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Material Informatics Market by Technique (Statistical Analysis, Genetic Algorithm, Deep Tensors, Digital Annealers), Elements (Metals, Alloys), Chemicals (Dyes, Polymers, Biomolecules), Application (Chemical, Pharmaceutical) - Global Forecast to 2028

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Abstracts

The global material informatics market size is anticipated to grow from USD 129 million in 2023 to USD 276 million by 2028, at a CAGR of 16.3% from 2023 to 2028. The rising implementation of material informatics software integrated with AI/ML for materials R&D due to technological advancement and growing digitalization in several applications such as manufacturing, chemical & pharmaceutical, and materials science are some of the major factors propelling the growth of material informatics market.

“Elements to contribute largest market share from 2023 to 2028.”

Material informatics software is used for understanding different elements in various applications, including materials science, manufacturing, food science, energy, and others. Different elements include metals, ceramics, composites, alloys, superalloys, and semiconductors. Using trial and error or synthesis methods can be exhaustive and inefficient during these elements' optimization or discovery processes. To simplify the element development and analysis processes, material informatics software plays a key role.

“Chemical & pharmaceutical application is expected to contribute significant market share in material informatics market during the forecast period.”

The main purpose of material informatics in the chemical & pharmaceutical application is to simplify the discovery and development process of novel chemical blends and,

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ultimately, new chemical compounds. As a result, many companies are focusing on the R&D of different chemicals. Thus, these R&D activities require collecting, storing, analyzing, and manipulating chemical data. These sustainable operations are achieved by implementing material informatics solutions in the chemical & pharmaceutical sector.

“North America is expected to account for the largest share of market during the forecast period.”

The presence of many key players such as Mat3ra (US), Schr?dinger (US), Citrine Informatics (US), Kebotix (US), AI Materia (Canada), Kitware (US), and Uncountable (US), along with a large customer base of manufacturing and chemical & pharmaceutical applications, is one of the major factors driving the material informatics market in the region. The US is also a manufacturing hub for the aerospace industry, which ultimately focuses on material R&D essential for the aerospace sector. All these factors are expected to contribute to the growth of the material informatics market in North America.

Break-up of the profiles of primary participants:

By Company Type – Tier 1 – 35%, Tier 2 – 40%, and Tier 3 – 25%

By Designation – C-level Executives – 35%, Directors – 45%, and Others – 20%

By Region – North America - 35%, Europe – 30%, Asia Pacific – 25%, and RoW – 10%

Research Coverage:

The material informatics market has been segmented into material type, application and region. the material informatics market has been studied for North America, Europe, Asia Pacific, and the Rest of the World (RoW).

Reasons to buy the report:

Illustrative segmentation, analysis, and forecast of the market based on material type, application and region have been conducted to give an overall view of the material informatics market.

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A value chain analysis has been performed to provide in-depth insights into the material informatics market.

The key drivers, restraints, opportunities, and challenges pertaining to the material informatics market have been detailed in this report.

The report includes a detailed competitive landscape of the market, along with key players, as well as an in-depth analysis of their revenues.

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