

News Release

CHINAPLAS 2024: BASF unveils innovative and sustainable total solution photovoltaic frame co-created with Worldlight

- **Aluminum replaced with a total solution of polyurethanes composite and water-borne coating solution**
- **85% reduction in product carbon footprint vs aluminum frames**
- **BASF at CHINAPLAS 2024: Hall 7.2, Booth C42, National Convention & Exhibition Center, Shanghai, China**

Shanghai, China – March 21, 2024 – At CHINAPLAS 2024, BASF will unveil a total solution photovoltaic (PV) frame, co-created with Jiangsu Worldlight New Material Co., Ltd (Worldlight), a global manufacturer of PV composite frames. The PV frame, made with an industry-leading total solution that combines polyurethanes (PU) composite with a water-borne coating solution, results in an 85% reduction in product carbon footprint (PCF) vs aluminum frames. The water-borne coating solution further reduces the emission of volatile organic compounds (VOCs) by more than 90%.

PU composite is more energy-efficient to produce than aluminum. When combined with the water-borne solution, the total solution is also lighter weight and possesses superior insulation. Hence it is also more energy-efficient in use. Additionally, the exceptional adhesion properties of the waterborne coating solution to PU composites significantly enhance weathering resistance, which translates to higher durability and a longer life span of the PV frame.

“Worldlight has created three main applications for different scenarios: offshore PV

modules, large-scale terrestrial PV modules as well as industrial and commercial rooftop PV modules. BASF's total solution enables us to meet strict standards and overcome challenges from diverse environmental conditions and design specifications," said Mr. Liang Zhao, CEO, Worldlight.

PU composite, made of glass fiber-reinforced polyurethanes, has been widely used in automotive, bridge construction, and aerospace industries. Compared to aluminum, PU composite with coating provides superior cost performance and mechanical properties, including resistance to abrasion, acids, alkalis, and UV radiation.

"BASF has consistently demonstrated how we support our partners to develop innovative material solutions that meet the demanding needs of the industry as well as evolving trends and regulations. Through our collaborative efforts with Worldlight, a market leader in composite PV frames, we will further explore the potential of composite PU materials with waterborne coatings as a total solution for this promising industry," said Silvia Mok, Vice President, Business Management Polyurethanes Systems, Performance Materials Asia Pacific, BASF.

BASF is accelerating its plastics journey towards a more sustainable future! At CHINAPLAS 2024, BASF will showcase its latest innovations, competencies, and developments – particularly in the areas of sustainability and co-creation. Join us at CHINAPLAS 2024 and let us walk you through the MAKE–USE–RECYCLE phases in our plastics journey.

For press photos and updates on BASF at CHINAPLAS 2024, click [here](#).

For the latest information on BASF at CHINAPLAS 2024, follow our BASF PM WeChat Channel:



About Worldlight

Jiangsu Worldlight New Material Co.,Ltd is a high-tech company founded by professionals who have been engaged in the photovoltaic industry for 20 years. We focus on the R&D and production of new materials in the photovoltaic industry. We are committed to providing cost-effective new materials for the scientific and sustainable development of photovoltaic industry.

The company focuses mainly on the R&D and production of composite photovoltaic frame, specifically on solving a series of pain points of composite frame. Relying on years of independent research and development of core technology and standardized and efficient management, the company has effectively filled the blank of the application of new materials. Besides this, it has reduced the production cost of downstream photovoltaic modules on the premise of greatly reducing energy consumption.

Worldlight will adhere to the development strategy of the domestic market and develop the global market. While providing new material with high quality products for domestic enterprise, the company will actively explore the international market. By entering the international market with higher quality standards and more intense competition, we can open up a broader space for enterprise development. Worldlight will strive to become the global leader in photovoltaic new materials industry.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. Around 112,000 employees in the BASF Group contribute to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio comprises six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of €68.9 billion in 2023. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the United States. Further information at www.basf.com.

About BASF' Performance Materials division

BASF's Performance Materials division is at the forefront of the much-needed sustainability transformation in plastics. Our products are co-created with customers around the globe to bring innovations to major industry sectors such as transportation, consumer goods, industrial applications, and construction. Our R&D focuses on all stages of the plastics journey: Make, Use and Recycle. The MAKE phase is about improving how plastics are made, from product design to the choice of raw materials and the manufacturing process itself. The USE phase enhances plastics' strengths such as light weight, robustness, and thermal resistance. At the end of the product lifecycle, the RECYCLE phase looks at how to close the loop to achieve a circular economy. In 2023, the Performance Materials division achieved global sales of €7.2 billion. Join #ourplasticsjourney at: <https://www.performance-materials.basf.com>