Oxford, June 19, 2025

**Openair-Plasma Technology for Battery and Automotive Applications**

Plasmatreat UK to showcase plasma solutions at Battery Cells & Systems Expo 2025

**At Battery Cells & Systems Expo 2025 (July 9-10, Birmingham), Plasmatreat UK, a subsidiary of Plasmatreat GmbH, based in Steinhagen, Germany, will be presenting surface pre-treatment with Openair-Plasma and functional nano-coatings with PlasmaPlus live on booth 1440. The focus will be on applications in the battery and automotive industries - from cleaning prismatic, cylindrical or pouch cells to reliable surface activation and coating. Plasma technology is used to increase surface energy before further processing such as bonding, painting, coating or sealing.**

The plasma experts from Plasmatreat UK are bringing various systems and equipment to Birmingham, including a Plasma Treatment Unit (PTU). This compact system will allow visitors to experience Openair-Plasma and PlasmaPlus technology live, especially for applications in the emobility sector. Whether it's the entire surface of battery cells, contact points, or the sealing surfaces of housings—numerous process steps in battery production can be reliably covered with Openair-Plasma and PlasmaPlus.

**Plasma as a pretreatment for strong bonds**

Atmospheric pressure plasma is a high-energy, ionized gas that is used specifically for the pre-treatment of material surfaces, for example to increase the wettability of surfaces so that adhesives or coatings adhere to the materials for a long time. Using only compressed air and electricity, it enables ultra-fine, dry and residue-free cleaning of glass or metal, for example, before the application of insulating film or coating on prismatic cells. Foils or plastic coatings can be activated by plasma in order to bond them reliably to each other or to the battery housing. Functional coatings can be applied with the PlasmaPlus applications. For example, AntiCorr provides environmentally friendly corrosion protection on the sealing surfaces of battery housings and reliably protects against infiltration corrosion. The AntiCorr process has already been extensively tested and has successfully passed the usual climate tests and salt spray tests, such as the PV1209 or MeKo-S test.

By removing impurities, increasing surface energy and improving adhesion, Plasmatreat's plasma solutions support critical steps in battery manufacturing, such as

* **Cell-to-cell bonding:** Plasma activation improves adhesion for structural bonds and thermally conductive bonded joints.
* **Corrosion protection:** PlasmaPlus AntiCorr coatings provide protection against infiltration corrosion for battery housings, terminals and other critical components.
* **Wire bonding and contact cleaning:** Openair-Plasma ensures reliable electrical connections by removing residue from battery terminals.
* **Innovative insulation processes:** Plasma treatment enables direct coating applications as an alternative to costly film wrapping.

**Plasma as a sustainable alternative to primer and wet chemistry**

Compared to traditional processes such as primer application or wet chemical cleaning, plasma technology offers numerous advantages: it is dry, VOC-free, non-contact, targeted and fully inline-capable. “Our customers benefit not only from increased process reliability and reproducibility, but also from reduced operating costs and a more sustainable production process,” says Jonathan Fisk, General Manager of Plasmatreat UK. “Especially in battery production, where precision, adhesive strength and reliable, durable products are essential, plasma is a real game changer.”

**Live demonstration and individual consultation**

Fisk and his team cordially invite interested trade visitors to bring samples to stand 1440 and discuss individual challenges. The live demonstrations will impressively show how flexibly and efficiently plasma can be integrated into modern production lines - without any chemicals and with maximum process reliability. The experts from Plasmatreat UK will be demonstrating how the treatment works and the effect of plasma on surfaces live with various materials, e.g. metal or various difficult-to-process plastic materials, and subsequent tests with test inks or water, for example.

For more information, visit: [www.plasmatreat.co.uk](http://www.plasmatreat.co.uk) .

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***Info box Openair-Plasma:***

**How Openair-Plasma® and PlasmaPlus® optimize industrial processes.**

When plasma with its high energy level comes into contact with materials, it changes the surface properties, for example from hydrophobic to hydrophilic. Plasma technology requires only compressed air and electricity for operation. Fine cleaning with Openair-Plasma® gently and reliably removes dust, release agents, additives, plasticizers and hydrocarbons from surfaces. Especially with non-polar plastics, plasma treatment achieves surface activation. It supports the increase of surface energy by introducing hydroxyl groups and thus improves adhesion in subsequent processes such as bonding, printing, painting and sealing. Even oxide layers on metal surfaces can be reliably removed inline during the production process using plasma technology. Plasmatreat's PlasmaPlus® technology can also be used to create targeted functionalized surfaces with defined properties by applying (depositing) nanocoatings, e.g. as an additional adhesion promoter layer. Plasmatreat's HydroPlasma® is used to remove stubborn organic and inorganic soils - an innovative cleaning method that uses only water, compressed air and electricity in an environmentally friendly manner.

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**About Plasmatreat**

Plasmatreat is an international leader in the development and manufacture of atmospheric plasma systems for the pretreatment of substrate surfaces. Whether plastic, metal, glass or paper - the industrial use of plasma technology modifies the properties of the surface in favor of the process requirements.

Openair-Plasma® technology is used in automated and continuous manufacturing processes in almost every industrial sector. Examples include the automotive, electronics, transportation, packaging, consumer goods and textile industry, but the technology, cost and environmental advantages of the plasma technology are used in medical technology and in the renewable energy sector as well.

The Plasmatreat Group has technology centers in Germany, USA, Canada, China, and Japan. With its worldwide sales and service network, the company is represented in more than 30 countries by subsidiaries and sales partners.

For more information, visit: [www.plasmatreat.com](http://www.plasmatreat.com)

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**Pictures and captions:**

**A close-up of a machine

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Surface activation of a prismatic cell with Openair-Plasma before cell-to-cell bonding. (Copyright: Plasmatreat GmbH)

A machine with a machine in the background

AI-generated content may be incorrect.

Cleaning the contacts of cylindrical cells for the best possible further processing. (Copyright: Plasmatreat GmbH)

Close-up of a machine

AI-generated content may be incorrect.

PlasmaPlus AntiCorr serves as a protective coating against infiltration corrosion, e.g. in the manufacture of battery housings. (Copyright: Plasmatreat GmbH)