HIGH TEMPERATURE RESISTANT SEPARATOR

ABSTRACT

A high temperature resistant separator is disclosed. The high temperature resistant separator comprises a porous film having a porous polyolefin substrate with a plurality of first porous structures and a inorganic layer, wherein the inorganic layer includes a plurality of inorganic particles and a binder, and the inorganic layer is formed on at least one surface of the porous polyolefin substrate, to form a plurality of second porous structures communicating with the first porous structures of the polyolefin porous substrate; and a heat-resistant enhancement layer formed on a surface of the porous film and inner walls of the first porous structures and the second porous structures, wherein the heat-resistant enhancement layer is a composite layer formed by cross-linking a titanium alkoxide, a photo-reactive agent, the polyolefin and/or the binder of the surface and the inner walls of the first porous structures and the second porous structures of the porous film.

FIG. 2