Development of practical Single Molecule Electret (SME) memory for low-power computers (Material Gate Co., Ltd.)

City	Year of Establishment	Founder
Hiroshima Prefecture	2023	Yuki Nakano Sadafumi Nishihara

Partner VC	Latest round of Fundraising	Valuation
Incubate Fund	Seed	Non-Disclosure

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○ Business Plan

In the highly information-driven society of the future, reducing computer power consumption is an urgent social issue. As the solution, next-generation non-volatile memory has been proposed to replace volatile memory with high power consumption, but it has not yet been realized. We aim the practical application of this next-generation non-volatile memory by using a Single Molecule Electret, an innovative memory material.

○ Research Outline

In this R&D effort, we will divide the technical aspects of Single Molecule Electret into three target : "materials," "thin film," and "devices."
①Scale-up study of Single Molecule Electret materials
②Densification of Single Molecule Electret thin films
③Prototyping and evaluation of Single Molecule Electret memory devices

Business Area/Field	Research Period	Research Grant Amount	International collaborative technology demonstration
Materials	STS 2024～2026FY	JPY 279 million	United States, Korea, Taiwan

○International collaborative technology demonstration

- Supply chain development
  Building a pipeline for expansion into major overseas semiconductor foundries

As of November,2024