

KYOCERA Fineceramics Europe at The Battery Show 2024: Ceramic components for the production of lithium-ion batteries with zero impurities

The specialist in high-tech ceramics is presenting its set of industry-specific solutions at the European trade fair for battery technology, which is being held in Stuttgart, Germany from 18 to 20 June.

Kyoto/London, 12th June 2024. Lithium-ion batteries play a key role in energy provision. Lighter in weight and more efficient than conventional energy storage systems, lithium-ion batteries are used in numerous applications, from consumer electronics to electromobility and solar energy. Demand for them is consequently very high. The sparing use of lithium - a valuable resource - along with cost-efficient production processes and high-quality manufacturing are therefore of particular importance to the manufacturers of these state-of-the-art batteries. After all, every battery is only as good as its weakest cell.

Ceramic solutions minimise the consumption of resources and energy

The production of lithium-ion batteries is a multi-stage process in which various raw materials – mainly graphite as well as lithium – are ground, mixed and combined with polymers to form a viscous coating paste. This suspension is applied (as a coating) to metallic carrier materials which will later become the anodes and cathodes, dried and stacked, folded (Z-folding) or rolled together with an insulating middle layer (separator), which varies depending on the specific application and type of battery. These processes require the electrode and intermediate layers to be cut into individual sheets, folded and placed on top of each other in a regular sequence or wrapped around a cylinder.

Kyocera Fineceramics supplies tool components for all of these steps, which, due to their lack of abrasion, ensure that the battery materials are not contaminated, e.g. classifiers and rotors made of silicon nitride or aluminium oxide for the grinding or mixing processes, oxide-based slot nozzles for coating the electrodes or rollers made of oxide and non-oxide ceramics for calendaring.

Structural components with cooling channels for thermal management within the batteries can also be added.

Application-orientated component development from a single source

Kyocera Fineceramics sees itself as a development partner that not only advises principals on selecting suitable advanced ceramics, but that also develops and produces the individual components for a production machine or system in a carefully coordinated manner, especially when this involves the use of various ceramic materials. This can often lead to additional savings in energy and raw materials.

International expertise for European battery production

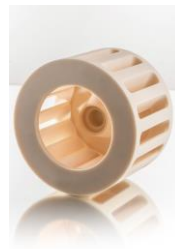
‘Lithium-ion batteries play a crucial role in energy provision, especially in e-mobility,’ emphasises Dr Carsten Rußner, President of KYOCERA Fineceramics Europe GmbH. ‘We can draw on decades of expertise in the use of technical ceramics in electronics and electrical engineering and are delighted to be able to contribute this experience to the development and expansion of European battery production.’

Overview: Kyocera at The Battery Show 2024

Event	The Battery Show
Date	18 – 20 June 2024
Location	Stuttgart, Germany
Kyocera Booth	Hall 8, Stand A66



Flywheel



Classifier rotor



For more information on Kyocera: uk.kyocera.com

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 292 subsidiaries (31 March 2024). In England, Kyocera has a subsidiary in Frimley, KYOCERA Fineceramics Ltd. With around 79,200 employees, Kyocera generated net annual sales of around EUR 12.29 billion in the 2023/2024 fiscal year.

Kyocera is ranked 672 on Forbes magazine's 'Global 2000' list for 2023, 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). As well, Kyocera receives a Gold rating on EcoVadis Sustainability Survey for the second consecutive year and was acknowledged as a 'Top 100 Global Innovator 2023', being one of the world's leading innovators, for the eighth 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 €596,500 per prize category).

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