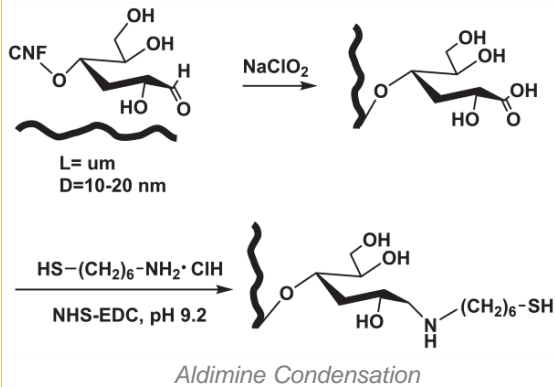
Ge Zhu

Ph.D. thesis (2018-2021)
LGP2 (Alain Dufresne)

End-modified CNF enhancement to nanocomposites (Natural Rubber) from a thiol-ene click reaction

Context

The end-modified CNF by aldimine condensation having the reactive thiol groups was introduced into the natural rubber (NR) composites, constructing the covalent linkage from the thiol-ene click reaction via the UV irradiation.

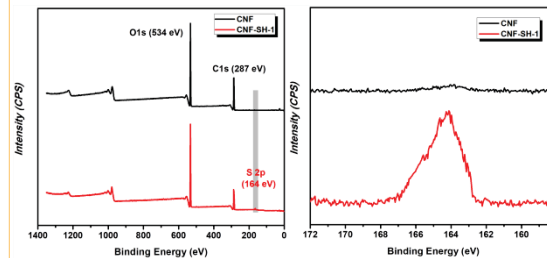
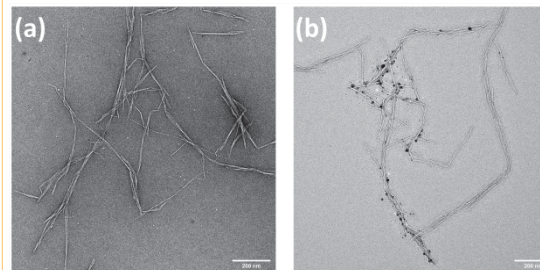
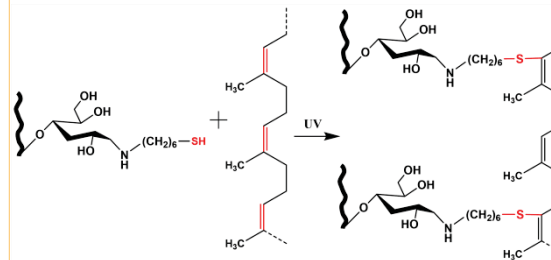


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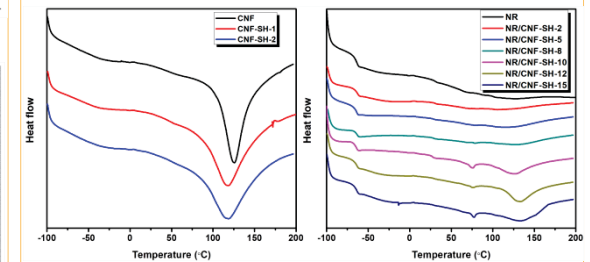
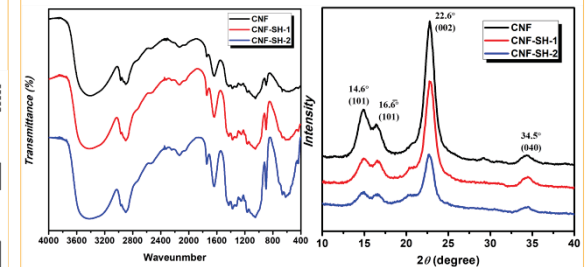


Methods

Click reaction with rubber



Results



The reactive enhancement of end-modified CNF to the elastomeric matrix effectively improved the mechanical properties of the obtained composites, particularly with the simultaneous enhancement of strength and toughness.

Conferences:

- Ge, ZHU & al. (2019). *Nanocellulose Winter School*. Grenoble.
- Ge, ZHU & al. (2019). *Forum International Industries*. PolyNat. Grenoble