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(54) **INORGANIC-POLYMERIC HYBRID SOLID-STATE ELECTROLYTES, LITHIUM BATTERIES CONTAINING SAME, AND PRODUCTION PROCESSES**

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(57) **ABSTRACT**

A hybrid solid electrolyte particulate (or multiple particulates) for use in a rechargeable lithium battery cell, wherein the particulate comprises one or more than one inorganic solid electrolyte particles encapsulated by a shell of polymer electrolyte wherein the hybrid solid electrolyte particulate has a lithium-ion conductivity from 10^{-6} S/cm to 5×10^{-2} S/cm and both the inorganic solid electrolyte and the polymer electrolyte individually have a lithium-ion conductivity no less than $10^{31\ 6}$ S/cm. Also provided is a lithium-ion or lithium metal cell containing multiple hybrid solid electrolyte particulates in the anode, cathode and/or the separator. Processes for producing hybrid solid electrolyte particulates are also disclosed.