

## **ABSTRACT**

The present disclosure discloses a coating slurry for a battery separator, including an organic polymer, a solvent, and a photoinitiator. The present disclosure also discloses a coated separator prepared with the coating slurry, and a preparation method of the coated separator. The preparation method of the coated separator includes: coating the coating slurry on at least one surface of a substrate, and irradiating a coated substrate under ultraviolet (UV) light with a set energy and wavelength to allow UV crosslinking to obtain the coated separator. In the present disclosure, a crosslinked structure is simply formed in the separator through the above-mentioned technical solution with a low cost to improve a thermomechanical strength and a breakage temperature of the separator.

[FIG. 2]