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LIU et al.(10) **Pub. No.: US 2023/0232719 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **PIEZOELECTRIC FIBER HAVING
SWISS-ROLL STRUCTURE, AND
PREPARATION METHOD THEREFOR AND
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ABSTRACT

A preparation method for a piezoelectric fiber is provided including a piezoelectric functional layer and an insulating layer coated on the piezoelectric functional layer. The piezoelectric functional layer includes a piezoelectric composite layer of a spiral winding structure, and the piezoelectric composite layer includes a first piezoelectric layer, a conductive layer and a second piezoelectric layer that are sequentially stacked. The preparation method piezoelectric composite layer in a direction perpendicular to the winding axis to form the piezoelectric functional layer, wherein turns of winding the piezoelectric composite layer are greater than 5, coating the piezoelectric functional layer with the insulating layer, and vacuum heating to consolidate, to prepare a preform rod.

