



US 20230231480A1

(19) **United States**

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

(10) **Pub. No.: US 2023/0231480 A1**

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

(54) **SWITCHED-CAPACITOR DIRECT
CURRENT/DIRECT CURRENT CONVERTER,
SWITCHING-MODE POWER SUPPLY, AND
CONTROL METHOD**

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(21) Appl. No.: **18/186,482**

(22) Filed: **Mar. 20, 2023**

Related U.S. Application Data

(63) Continuation of application No. PCT/CN2021/
093559, filed on May 13, 2021.

(30) **Foreign Application Priority Data**

Sep. 25, 2020 (CN) 202011024139.1

Publication Classification

(51) **Int. Cl.**
H02M 3/158 (2006.01)
H02M 1/32 (2006.01)
H02M 1/00 (2006.01)
(52) **U.S. Cl.**
CPC **H02M 3/1582** (2013.01); **H02M 1/322**
(2021.05); **H02M 1/0077** (2021.05)

(57) **ABSTRACT**

A switched-capacitor DC/DC converter, a switching-mode power supply, and a control method. The switched-capacitor DC/DC converter includes a controllable switch and n switched capacitor modules, where the n switched capacitor modules are connected in series to form a voltage conversion branch circuit, and the voltage conversion branch circuit is connected to the controllable switch in series. n is an integer greater than or equal to 1. When the DC/DC converter implements different voltage conversion ratios, n may be different values. The converter can implement voltage step-down or voltage step-up, and does not include a transformer inside.

