

Patent pertinent to lithium-ion secondary battery for vehicles granted

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Mitsubishi Chemical Corporation (“MCC”; HQ: Chiyoda-ku, Tokyo, President and Representative Director: Masayuki Waga) and MU Ionic Solutions Corporation (“MUIS”; HQ: Chiyoda-ku, Tokyo, President and Representative Director: Masaaki Tsuchiyama) announce the grant by the European Patent Office (“EPO”) of their jointly owned European patent pertaining to a lithium-ion secondary battery (European Patent Application Number: 06 83 2384.9; “the Patent”). The Patent, which relates to a lithium-ion secondary battery for vehicles, covers a combination of a nickel-containing positive electrode material, which is the standard choice in lithium-ion secondary batteries for vehicles, and an electrolyte comprising lithium difluorophosphate. The Patent, which has already been granted in Japan, US, China as well as South Korea, has now been additionally granted by the EPO with effect in Germany, where the demand for electric vehicles is increasing.

In recent years, nickel-containing positive electrode materials have been used in vehicle batteries because of their greater energy storage per unit volume when compared with other materials, and in order to achieve a higher capacity battery. The Patent offers a technology with extraordinary advantages for building batteries with a long life and high output, and in particular for a battery which is suited for quick recharging. This is a highly awaited development in terms of vehicle use, since this new technology, incorporating difluorophosphoric acid salt as the active component, is capable of improving the output characteristics of the batteries, in particular over known batteries using nickel-containing positive electrode materials, as well as the long-term retention of capacity, even after repeated charge/discharge cycles.

MCC and MUIS hold, apart from the Patent, a large number of further patents relating to materials for lithium-ion secondary batteries for vehicles. The prevalence of electric automobiles is expected to increase in the coming years across the globe, especially in Europe: this is driven not only as a solution to environmental challenges, such as the reduction of fossil fuel consumption and harmful gas emission, but also to allow a new society of next-generation mobility to be realized. MCC and MUIS will vigorously continue, in response to voracious demand, our activities as leading companies in the field of electrolytes for lithium-ion secondary batteries for vehicles, while promoting the healthy expansion of this market by means of appropriate use of intellectual property rights, thereby contributing to the realisation of a sustainable, next-generation society.

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