



materials design

Experience the power of prediction with MedeA

Think of the implications of being able to predict the physical and chemical properties of many materials combinations. That is what MedeA can help you do.

MedeA predicts materials properties using simulations based on quantum mechanics, statistical thermodynamics, classical mechanics and electrostatics, as well as correlation methods involving empirical data.

Designed to perform

The journey of MedeA takes you from simulation to analysis to decision. A powerful productivity tool, MedeA brings everything you need together in one place. With MedeA you can calculate materials properties seamlessly, saving you time and putting all the data that you need in your hands.

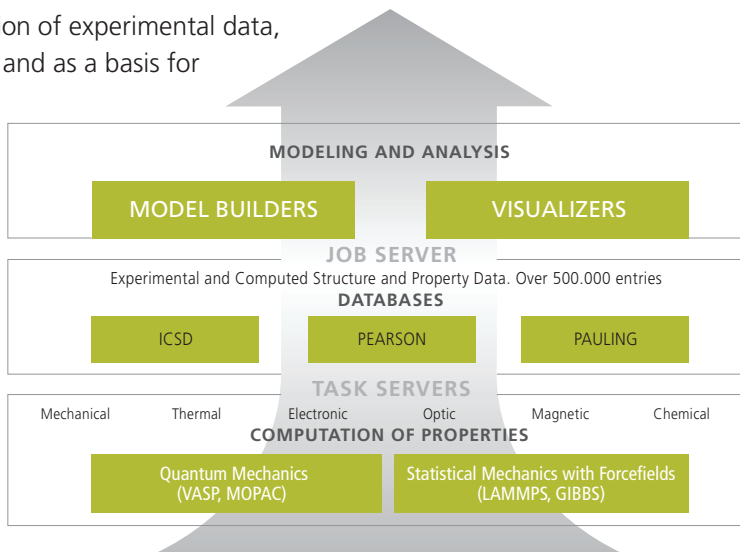
MedeA is **designed for materials engineers and scientists** who want rapid and reliable answers for a range of materials issues related to application areas such as electrical power generation, automotive applications, energy storage, alloy design, microelectronics, the chemical industry and petrochemicals.

Academic researchers rely on MedeA for interpretation of experimental data, gaining deep understanding of materials properties, and as a basis for research in computational materials science. MedeA is an invaluable tool for learning and teaching.

The MedeA architecture

The MedeA software consists of three levels, a graphical user interface, databases, and simulation programs. Communication between layers is through JobServers and TaskServers.

MedeA embeds modules in a core framework with components that can be distributed over a network of computers including large-scale super-computers, or installed on a single machine.



MedeA's network architecture helps you to:

- Search and retrieve over 500,000 entries of materials data including crystal structure and binary phase diagrams.
- Efficiently explore the vast compositional space of materials with powerful computational capabilities.
- Build models of solids, surfaces, molecules, nanostructures, and interfaces between materials with a user-friendly interface.
- Compute mechanical, thermal, fluid, catalytic, electrical, optical and magnetic properties of materials.
- Keep thousands of computed results organized with the JobServer.
- Visualize and analyze results.

Visit our website www.materialsdesign.com or contact your local Materials Design office for further information.