



US 20230231577A1

(19) **United States**(12) **Patent Application Publication**
CHEN et al.(10) **Pub. No.: US 2023/0231577 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **METHOD AND SYSTEM FOR POLAR CODE CODING****Publication Classification**(71) Applicant: **ZTE CORPORATION**, Guangdong (CN)(72) Inventors: **Mengzhu CHEN**, Guangdong (CN); **Jin XU**, Guangdong (CN); **Jun XU**, Guangdong (CN)(51) **Int. Cl.****H03M 13/13** (2006.01)**H03M 13/00** (2006.01)(52) **U.S. Cl.**CPC **H03M 13/13** (2013.01); **H03M 13/616** (2013.01)(21) Appl. No.: **17/942,885**(22) Filed: **Sep. 12, 2022****Related U.S. Application Data**

(63) Continuation of application No. 16/830,968, filed on Mar. 26, 2020, now Pat. No. 11,444,639, Continuation of application No. PCT/CN2017/104522, filed on Sep. 19, 2017.

(57)

ABSTRACT

A system and method for polar code coding with information bits placed in particular bit indexes are disclosed herein. In one embodiment, a method for channel coding includes: associating, by a polar code encoder, a first bit sequence with first bit indexes of a polar code input; associating, by the polar code encoder, a second bit sequence with second bit indexes, wherein the first bit indexes have a higher reliability than the second bit indexes; and encoding, by the polar code encoder, both the first bit sequence and the second bit sequence using a generator matrix to generate encoded bits.

