

LafargeHolcim and Heliatek present unique energy-generating concrete facade

LafargeHolcim together with its partner Heliatek have developed a unique photovoltaic energy-generating concrete facade that has the capability to double the energy generation traditionally achieved by roof-based solar systems.

LafargeHolcim and Heliatek have closely collaborated over the last two years to create a cladding solution combining Ductal® and HeliaFilm®, Heliatek's flexible and ultra-light solar film. With this new solution, prefabricated Ductal panels are delivered on site with an integrated solar energy-generation system.

This cladding boosts the building's ability to generate energy independently and offers a reliable, decentralized and decarbonized energy supply. A 10 storey commercial building covered with 60 percent of its facade with the Ductal/HeliaFilm cladding system could generate approximately 30 percent of its annual energy requirement.

G rard Kuperfarb, Group Head of Growth & Innovation at LafargeHolcim said: *“LafargeHolcim seeks to offer sustainable, high-performance construction solutions that improve energy efficiency for buildings. With this Ductal/ HeliaFilm solution, building owners and developers as well as architects and engineers will be able to mitigate the energy costs of a building while enjoying the many benefits of a very light, low maintenance and long-lasting cladding solution.”*

LafargeHolcim's Research & Development focuses on addressing today's major construction challenges. 30 to 40 percent of global energy consumption is used for heating and cooling buildings and insulation regulations are being strengthened all over the world. Decentralized energy generation in buildings is among the critical levers to mitigate the impact of buildings on climate change but also to reduce the operating expenses for owners and optimize the use of national power grids.

Heliatek, a technology leader in the field of organic electronics, has developed a range of ultra-light (1 kg/sqm), highly aesthetic, thin, solar films. With a CO₂ life cycle impact close to five times less than traditional crystalline photovoltaics, the HeliaFilm is the greenest photovoltaics solution worldwide.

“Cooperation like the one we have with LafargeHolcim is at the core of our strategy. Our HeliaFilm is the active element which transforms building cladding into a power station. This is the path to green, localized electricity.” stated Thibaud Le S guillon, CEO of Heliatek GmbH.

A prototype of this new photovoltaic facade system will be presented at Batimat, the French construction fair in November, and a pilot project is planned in 2018.

About LafargeHolcim

LafargeHolcim is the leading global building materials and solutions company serving masons, builders, architects and engineers all over the world. Group operations produce cement, aggregates and ready-mix concrete which are used in building projects ranging from affordable housing and small, local projects to the biggest, most technically and architecturally challenging infrastructure projects. As urbanization increasingly impacts people and the planet, the Group provides innovative products and building solutions with a clear commitment to social and environmental sustainability. With leading positions in all regions, LafargeHolcim employs around 90,000 employees in more than 80 countries and has a portfolio that is equally balanced between developing and mature markets.

More information is available on www.lafargeholcim.com

Follow us on Twitter  @LafargeHolcim

About Ductal®

Ductal® is a high-tech construction material with the superior qualities of resistance to compression, ductility, longevity, eco-efficiency, insulation and aesthetics. Ductal® is used in a wide range of applications - from the most demanding structures, including bridges and roads, to the most creative architectural projects and cost-effective public and private buildings, through our facade rainscreen cladding solution.

More information is available on www.ductal.com/en

Follow Ductal® on www.facebook.com/ductalUHPC

About Heliatek

As technology leader in organic electronics, Heliatek develops, produces and distributes large area Organic PV solar films. Its business model is to supply the custom-designed HeliaFilm® to partners in industries, such as building and construction materials and light architectural structures. Heliatek maintains a total staff of some 110 specialists at its facilities in Dresden and Ulm, Germany.

Investors in Heliatek include leading industrial and financial companies such as BASF, HTGF, Innogy Venture Capital, Wellington Partners, eCAPITAL and AQTON SE. New investors include innogy SE, ENGIE, BNP Paribas and CEE Group. Research and development work, as well as the installation of production technology, have been funded by the Free State of Saxony, the Federal Republic of Germany and the European Union.

More information is available on www.heliatek.com

About HeliaFilm®

HeliaFilm®, the solar film invented by Heliatek GmbH in Dresden is based on nano-sized carbon molecules which are deposited in a unique roll-to-roll process onto a flexible PET film substrate. HeliaFilm® is ultra-thin, ultra-light, flexible and can be customized in colours, lengths and transparency. The production of HeliaFilm® is based on patented raw material and processes, without any use of toxic materials or rare earth elements. To produce 1 m² of HeliaFilm®, only 1 gram of organic material and a maximum process temperature of 120°C are needed. The truly green HeliaFilm® is highly adaptable for all forms of material integration, such as glass, concrete and metal.

HeliaFilm® is a registered trademark of Heliatek GmbH.