

## **ARMOR solar power films Introduces True Gray Solar Film with Novel Acceptor Material from Nano-C, Inc.**

*Integration of Nano-C proprietary fullerene derivative expands color options for ARMOR solar power films' product offerings including Building Integrated Photovoltaics (BIPV).*

**Nantes, France, Kitzingen, Germany, and Westwood, MA, USA** – ARMOR solar power films, the industrial leader in manufacturing organic photovoltaics (OPV), and Nano-C, Inc., the leading producer of patented nanostructured carbon materials, including fullerenes, fullerene derivatives, and single-walled carbon nanotubes (SWCNT), announce that they have expanded the color options for all types of product offerings including BIPV, achieving a true gray color sought after by architects and design professionals. ARMOR solar power films plans to utilize the Nano-C fullerene derivative to expand their product portfolio to include ASCA® organic photovoltaic film in true gray.

Fullerene derivatives meet the needs and requirements of organic photovoltaic (OPV) due to their unique structural properties. Nano-C's new propriety fullerene-based electron acceptor, a key component of the active layer, is easily processible via roll-to-roll (R2R) printing and enables the manufacturing of commercial OPV modules with a competitive performance that meets the color demands of the architectural design and building industries. Nano-C manufactures fullerene derivatives at commercial scale and a competitive cost at their large-scale manufacturing facility in Westwood, MA. Furthermore, the use of the new acceptor material has a positive effect on the performance including stability of OPV modules.

BIPV and BAPV materials transform the whole buildings envelope into solar-active surfaces, linking form to function. The OPV is customizable in overall design, including color. By increasing the color options of OPV films to include true gray, Armor and Nano-C aim to expand the implementation of OPV by architectural and design professionals across the globe.

"The primary major specification for many of our architectural design customers is color. ", says Dr. Sebastian Meier, Director R&D of ARMOR solar power films GmbH (German Branch of ARMOR solar power films). "We have been pleased to continue our long-standing relationship and open-innovation approach with Nano-C to push the boundaries of what OPV can achieve in both form and function. The new acceptor material developed by Nano-C allows us to meet additional color requirements of our customers thus enabling us to expand our product offerings. "

Dr. Henning Richter, Vice President of Research and Development of Nano-C, Inc., adds: "We are pleased that our long-standing efforts to develop new generations of electron acceptor materials have led to an expansion of Armor's portfolio of OPV solutions while maintaining highest performance standards. This has been made possible by the trustful and efficient collaboration between both companies addressing materials characteristics and the resulting optimization of processing conditions. "

**TRADE FAIR BAU ONLINE MUNICH**  
**ARMOR SOLAR POWER FILMS PRESS CONFERENCE**  
**« BIPV, Building Integrated Photovoltaics with 100% design freedom »**  
**JANUARY, 13th 2021, 11am-12pm**

- Get your [online accreditation](#) and register to the press conference
- Visit ARMOR solar power films [virtual booth](#)

**About Nano-C**

Nano-C is a leading innovator and manufacturer in the chemistry of nanostructured carbon, including fullerenes, carbon nanotubes (CNT), and their chemical derivatives. Nano-C is focused on fundamental technology trends in electronics, energy, and healthcare: the roll-out of 5G, connectivity driven by the Internet of Things, the race to extend Moore's Law, addressing climate change through sustainable energy generation, and most recently, biopharmaceuticals. Proprietary materials produced by Nano-C are critical links in the value chain for next-generation electronics, sensors, semiconductor manufacturing, and therapeutics. Nano-C's advanced materials and molecular platform encompasses a portfolio of unique solutions protected by over 215 global patents spanning methods of manufacturing to end-use applications. Through its patented products and processes, and its distinct competencies in the chemistry of these materials, Nano-C is enabling a revolution in device design, manufacture, and performance, and it is committed to their responsible development and use. For more information on Nano-C, Inc. please visit our website [www.nano-c.com](http://www.nano-c.com), follow us on [LinkedIn](#), or email us at [nanocinfo@nano-c.com](mailto:nanocinfo@nano-c.com).

**About ARMOR**

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. The European market leader in innovative and sustainable printing services and consumables, the Group is a pioneer in the development and production of industrial inks and innovative materials, such as organic solar films, coated collectors for electric batteries and bespoke filaments for additive manufacturing. With an international presence, ARMOR has nearly 2,000 employees in some 20 different countries. In 2019 it posted annual revenue of €280m. Each year the group invests nearly €30m in industrial equipment and R&D. ARMOR is a responsible company committed to stimulating innovation within society. [www.armor-group.com](http://www.armor-group.com)

**About ARMOR solar power films**

ARMOR solar power films, a subsidiary of ARMOR Group, 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, Germany and West Africa. [www.asca.com](http://www.asca.com)

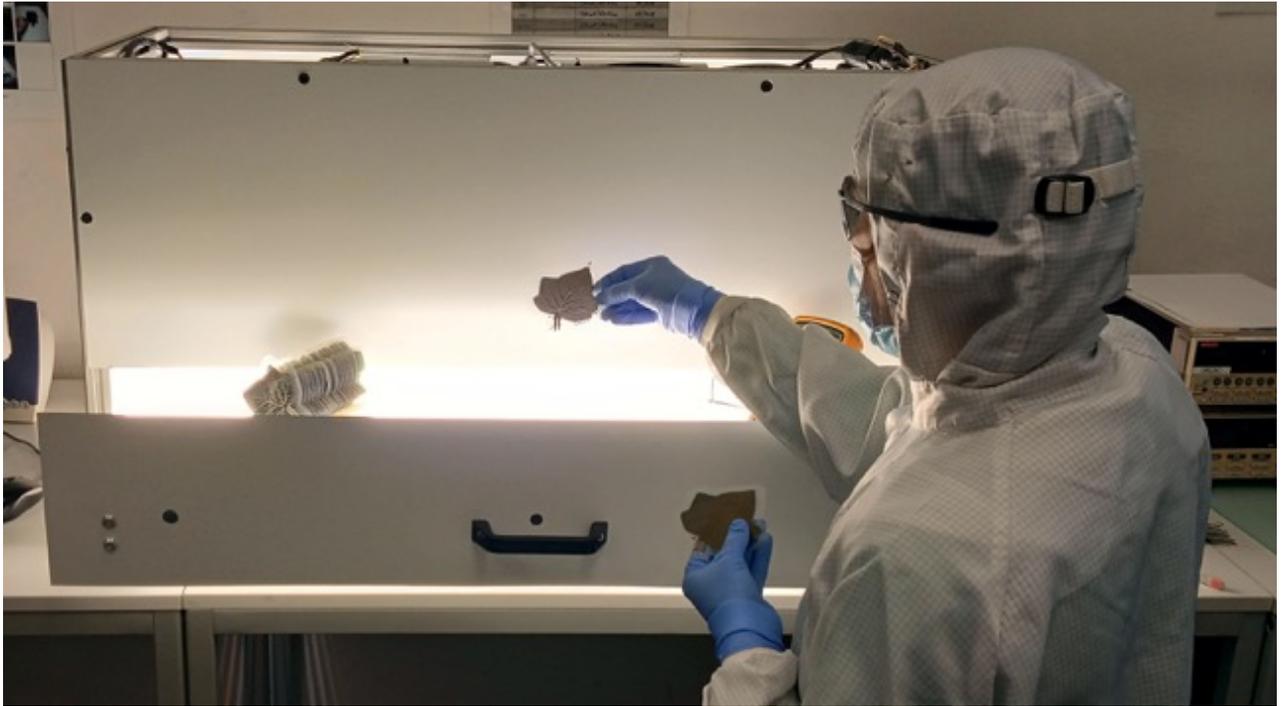


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