

Battery with improved electrolyte and improved electrodes

Abstract

The description concerns a battery device, comprising:

- electrodes comprising an anode and a cathode, and
- 5 - an electrolyte, between the electrodes, comprising a crystalline material having the composition $M_2B_2O_5 \cdot x(HOH) \cdot y(NO_3)$, where M and N are alkali metals or hydrogen or mixtures of alkali metals or hydrogen, B is titanium, O and H respectively denote the elements oxygen and hydrogen, and x and y are between 0 and 4 and indicate the presence of H^+ , OH^- , and N^+ ions capable of migrating within the crystalline material.
- 10 In particular, at least one type of ion among H^+ , OH^- , N^+ , and M^+ is mobile so as to migrate within the crystalline material towards at least one of the electrodes, and said at least one of the electrodes is made of a material suitable for carrying out a chemical interaction with at least one of the H^+ , OH^- , M^+ and N^+ ions.

FIG. for abstract: FIG. 5