

Abstract of the Disclosure

The present invention provides a porous free-standing flexible thick electrode, its fabrication method, and an aqueous hybrid ion battery made with said electrode. This free-standing flexible thick electrode provides a flexible thick electrode sheet characterized by an active material load of 0.01 - 2 g/cm², a thickness range from 0.01 - 4 mm, porosity range from 15-60%, tensile strength range from 0.2 - 5 MPa, tensile elongation at break range from 5-25%, volume resistivity range from 0.1 - 10 $\Omega\cdot\text{cm}$, tolerance of pH 2-13, a width of 0.01 - 2 m, and an unrestricted length, even tens of meters.

Figure 1 to accompany Abstract