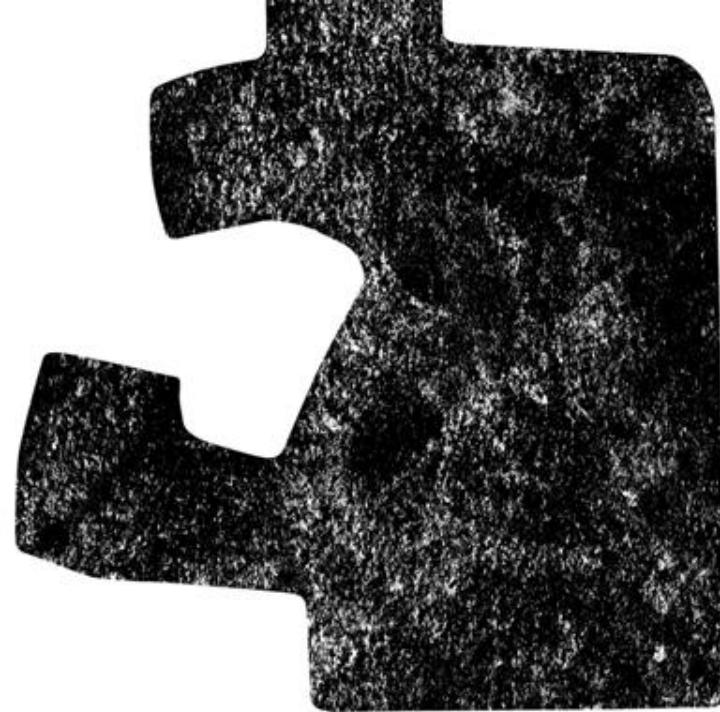


PLA reinforced with modified cellulose nanocrystals

Eduardo Robles, Iñaki Urruzola, Jalel Labidi,
Luis Serrano

University of the Basque Country
Chemical and Environmental Engineering Department
Plaza Europa 1, 20018. Donostia-San Sebastian, Spain.

PhD candidate: jerobles001@ehu.eus/ Advisors✉: jalel.labidi@ehu.eus , luis.serrano@ehu.eus

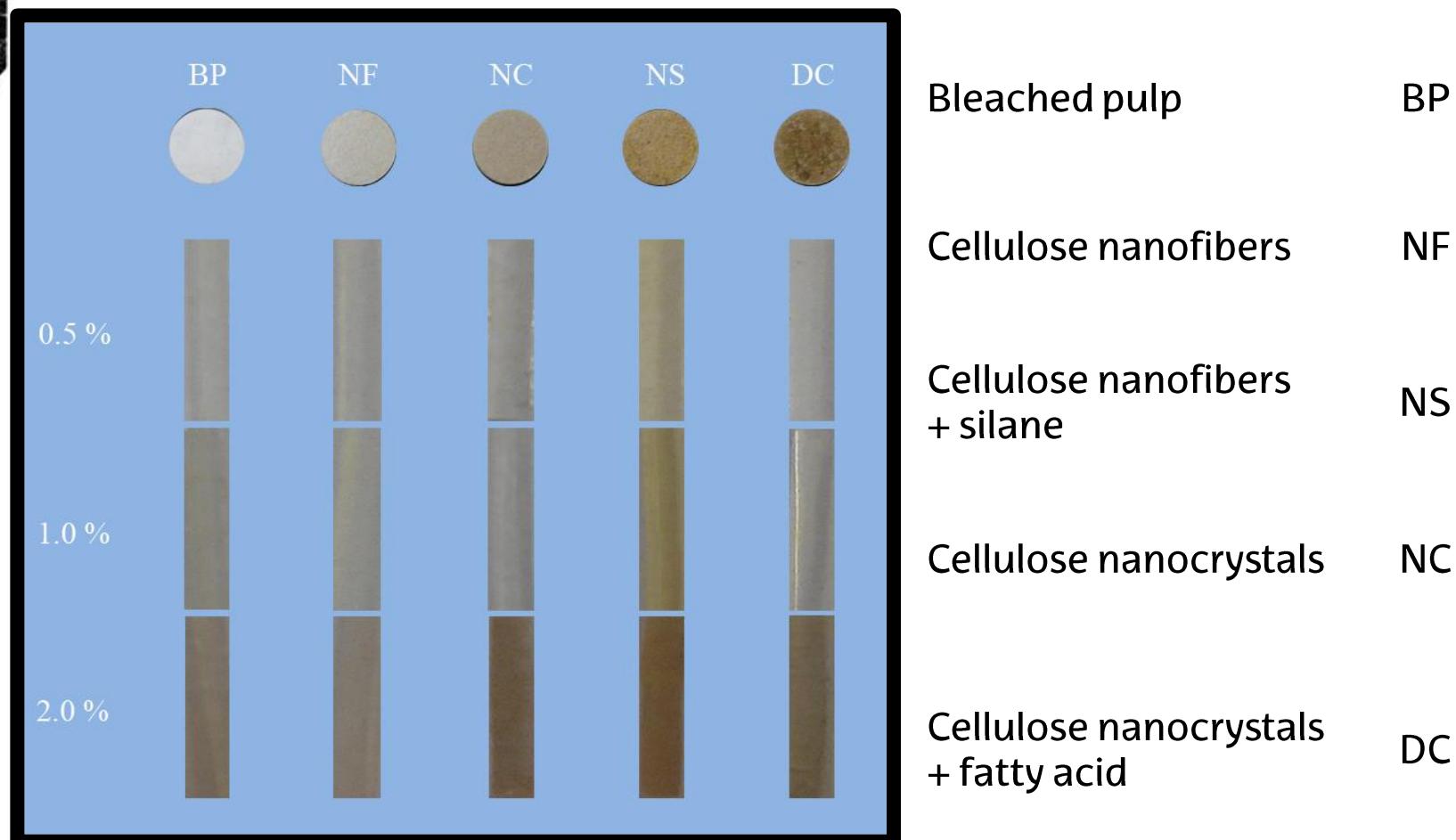


Objectives

- Study mechanical behavior in tensile uniaxial stress
 - Study thermal behavior of the composites
- 

PLA reinforced with modified cellulose nanocrystals

Performance Testing and
Testing Methodologies of
Non-wood Biobased Materials
March 4-5 Tallinn, Estonia





PLA reinforced with modified cellulose nanocrystals

Performance Testing and
Testing Methodologies of
Non-wood Biobased Materials
March 4-5 Tallinn, Estonia

References

- .
- ❑ Freire C. S. R, Silvestre A. J. D., Pascoal Neto C., Belgacem M.N., Gandini A. 2006. Controlled Heterogeneous Modification of Cellulose Fibers with Fatty Acids: Effect of Reaction Conditions on the Extent of Esterification and Fiber Properties, *Journal of Applied Polymer Science*, 100, 1093-1102.
- ❑ Kowalczyk M., Piorkowska E., Kulpinski P., Pracella M. 2011. Mechanical and thermal properties of PLA composites with cellulose nanofibers and standard size fibers, *Composites: Part A*, 42, 1509-1514.
- ❑ Zhang W., Zhang X., Liang M., Lu C. 2008. Mechanochemical preparation of surface-acetylated cellulose powder to enhance mechanical properties of cellulose-filler-reinforced NR vulcanizates, *Composites Science and Technology*, 68, 2479-2484.





TALLINN UNIVERSITY OF
TECHNOLOGY

Thank you!



Universidad
del País Vasco
Euskal Herriko
Unibertsitatea

CAMPUS OF
INTERNATIONAL
EXCELLENCE

Tänan väga/Gracias

