ABSTRACT

The present application provides a coated separator, a preparation method for coated separator, and a battery. The coated separator (1) includes a base film (11) and a coating layer structure (12) arranged on the base film; the coating layer structure includes multiple material layers and includes one-dimensional nanomaterials and ceramic particles (13); and an average length of the one-dimensional nanomaterials in each material layer decreases layer by layer in a direction away from the base film. The average length of the one-dimensional nanomaterials in each material layer decreases layer by layer, and thus, possible large gaps formed due to unordered distribution of the one-dimensional nanomaterials can be avoided. In addition, the one-dimensional nanomaterials are mixed with the ceramic particles by adding the ceramic particles into the coating layer structure, thereby avoiding that the stacking density of the one-dimensional nanomaterials is too large, forming a more effective lithium ion transmission channel, increasing the lithium ion transmission rate, and effectively improving the performance of the separator and the performance of the battery.

Figure 1.