

PRESS RELEASE

## **Organic electronics: Bio-on presents Eloxel, to develop the use of bioplastics in the electronics sector. At his side Kartell, strategic partner**

- **ELOXEL** is born (*organic electronics for electronics*) the new company created by Bio-on to exploit the patents destined to revolutionize the world of electronics through the use of bioplastics. The aim is to enable designers to create sustainable products and revolutionary applications.
- **Kartell** through Felofin participates in the new company **ELOXEL** with the 50% of capital shares: a financial operation that pays attention on the new frontier of organic electronics.
- **Bio-on** researchers in **Italy** and the **United States**, who have been working in this field for about 2 years, have discovered that bioplastic can produce and store electricity as a result of mechanical stress. The researches confirm the extraordinary versatility of bioplastic: a platform product that can be used to transform and make the electronics sector also sustainable with new generation of batteries and passive energy generators.
- For this activity Bio-on granted to ELOXEL SpA an exclusive license with a value of Euro 6.500.000,00

**Milan (Italy), 27 December 2018** – In the next few years the development of new electronic products will be based more and more on eco-sustainable organic materials such as bioplastic, which will allow to realize extremely innovative solutions. For this reason, **Bio-on**, listed on the AIM of Italian Stock Exchange and active in the high-quality bioplastic sector, announces the establishment of **ELOXEL SpA**, of which **Bio-on** and **Kartell** each hold the 50%.

**Bio-on** with the support of **Kartell** accelerates the development of organic electronics based on **Bio-on technologies to quickly acquire a leading position in this rapidly growing sector**. The researches in this field have already been conducted over 2 years in the Bio-on laboratories and during this year the first world-wide patents were deposited based on bioplastic, natural and 100% biodegradable, in the field of new batteries and full green piezoelectric materials.

**ELOXEL** operates in the field of **flexible and wearable organic electronics, also single-use**, to meet the growing need of consumers to have personal and portable energy always available. **In this context, and exploiting the piezoelectric properties of Bio-on bioplastic (PHB), namely the ability to produce and store electrical energy as a result of mechanical stress, it is possible to develop membranes or devices to be integrated into clothes and fabrics keeping intact the mechanical properties or new generation batteries. The application fields are the most varied, from the consumer electronic sector to the biomedical one.**

**The new materials developed by ELOXEL will also contribute - like all Bio-on biopolymer-based applications - to limiting the new environmental emergency created by the huge amount of electronic waste** exacerbated by the fact that current electronic devices do not allow efficient recycling processes and often contain highly toxic and hazardous components (e.g. lead / lithium batteries).

*"The investment announced today represents to us the launch of a new project - explains **Marco Astorri, President and CEO of Bio-on** - and we are particularly proud that a prestigious brand like **Kartell**, through **Claudio Luti**, invests once again in an innovation plan and in the enormous potential of the technologies developed by **Bio-on in the field of organic electronics**. Smartphones, watches, televisions, computers, wellness systems and other products have long been part of our bioplastic development plans, which every day proved to be used in various industrial sectors to create eco-sustainable products.*

*"I believed in the new company that Marco Astorri and his team of scientists presented to me - affirms **Claudio Luti, President of Kartell** - choosing to invest in this project in order to contribute to a growth process that looks at sustainability and at the protection of environment and people's health".*

All the biomaterials developed by Bio-on (PHAs or polyhydroxy-alkanoates and PHBs or poly-hydroxy-butyrate) are obtained from renewable plant sources without any competition with food chains up to CO<sub>2</sub>; in most cases they guarantee the same thermo-mechanical properties of traditional plastics with the advantage of being completely eco-friendly and 100% biodegradable in a natural way. Thanks to the exclusive characteristics of its materials, Bio-on now extends its use to another of the most innovative and interesting field of application such as organic electronics. Electro-conductive plastic with piezoelectric properties similar to quartz will allow the production of interesting amounts of energy by mechanical means and the accumulation in super capacitors (green batteries) to be used in various applications. The researches in this field of application are based on PHBs, the only organic material that derives from the nature having piezoelectric properties.

Felofin completed the acquisition of 50% shares in ELOXEL SpA. Following the transaction, the share of Bio-on SpA and FELOFIN is equal to 50.00% each. Bio-on granted to ELOXEL SpA an exclusive license for the exploitation of organic electronics with a total value of Euro 6.500.000,00. From 2019 **ELOXEL** will begin various collaborations with companies and research centers leading the global electronic sector.

**Press information.**

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## Kartell

A leading design company founded in Milan in 1949, Kartell has been a symbol of Italian design for almost 70 years. A success story told through an incredible array of products - furniture, homeware, lighting - that have become part of the domestic landscape, not to mention actual contemporary design icons. Since 1988, Claudio Luti, working alongside some of the world's most prestigious designers (including Philippe Starck, Ron Arad, Antonio Citterio, Ferruccio Laviani, Piero Lissoni, Patricia Urquiola, Tokujin Yoshioka, Mario Bellini, Alberto Meda), continues with the same fervour and enthusiasm as the founder, Giulio Castelli, to seek out new technologies, forms and styles by seamlessly teaming the experience of designers with the potential and requirements of the company. The Kartell collection is multifunctional and broad in its appeal, easy to use and beautiful to behold. The company operates in the habitat sector, specialising in furniture, homeware and lighting (the latter being successfully reintroduced into the range in 2000), but also in contract furnishings and e-commerce. [www.kartell.com](http://www.kartell.com)

## bio-on

turn off pollution

Bio-On S.p.A., an Italian Intellectual Property Company (IPC), operates in the bioplastic sector conducting applied research and development of modern bio-fermentation technologies in the field of eco-sustainable and completely naturally biodegradable materials. In particular, Bio-On develops industrial applications through the creation of product characterisations, components and plastic items. Since February 2015, Bio-On S.p.A. has also been operating in the development of natural and sustainable chemicals for the future. Bio-On has developed an exclusive process for the production of a family of polymers called PHAs (polyhydroxyalkanoates) from agricultural waste (including molasses and sugar cane and sugar beet syrups). The bioplastic produced in this way is able to replace the main families of traditional plastics in terms of performance, thermo-mechanical properties and versatility. Bio-On PHAs is a bioplastic that can be classified as 100% natural and completely biodegradable: this has been certified by Vincotte and by USDA (United States Department of Agriculture). The Issuer's strategy envisages the marketing of licenses for PHAs production and related ancillary services, the development of R&D (also through new collaborations with universities, research centres and industrial partners), as well as the realisation of industrial plants designed by Bio-On. [www.bio-on.it](http://www.bio-on.it)

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**ELOXEL**

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