

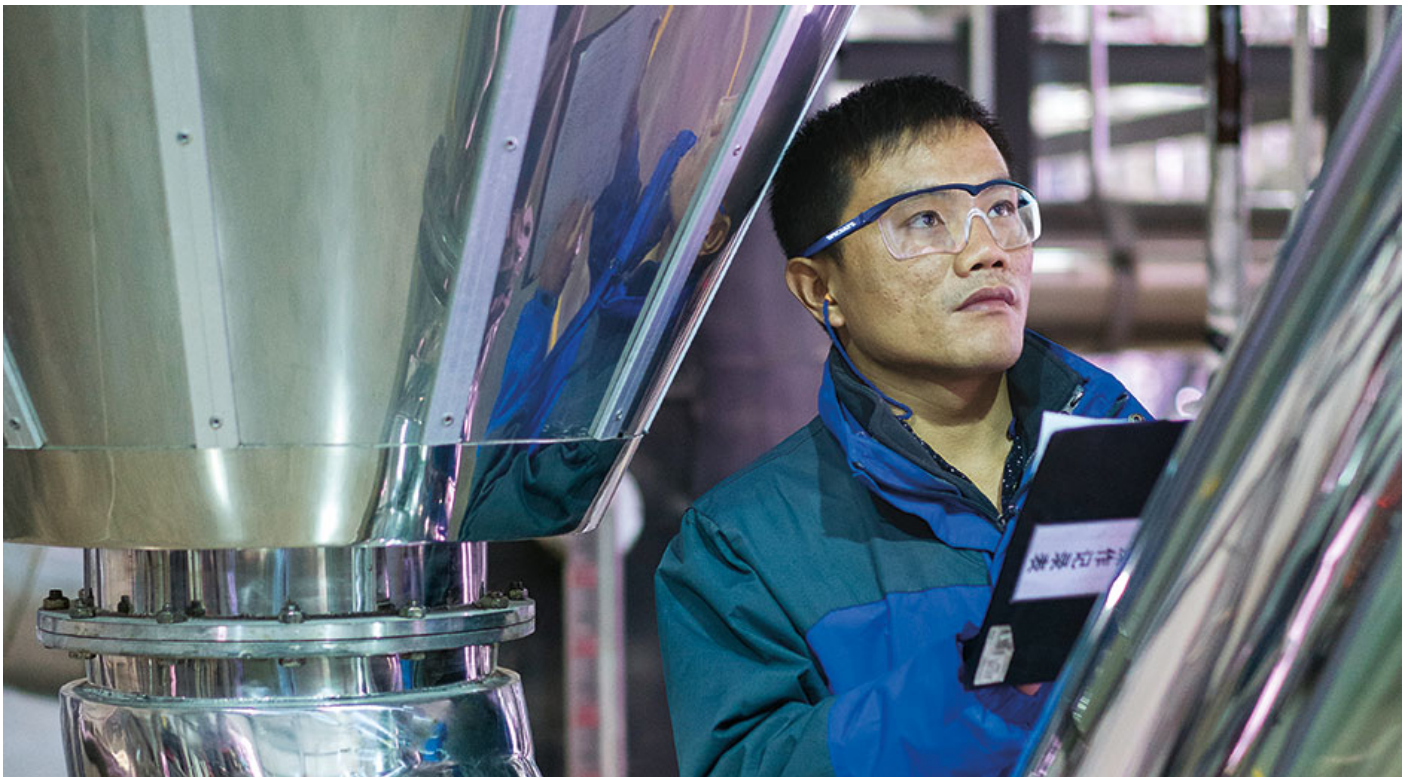


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The battery material compositions licensed offer an outstanding balance of power, energy, thermal stability and cost

08 Aug 2016



Manufacturing battery materials at our facility in Changzhou, China

Johnson Matthey and 3M have entered into a patent licence agreement that aims at further expanding the use of Nickel-Manganese-Cobalt (NMC) cathode materials in lithium-ion batteries for automotive applications. Under the agreement, 3M grants Johnson Matthey a licence to US6964828, US7078128, US8241791, US8685565 and all global equivalents thereof, and to US6660432 and all global equivalents thereof.

Optimised performance for automotive applications

The cathode compositions composed of nickel, manganese and cobalt offer an outstanding balance of power, energy, thermal stability and cost. NMC cathode materials can be tailored through changes in composition and morphology to give optimised performance in a diverse range of automotive applications from micro-hybrid systems to fully electric vehicles. Through focused product development and customisation, Johnson Matthey will deliver NMC technologies to the market to support and enable powertrain electrification.

"We are pleased to have reached this agreement with 3M, which represents a further step in our strategy to provide a broad portfolio of cathode materials to the automotive and other high performance markets," said Neil Collins, Director of Johnson Matthey's Battery Materials business. "We look forward to applying our skills in nickel chemistry and in the scale-up and manufacture of battery materials as we work with our customers to develop customised, commercial products."

"The rapid growth of the electric vehicle market is driving the need for NMC based cathode materials globally and especially in China"

"The rapid growth of the electric vehicle market is driving the need for NMC based cathode materials globally and especially in China", said Christian Milker, Global Business Manager 3M Electronics Materials Solutions Division. "Johnson Matthey is very well positioned to supply lithium ion battery customers in this dynamic environment. We are very pleased to conclude this agreement with Johnson Matthey, which will help to accelerate the adoption of NMC technology worldwide."

Functional materials for the battery industry

Johnson Matthey is a global speciality chemicals company underpinned by science, technology and its people. A leader in sustainable technologies, many of our products enhance the quality of life of millions through their beneficial impact on the environment, human health and wellbeing. Johnson Matthey is building its position as a supplier of functional materials to the lithium-ion battery industry with a focus on automotive applications. We are a leading supplier of lithium iron phosphate for a range of light and heavy duty powertrain applications which is complemented with capability in the design and supply of high performance, fully integrated battery systems. In addition, we have a strong position in specialist nickel catalysts for chemical industry customers. This enables us to leverage our technical and manufacturing know-how in nickel based products for the benefit of our battery materials' customers.

Johnson Matthey has operations in over 30 countries and employs around 13,000 people. Its products and services are sold across the world to a wide range of advanced technology industries.

Enquiries

Sally Jones, Director, Investor Relations and Corporate Communications
+44 20 7269 8407

Simon McGough, Head of Investor Relations
+44 20 7269 8235

David Allchurch, Tulchan Communications
+44 20 7353 4200

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