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(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2023/0231148 A1**
Wada et al. (43) **Pub. Date: Jul. 20, 2023**(54) **CATALYST FOR ELECTRODE,
COMPOSITION FOR FORMING GAS
DIFFUSION ELECTRODE, GAS DIFFUSION
ELECTRODE, MEMBRANE-ELECTRODE
JUNCTION, AND FUEL CELL STACK**(71) Applicant: **N.E. CHEMCAT CORPORATION,**
Tokyo (JP)(72) Inventors: **Yoshiyuki Wada,** Tokyo (JP);
Tomoteru Mizusaki, Tokyo (JP);
Kiyotaka Nagamori, Tokyo (JP);
Satoshi Aoki, Tokyo (JP); **Makoto**
Nishibetto, Tokyo (JP); **Yasuhiro Seki,**
Tokyo (JP)(73) Assignee: **N.E. CHEMCAT CORPORATION,**
Tokyo (JP)(21) Appl. No.: **17/910,137**(22) PCT Filed: **Mar. 16, 2021**(86) PCT No.: **PCT/JP2021/010677**

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ABSTRACT

Provided is a catalyst for electrode that has excellent catalytic activity and that is capable of contributing toward lower PEFC costs. This catalyst for electrode includes: a hollow carbon support having nanopores with a pore diameter of 1 to 20 nm; and a plurality of catalyst particles supported on the support. The catalyst particles are supported both inside and outside the nanopores of the support, are composed of (zerovalent) Pt, and when analysis of the particle size distribution of the catalyst particles is performed using three-dimensional, reconstructed images obtained through STEM-based electron tomography measurement, the percentage of catalyst particles supported inside the nanopores is 50% or more.

