



US 20240180036A1

(19) **United States**

(12) **Patent Application Publication**
CHOI et al.

(10) **Pub. No.: US 2024/0180036 A1**

(43) **Pub. Date: May 30, 2024**

(54) **THERMOELECTRIC ELEMENT**

(52) **U.S. Cl.**

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CPC **H10N 10/817** (2023.02); **H10N 10/17**
(2023.02)

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(57)

ABSTRACT

(21) Appl. No.: **18/577,744**

(22) PCT Filed: **Jul. 12, 2022**

(86) PCT No.: **PCT/KR2022/010134**

§ 371 (c)(1),

(2) Date: **Jan. 9, 2024**

(30) **Foreign Application Priority Data**

Jul. 12, 2021 (KR) 10-2021-0090956

Publication Classification

(51) **Int. Cl.**

H10N 10/817 (2006.01)

H10N 10/17 (2006.01)

A thermoelectric element according to an embodiment of the present invention comprises: a first substrate; an insulation layer disposed on the first substrate; a first electrode disposed on the insulation layer; a bonding layer disposed on the first electrode; a semiconductor structure disposed on the bonding layer; a second electrode disposed on the semiconductor structure; and a second substrate disposed on the second electrode, wherein the upper surface of the insulation layer includes a first concave surface vertically overlapping the first electrode, the bonding layer includes a first area vertically overlapping the first concave surface and the semiconductor structure and a second area which vertically overlaps the first concave surface and does not vertically overlap the semiconductor structure, and a void density of the first area is smaller than that of the second area.

