Press Release – August 9, 2021

Generating solar power with glass facades
ARMOR ASCA's organic solar cells can even be integrated into safety glass

Kitzingen, August 9, 2021. ARMOR solar power films GmbH from Kitzingen, Germany, known under the brand name ASCA®, has developed a new technology that allows organic photovoltaic (OPV) cells to be integrated quickly, easily and flexibly into any glass format and facade. Flat glass processor BGT Bischoff Glastechnik GmbH – based in Bretten near Karlsruhe, Germany – is now offering the transparent, energy-generating glass modules to the global construction industry. In addition to manufacturing the OPV components, ARMOR ASCA also plans the system integration, from cable routing and connection technology to the inverter. The solar power is fed into the public grid or consumed directly.

Energy-generating high-rise buildings

While the balustrades are transparent from the inside, they are translucent from the outside, thereby guaranteeing privacy from the outside. The solar power is produced by carbon-based organic solar cells, which ARMOR ASCA applies in very thin layers to fine films using a special printing process. "*With the glass balustrades, ARMOR ASCA closes a gap in facade construction. For the first time, safety glass for high-rise buildings can also generate energy*," says a delighted Martin Sulzer, who heads technical sales at BGT. He adds, "*The modules are ideally suited for facades because they are attractive, and there is also no complete loss of power even when partial shading occurs thanks to their technical properties."*

Unlike conventional crystalline solar cells, the organic solar films are not only flexible and transparent, but can also be bent and shaped as desired. The solar film can be produced in blue, green, gray and red. There are also no limits in terms of shape, length, size and design. "*We can produce any shape of solar cell, which thus becomes part of the architecture and design*," explains Hermann Issa, senior vice president in charge of Business Development & Project Management at ARMOR ASCA.

First project in commercial housing

Once the design has been completed, the system can be planned within about ten days. The first glass balustrades with integrated solar films went into operation in May at condominiums in Stuttgart Möhringen. "*We are pleased to demonstrate how well our balustrades perform in this project. This proves that our technology also works excellently in commercial housing*," adds Issa.

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ARMOR solar power films designs and develops intelligent, tailor-made, flexible and low-carbon solar energy solutions on an industrial scale for its international partners. Its team of experts of sixty people is spread over France and Germany. ARMOR solar power films is a subsidiary of ARMOR Group. ARMOR specializes in the industrial formulation of inks and the coating of thin layers onto thin films. The Group is the global market leader in the design and manufacture of thermal transfer ribbons for printing variable traceability data on labels and flexible packaging. With an international presence, ARMOR has nearly 2,000 employees in some 20 different countries. In 2020 it posted annual revenue of €274m. www.asca.com

BGT Bischoff Glastechnik GmbH, headquartered in Bretten/Germany, is a market-leading European company in the processing and finishing of special glazings. With a broad portfolio of high-quality functional and façade glazings, we are producing with the most modern dedicated machines in the industry. Based on certified quality standards, we are active in the international project business in building construction and several other industries, especially as a supplier to the utility vehicles manufacturing sector. Since 2020, BGT is a company of Glas Trösch Group, based in Switzerland, and is also utilizing Glas Trösch Group's wide network in procurement, manufacturing, and logistics. Iconic reference buildings with BGT glazings are, among many more: World Trade Center 1&3 (New York City), the Elbphiliharmonie (Hamburg, Germany), the Reichstag (Federal Parliament Building) in Berlin, Germany, the new Headquarters of the European Central Bank (ECB) in Frankfurt, Germany, and Ferrari World in Abu Dhabi. www.bgt.glass

Komplexe Glasprojekte einfach gemacht

solar power films

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A PDF of the press release and images can be found at the following link:
https://pressedownload.pr-krampitz.de/20210809_ARMOR_PM2_EN.zip

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Glass balustrades with integrated green-transparent OPVs that generate energy on the building in Stuttgart Möhringen.