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(54) **SULFIDE-BASED SOLID ELECTROLYTE, METHOD FOR PRODUCING THE SULFIDE-BASED SOLID ELECTROLYTE, AND METHOD FOR PRODUCING ALL-SOLID-STATE BATTERY**

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(57) **ABSTRACT**

Provided is a method for producing a sulfide-based solid electrolyte with a balance between the ion conductivity of the sulfide-based solid electrolyte and the heat generation amount of an electrode layer containing the sulfide-based solid electrolyte during an electrode reaction. Disclosed is a method for producing a sulfide-based solid electrolyte comprising a sulfide glass-based material that contains at least one lithium halide compound selected from the group consisting of LiI, LiBr and LiCl, the method comprising immersing the sulfide glass-based material, which is at least one sulfide glass-based material selected from the group consisting of a sulfide glass and a glass ceramic, in an organic solvent having a solubility parameter of 7.0 or more and 8.8 or less, for 1 hour to 100 hours.