



FIZnews

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ICSD data provide the basis for a new global AI initiative in materials research

Karlsruhe, July 21, 2026 — The Inorganic Crystal Structure Database (ICSD) from FIZ Karlsruhe is one of the scientific data sources for CuspAI's new AI Materials Foundry. The international network brings together more than 45 partners from academia and industry, including NVIDIA, Meta, Samsung, Henkel, and the Hyundai Motor Group. The goal is to significantly accelerate the development of new materials using artificial intelligence.

High-quality, reliable, and carefully curated data are crucial for AI-driven materials research. This is exactly where ICSD comes into play. CuspAI uses the database as one of its key sources of experimental data, which AI models can use to design and evaluate new materials. As the partner who provides the data, FIZ Karlsruhe thus helps ensure that scientific findings can be incorporated more quickly into new applications for semiconductors, energy technologies, and industrial manufacturing.

That ICSD was selected as a data source underscores its international significance. For decades, ICSD has been a globally recognized reference database for inorganic crystal structures and meets the highest scientific quality standards. Its carefully verified and curated data provide the reliable foundation that modern AI applications in materials research require.

Through its participation in the AI Materials Foundry, FIZ Karlsruhe is strengthening its role as an internationally sought-after provider of high-quality research data and demonstrating the importance of quality-assured scientific information infrastructures for the next generation of AI-supported research.



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