Press release 1-3-2016

BIO4SELF

New European Horizon 2020 innovation project on ultra-strong, fully bio-based composite materials is launched today!

Ghent, March 1, 2016 – **CENTEXBEL**, the Belgian research centre for textiles and plastics, and **IBA**, the global leading supplier of electron beam and X-ray solutions for industrial applications, located in Ottignies-Louvain-la-Neuve, are the Belgian partners in BIO4SELF, the newly approved European Horizon 2020 project. CENTEXBEL and IBA will contribute to the development of novel PLA materials for composites together with their European consortium partners from 10 different countries.

The BIO4SELF project aims to develop bio-based composites with unprecedented stiffness by combining PLA (the largest used biopolymer) with a bio-LCP (Liquid Crystalline Polymer) to create extra reinforcement. The PLA's temperature resistance and the durability will be optimised as well, the latter property by adding well-chosen anti-hydrolysis agents. In addition, inherent self-functionalization via photocatalytic polymers (for self-cleaning properties), tailored microcapsules (for self-healing) and deformation detection fibres (for self-sensing) will be added.

The potential of the bio-based materials will be demonstrated by means of advanced prototypes for automotive and home appliances. Cost-efficient production of fully bio-based composites meeting the standards of highly technical applications and sustainability will be pursued by investigating the performances of new bio-based materials in plastic manufacturing.

CENTEXBEL is responsible for the melt spinning of PLA filaments given its expertise and long standing experience. It will also coordinate this new Horizon 2020 project.

IBA's role in the project is the electron beam treatment of PLA to improve the thermal stability and the stiffness of the developed materials.

"We are excited to use our experience and electron beam technology to develop the next generation of biodegradable and sustainable fibres which we will use in our everyday lives. The BIO4SELF project and the collaboration with CENTEXBEL will bring us the application related competences required to develop an optimal solution for this industry", says Philippe Dethier of IBA.

Co-funded by the European Union

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The BIO4SELF consortium is strongly industry driven, including 5 large enterprises and 5 SMEs. The consortium is completed with 3 universities and 3 research centres. This composition guarantees that BIO4SELF covers all required expertise and infrastructure from the academic world, applied research and industry from 10 different EU countries.

BIO4SELF is a Horizon 2020 project and co-funded by the European Union (grant of € 6.8 million). It will last 40 months and started on March 1st, 2016. BIO4SELF is coordinated by Centexbel, the Belgian research centre for textiles and plastics.

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