

ABSTRACT

A MULTI-ELEMENT ELECTROCHEMICAL CAPACITOR AND A METHOD FOR MANUFACTURING THE SAME

The invention relates to electrical engineering. The multi-element electrochemical capacitor of this invention comprises at least one layer of electrical insulation film with alternating opposite-polarity electrode films placed thereon in succession and interspaced by a porous ion-permeable separator, coiled into a roll. Each electrode sheet is a substrate of nonwoven polymer material at a high pore ratio, with at least one electrode in the form of an electrochemically active layer attached to one side or both sides thereof, or embedded within the same. The capacitor also comprises contact electrodes. The method for manufacturing a multi-element electrochemical capacitor comprises preparing electrode mixtures; making opposite-polarity electrode sheets by applying an electrode mixture thereto; placing the opposite-polarity electrode sheets successively on the electrical insulation film layer; coiling the electrode sheets and film layer into a roll around a central electrode; connecting the outer surface of the roll to a peripheral electrode; and impregnating the roll with electrolyte. The technical effect consists in improved specific characteristics of the electrochemical electric energy storage, stability of the specific characteristics, and a longer service life of the capacitor.