

## Press Information

### **Kyocera significantly expands its exhibition area at the Battery Show Europe 2023 in Stuttgart**

Ceramic manufacturer Kyocera showcases ceramic products for the production of Li-ion battery cells.

Kyocera, one of the world's leading ceramic manufacturers, will showcase its fine ceramic products at the Battery Show Europe 2023, taking place from May 23 to 25, 2023, in Stuttgart. This marks the company's first appearance at an international trade show and in the public eye since its consolidation into KYOCERA Fineceramics Europe GmbH. With a growing strategic focus on the e-mobility market, Kyocera's Ceramic Division has significantly increased its exhibition space, emphasizing its aim to expand market share and target new customers.

**Kyoto/London, 16<sup>th</sup> May 2023.** The demand for electric vehicles (EVs) is higher than forecasted despite the global economic situation caused by the COVID-19 pandemic. The unprecedented rise in demand will also increase the demand for batteries and battery cells. The surging demand gives rise to an opportunity for European machinery and equipment manufacturers to supply to the gigafactories. One of the major challenges facing the industry is the limited driving range of lithium-ion batteries. The current production batteries provide a range of up to 450 kms, while the consumers demand and prefer more. To improve the range and efficiency, advanced battery components and materials are imperative. The focus is on high-performance components that are directly used in the battery manufacturing, electric motors, power electronics and thermal management.

#### **A wide range of markets and ceramic combinations**

Kyocera has been providing Fine Ceramic products for a wide range of markets including automotive industry, industrial equipment, medical devices, and aerospace systems and has supported the development of numerous other industries. Kyocera offers a broad range of over 200 different compositions of ceramics such as aluminum oxide, zirconium oxide, silicon carbide, silicon nitride, cordierite, aluminum nitride, cermet, mullite, sapphire, aluminum titanate, yttrium oxide, and many more.

### Properties of fine ceramic materials

Key properties of Fine Ceramic materials such as high wear resistance, low metal contamination, chemical resistance, weight reduction, mechanical strength are of importance in the Battery cell manufacturing. These characteristics provide an advantage over the conventional materials (e.g. metal).

### All-round components

The battery slurry is highly abrasive and the battery cell manufacturing requires highly precise and durable components. Kyocera offers the relevant materials and components in this context. Rotors and classifiers in Silicon Nitride and oxide ceramics are used in the mixing and milling processes of the slurry preparation. Oxide based Slot-dies are used in electrode coating, oxide and non-oxide ceramic high rollers are used in the calendaring process and cutting tools are used in the slitting process. Furthermore, substrate and structural components with cooling channels are used in the thermal management of the Battery.

### Contribution to global electrification

More ceramics components will be used in the Battery cell manufacturing equipment and the Batteries for its superior properties and capabilities. Kyocera with wide range of materials and decades of history as a supplier for high performance products will continues its development of products for the EV Batteries, support EV adoption and embraces global electrification.

### Pictures



**Picture 1: Silicon Nitride and Alumina Classifiers in the milling process.**



**Picture 2: Oxide and Non-oxide rotors in the mixing process.**



**Picture 3: Ceramic slot-die.**



**Picture 4: Ceramic high rollers in the Calendaring process.**



**Picture 5: Picture of alumina parts.**

#### **Kyocera Booth Outline**

Exhibition	The Battery Show Europe <a href="https://www.thebatteryshow.eu/en/Home.html">https://www.thebatteryshow.eu/en/Home.html</a> Booth no. 10-C60
Date	May 23 – 25, 2023
Location	Stuttgart, Germany

Links where material properties can be seen:

<https://www.kyocera-fineceramics.de/en/materials>

Please click the following link to get more pictures:

<https://spgroup.box.com/s/xyxas2imvk2wt8gmogbo3n9k9nguroo2>



For more information on Kyocera: [www.kyocera.co.uk](http://www.kyocera.co.uk)

## About Kyocera

KYOCERA Fineceramics Europe GmbH is a subsidiary of KYOCERA Europe GmbH, which has been successful in Europe for over 50 years. The Kyocera Group is one of the world's leading providers of high-performance ceramic components for the technology industry, offering over 200 different ceramic materials, as well as state-of-the-art technologies and services tailored to the specific needs of each market.

KYOCERA Europe GmbH is a company of the KYOCERA Corporation headquartered in Kyoto/Japan, a world leader in semiconductor, industrial and automotive components as well as electronic components, printing and multifunction systems, and communications technology. The technology group is one of the world's most experienced manufacturers of smart energy systems, with more than 45 years of industry expertise. The Kyocera Group comprises 297 subsidiaries (31 March 2023). In England, Kyocera has a subsidiary in Frimley, KYOCERA Fineceramics Ltd. With around 81,000 employees, Kyocera generated net annual sales of around EUR 13.87 billion in the 2022/2023 fiscal year.

Kyocera is ranked 665 on Forbes magazine's 'Global 2000' list for 2022, and ranked as 'The 100 Most Sustainably Managed Companies in the World' according to the Wall Street Journal. For the second year in a row, Kyocera qualified for the Dow Jones Sustainability Index (Asia-Pacific) and acknowledged as a 'Top 100 Global Innovator 2023', being one of the world's leading innovators, for the seventh time by Clarivate.

The company also takes an active interest in cultural affairs. The Kyoto Prize, a prominent international award, is presented each year by the Inamori Foundation — established by Kyocera founder Dr Kazuo Inamori — to individuals worldwide who have contributed significantly to the scientific, cultural, and spiritual betterment of humankind (equivalent to approximately €685,000 per prize category).

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