Steinhagen, April 15th, 2025

**Openair-Plasma Technology for High-performance and Long-lasting Batteries - Efficient, Sustainable, Reliable**

Plasmatreat presents plasma solutions at the Battery Show Europe 2025

**Plasmatreat, the world's leading developer and manufacturer of atmospheric pressure plasma technology, is presenting its innovative surface treatment solutions at the Battery Show Europe 2025 in Stuttgart, Germany, in hall 8, booth C10. With Openair-Plasma and PlasmaPlus, Plasmatreat GmbH, headquartered in Steinhagen, Germany, enables improved adhesion, environmentally friendly corrosion protection and more efficient production processes - key factors to produce high-performance, long-lasting and sustainable batteries.**

**Sustainable and inline-capable plasma technology for battery production**

Batteries, whether prismatic, cylindrical or pouch cells, must nowadays be powerful, durable and, ideally, sustainable. Plasmatreat's Openair-Plasma and PlasmaPlus are environmentally friendly alternatives to conventional chemical pre-treatment processes. They offer ultra-fine cleaning, surface activation and functionalized nano-coatings - all in a dry inline process that requires only compressed air and electricity.

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.

**Live demonstrations: Plasma technology for key battery applications**

At booth C10 in hall 8, Plasmatreat will present a series of live demonstrations showing the impact of plasma surface treatment on battery production. One highlight will be the state-of-the-art Plasma Treatment Unit (PTU), featuring advanced nozzle technology for Openair-Plasma activation and cleaning, as well as PlasmaPlus coating for automated, selective and reliable surface treatment. Whether cleaning batteries before applying insulating film or coating, activating already insulated batteries before bonding, or applying functional coating, e.g. AntiCorr, against infiltration corrosion.

Plasmatreat will be placing a special focus on the cleaning of battery cells before electrical insulation, whether with PET film or coating, at its trade fair booth: Visitors will be able to experience live how plasma activation improves the adhesion of PET films and PET coatings, thus ensuring optimum insulation performance. For long-term stable corrosion protection, Plasmatreat will also be demonstrating its AntiCorr coating for complete battery housings, which will be validated with AntiCorr test fluids. The AntiCorr process has already been extensively tested and has successfully passed the standard climatic tests and salt spray tests, such as the PV1209 or the MeKo-S test.

Another special feature on booth C10 in hall 8 is the SCARA Janome robot system, on which the plasma experts will be demonstrating the precise plasma treatment of both cylindrical and prismatic battery cells. Equipped with various nozzle configurations, the system demonstrates the flexibility of Openair-Plasma technology for different battery geometries and materials. For cylindrical cells, the plasma treatment ensures ultra-fine cleaning of the battery contacts prior to wire bonding, which improves the electrical connection and reliability. For prismatic cells, plasma activation optimizes the surface adhesion for subsequent coating, film or bonding processes.

The range of different systems and equipment highlights Plasmatreat's industrial-grade plasma solutions designed for seamless integration into high-speed in-line manufacturing environments in the automotive and energy storage industries.

Visitors to the Plasmatreat booth C10 in Hall 8 are invited to bring their own materials and test the plasma effect live at Plasmatreat.

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

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***Info box:***

**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

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

Close-up of a machine

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