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Ilic et al.(10) **Pub. No.: US 2022/0360196 A1**(43) **Pub. Date: Nov. 10, 2022**(54) **DC BALANCER CIRCUIT WITH ZERO
VOLTAGE SWITCHING****Publication Classification**(51) **Int. Cl.***H02M 7/537* (2006.01)*H02M 1/08* (2006.01)*H02M 1/088* (2006.01)*H02M 3/07* (2006.01)(52) **U.S. Cl.**CPC *H02M 7/537* (2013.01); *H02M 1/083*(2013.01); *H02M 1/088* (2013.01); *H02M**3/07* (2013.01); *H02M 1/0058* (2021.05)

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(57)

ABSTRACT

Disclosed herein are systems and methods for operation of a switched capacitor converter (SCC). In some variations, the SCC includes a resonant circuit including an inductor. Aspects of the disclosure include methods for controlling the SCC switches to decrease switching losses associated with operating the converter and to increase efficiency of the SCC. According to some aspects, a control method is used to switch converter switches under zero-voltage conditions. According to some aspects, a control method is used to switch converter switches under zero-current conditions.

