



US 20230231311A1

(19) **United States**

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

(10) **Pub. No.: US 2023/0231311 A1**

(43) **Pub. Date: Jul. 20, 2023**

(54) **CIRCULARLY POLARIZED ANTENNAS AND WEARABLE DEVICES**

(71) Applicant: **Anhui Huami Information Technology Co., Ltd.**, Hefei (CN)

(72) Inventors: **Anping Zhao**, Hefei (CN); **Yajun Zhao**, Hefei (CN)

(21) Appl. No.: **18/185,023**

(22) Filed: **Mar. 16, 2023**

Related U.S. Application Data

(63) Continuation of application No. PCT/CN2021/118410, filed on Sep. 15, 2021.

(30) **Foreign Application Priority Data**

Sep. 29, 2020 (CN) 202011051024.1
Sep. 29, 2020 (CN) 202022193631.3

Publication Classification

(51) **Int. Cl.**
H01Q 9/04 (2006.01)
H01Q 1/36 (2006.01)
(52) **U.S. Cl.**
CPC **H01Q 9/0435** (2013.01); **H01Q 1/36** (2013.01)

(57) **ABSTRACT**

Provided are a circularly polarized antenna and a wearable device. The circularly polarized antenna is applicable to a wearable device, the antenna including: an annular gap structure including an annular antenna radiator, the radiator having an effective perimeter equal to a wavelength corresponding to a central operating frequency of the circularly polarized antenna; a feeding terminal connected across the gap structure, electrically connected to the radiator at one end, and connected to a feeding module of a mainboard of the wearable device at the other end; and at least one first grounding terminal connected across the gap structure, electrically connected to the radiator at one end, and electrically connected to a grounding module of the mainboard via an inductor at the other end.

