

ABSTRACT**HIGH POWER DENSITY AND LOW-COST LITHIUM-ION BATTERY**

Lithium-ion battery comprising at least one stack which comprises successively: a first electronic current collector, a first porous electrode made of a material selected from the group formed by $\text{Nb}_{2-x}\text{M}^1_x\text{O}_{5-\delta}\text{M}^3_6$, $\text{Nb}_{18-x}\text{M}^1_x\text{W}_{16-y}\text{M}^2_y\text{O}_{93-\delta}\text{M}^3_6$, $\text{Nb}_{16-x}\text{M}^1_x\text{W}_{5-y}\text{M}^2_y\text{O}_{55-\delta}\text{M}^3_6$, $\text{Nb}_2\text{O}_{5-\delta}$ with $0 \leq \delta \leq 2$, $\text{Nb}_{18}\text{W}_{16}\text{O}_{93-\delta}$ with $0 \leq \delta \leq 2$, $\text{Nb}_{16}\text{W}_5\text{O}_{55-\delta}$ with $0 \leq \delta \leq 2$, $\text{Li}_4\text{Ti}_5\text{O}_{12}$ and $\text{Li}_4\text{Ti}_{5-x}\text{M}_x\text{O}_{12}$ with $\text{M} = \text{V}, \text{Zr}, \text{Hf}, \text{Nb}, \text{Ta}$ and $0 \leq x \leq 0.25$, a porous separator made of an electronically insulating inorganic material, a second porous electrode made of a phosphate or a lithium oxide, and a second electronic current collector, knowing that the electrolyte of said battery is a liquid charged with lithium ions confined in said porous layers, each of the three porous layers being free of binder and having a porosity comprised between 20% and 70% by volume.