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(19) **United States**(12) **Patent Application Publication**  
**JUNG et al.**(10) **Pub. No.: US 2024/0237166 A1**(43) **Pub. Date: Jul. 11, 2024**(54) **MICROWAVE HEATING APPARATUS, AND  
METHOD FOR MANUFACTURING  
ALUMINUM NITRIDE BY USING SAME****H05B 6/70** (2006.01)**F27D 99/00** (2010.01)(52) **U.S. Cl.**CPC ..... **H05B 6/78** (2013.01); **C01B 21/0726**  
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**ABSTRACT**

A microwave heating apparatus according to the present disclosure includes a housing, a drum unit disposed rotatably on the housing and into which heating target substance and gas are introduced, and at least one heating unit heating the drum unit by applying microwaves to the drum unit. With a microwave heating apparatus and a method for manufacturing an aluminum nitride using the same of the present disclosure, an aluminum nitride may be manufactured at a lower temperature than that of conventional methods, thereby reducing manufacturing time. Additionally, a microwave heating apparatus according to the present disclosure may significantly reduce power consumption compared to an electric heating apparatus.

