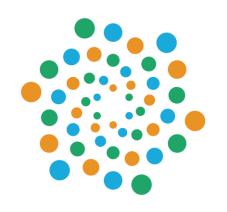# Development of a materials platform for integrating internal and external data in the materials industry (CrowdChem, Inc.)

○ Business Plan

We build a database by manually extracting information such as compounding information and experimental results from examples of chemical product structures and properties, mainly from publicly available web catalogs, and chemical experts from examples of chemical patents. By using a proprietary machine learning model to learn from the data set obtained in this extraction process, it is possible to predict the resulting property information from compounding information and processing processes, and to search for combinations of raw materials that will achieve the desired properties. Based on this model, the company provides compounding analysis and proposal services and platform services.

○ Research Outline

By developing federated learning technology based on a unique machine learning algorithm that can connect data resources across the materials industry based on catalogs and patents and different data, we will commercialize a platform where all companies that manufacture and use materials can share and use each other's data.

1. Development of federated learning technology for the chemical industry
2. Improvement of the accuracy of federated learning models
3. Development of information security technology for practical use of federated learning

City	Year of Establishment	Founder
Shinagawa-ku, Tokyo	2022	Hisaki Ikebata

Partner VC	Latest round of Fundraising	Valuation
PKSHA Algorithm Fund	Pre Series A	JPY 940 million

Business Area/Field	Research Period	Research Grant Amount	International collaborative technology demonstration
Materials	STS 2025～2026FY	JPY 289 million	North America, Europe

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