

Dresden, 20 February 2019

## **VON ARDENNE PRESENTS REFINEMENT OF CURRENT COLLECTORS FOR LITHIUM-ION BATTERIES AT BATTERY JAPAN 2019 IN TOKYO**

For some decades now, VON ARDENNE has been a leading company in industrial large-area coating using innovative PVD methods. Based on this expertise in the deposition of extremely thin layers, the German high-tech company has identified different approaches along the production chain of lithium-ion batteries to considerably improve their performance and cost-efficiency by functionalizing cell component surfaces.

**VON ARDENNE** will introduce its novel technologies **from 27 February to 1 March 2019** at their booth (**West Hall 1F, booth D113/3**) at the leading trade fair **Battery Japan** in Tokyo.

These technologies enable solutions that address current challenges for lithium-ion batteries. In the face of the increasing demand, for instance in the automotive industry, requirements such as output, high energy density, longevity and fast-charging capacity are getting increasingly important.

At the same time, VON ARDENNE is tackling the challenges that occur when new cell systems and innovative electrode manufacturing processes shall be established. Here, PVD thin-film technologies offer cell manufacturers a high potential for a cost-efficient, sustainable production that helps save resources.

One of these VON ARDENNE technologies is **XPRIME** – a thin (<1µm) and dense coating on aluminum or copper current collectors. This coating increases both the power density and the lifetime of the latest lithium-ion batteries. This is achieved by:

- A reduced resistance of the current collector
- An increased adhesion and conductivity of the active material
- An increased conductivity of the electrode

Furthermore, the VON ARDENNE **XPRIME** coating enables a passivation of the current collector and

- An increased electrochemical stability of the current collector, which is needed, for instance, in high-voltage or all-solid-state batteries
- A chemical stability against corrosive media, such as those that occur in water-based electrode manufacturing

Beyond that, VON ARDENNE offers the corresponding coating equipment for current collectors ranging in scale from R&D to pilot production up to high-volume production.

### **Exclusive presentation at the Battery Japan**

Apart from the activities at the booth, VON ARDENNE will host an exclusive presentation on:

#### **“Thin-Film Refining of Current Collectors to Enable New Concepts for Lithium-Ion Cells”**

This presentation will be given by **Dr. Maik Vieluf** and **Markus Piwko** on **28 February 2019 from 04:00 to 05:00 p.m. in West Hall 2, Room 6.**

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## ABOUT VON ARDENNE GMBH

VON ARDENNE develops and manufactures industrial equipment for vacuum coatings on materials such as glass, wafers, metal strip and polymer films. These coatings give the surfaces new functional properties and can be between one nanometer and a few micrometers thin, depending on the application.

Our customers use these materials to make high-quality products such as architectural glass, displays for smartphones and touchscreens, solar modules and heat protection window film for automotive glass.

We supply our customers with technologically sophisticated vacuum coating systems, extensive expertise and global service. The key components are developed and manufactured by VON ARDENNE itself.

Systems and components made by VON ARDENNE make a valuable contribution to protecting the environment. They are vital for manufacturing products which help to use less energy or to generate energy from renewable resources.

## VON ARDENNE AT BATTERY JAPAN 2019 IN TOKYO

**BOOTH:** 27 February - 1 March 2019, West Hall 1F, D113/3

**PRESENTATION:** 28 February 2019, West Hall 2, Room 6, 04:00 - 05:00 p.m.

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THIN, DENSE AND COST-EFFICIENT

# FUNCTIONAL LAYERS ON CURRENT COLLECTORS

**THE NEW PVD PROTECTION**

## XPRIME

Electrode

Current Collector

200 nm