

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2023/0231232 A1 Chen et al.

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

(54) HEAT INSULATION PAD AND METHOD OF MAKING THE SAME, BATTERY ASSEMBLY AND DEVICE

(71) Applicant: JIANGSU CONTEMPORARY AMPEREX TECHNOLOGY LIMITED, Changzhou (CN)

(72) Inventors: **Zhiming Chen**, Changzhou (CN); Quan Yang, Changzhou (CN); Boxiang Liao, Changzhou (CN); Haijian Guo, Changzhou (CN)

(21) Appl. No.: 18/188,488

(22) Filed: Mar. 23, 2023

Related U.S. Application Data

Continuation of application No. PCT/CN2022/ 077500, filed on Feb. 23, 2022.

(30)Foreign Application Priority Data

Mar. 3, 2021 (CN) 202110236896.3

Publication Classification

(51)	Int. Cl.	
` /	H01M 10/658	(2006.01)
	H01M 10/625	(2006.01)
	H01M 10/647	(2006.01)
	H01M 10/651	(2006.01)

(52) U.S. Cl.

CPC H01M 10/658 (2015.04); H01M 10/625 (2015.04); H01M 10/647 (2015.04); H01M 10/651 (2015.04); H01M 2220/20 (2013.01)

(57)ABSTRACT

A heat insulation pad and method of making the same, battery assembly and device are provided. In some embodiments, the heat insulation pad includes silicon rubber and aerogel dispersed in the silicon rubber, wherein the heat insulation pad satisfies that: a temperature difference between a surface on one side of the heat insulation pad and a surface on the other side opposite to the one side is $\ge 150^{\circ}$ C., when the surface on one side of the heat insulation pad is contacted with hot surface having a temperature of 600° C. for 5 minutes under a pressure of 0.9 MPa followed by pressure relief and then is contacted with hot surface having a temperature of 600° C. for another 20 minutes. By using the heat insulation pad of the present disclosure, the safety performance of the battery assembly and of the device can be improved.

