

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0213440 A1 **SAKAI**

Jun. 27, 2024 (43) **Pub. Date:**

(54) ELECTRODE BODY FOR NON-AQUEOUS RECHARGEABLE BATTERY, NON-AQUEOUS RECHARGEABLE **BATTERY, AND METHOD FOR** MANUFACTURING ELECTRODE BODY OF NON-AQUEOUS RECHARGEABLE **BATTERY**

(71) Applicants: PRIMEARTH EV ENERGY CO., LTD., Kosai-shi, Shizuoka (JP); ТОУОТА ЛІДОЅНА КАВИЅНІКІ KAISHA, Toyota-shi, Aichi-ken (JP); PRIME PLANET ENERGY & SOLUTIONS, INC., Tokyo (JP)

(72) Inventor: Ryotaro SAKAI, Toyohashi-shi (JP)

(73) Assignees: PRIMEARTH EV ENERGY CO., LTD., Kosai-shi, Shizuoka (JP); ТОУОТА ЛІДОЅНА КАВИЅНІКІ KAISHA, Toyota-shi, Aichi-ken (JP); PRIME PLANET ENERGY & SOLUTIONS, INC., Tokyo (JP)

(21) Appl. No.: 18/545,659

(22) Filed: Dec. 19, 2023

(30)Foreign Application Priority Data

Dec. 22, 2022 (JP) 2022-205405

Publication Classification

(51) Int. Cl. H01M 4/131 (2010.01)H01M 4/139 (2010.01)H01M 4/62 (2006.01)H01M 4/02 (2006.01) (2010.01)H01M 10/0525

(52)U.S. Cl. CPC H01M 4/131 (2013.01); H01M 4/139 (2013.01); H01M 4/625 (2013.01); H01M 2004/021 (2013.01); H01M 10/0525 (2013.01)

(57)ABSTRACT

An electrode body for a non-aqueous rechargeable battery includes a positive electrode substrate and a positive electrode mixture layer. A ratio of a specific surface area of the positive electrode plate to a density of the positive electrode mixture layer is 1.0 to 2.0, inclusive. A ratio of a spring constant of the electrode body to the specific surface area of the positive electrode plate is 30 to 80, inclusive.

