



## Ansys' Collaboration with Schrödinger will Accelerate Materials Development with Unprecedented Multiscale Simulation

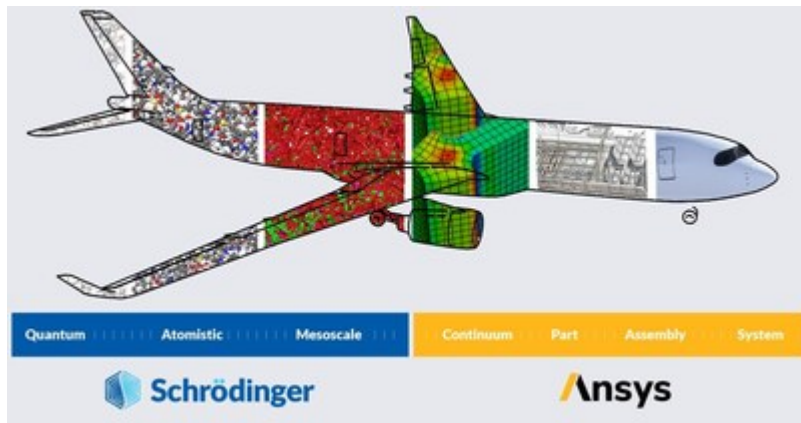
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*Collaboration enables accelerated materials discovery to optimize product development*

### / Key Highlights

- Ansys and Schrödinger are collaborating to develop an integrated computational materials engineering (ICME) approach to product development that infuses virtual materials discovery into the early stages of design
- The predictive accuracy of Ansys multiphysics solutions combined with Schrödinger's materials solutions help engineers identify suitable materials for their designs before manufacturing begins

PITTSBURGH, May 7, 2024 /PRNewswire/ -- [Ansys](#) (NASDAQ: ANSS) and Schrödinger are collaborating to deliver an ICME approach that bridges the gap between materials discovery and product development. Together, Ansys and Schrödinger will accelerate the discovery of new materials by using a multiscale framework, leading to more optimized materials, components, and manufacturing workflows for customers. The new workflows will empower Ansys customers to make critical decisions earlier in the design process and bring products to market sooner.



Presently, materials discovery and product development are separate processes. While digital engineering tools have been widely adopted, standardizing and accelerating materials engineering tools has been delayed by the complexity of generating detailed data at a small scale. As a result, new products are being developed faster than the discovery of new materials that could improve performance. Computational materials engineering tools that quickly model materials from molecular to macroscopic levels present an opportunity to help customers unlock new levels of innovation and keep pace with industry advancement.

The Ansys and Schrödinger collaboration delivers a critical solution to address this challenge. The holistic approach of ICME allows customers to first determine what material characteristics are needed to meet specification standards. Once identified, users can generate material properties using Schrödinger's molecular modeling platform and use them in an Ansys simulation tool to evaluate product performance based on predicted materials data — all before prototyping begins. With this collaboration, users can run multiscale simulations to discover new materials, while ensuring products across industries fit performance standards such as weight, size, and efficiency.

"Designing the next generation of materials starts at the molecular level," said Mathew Halls, senior vice president of materials science at Schrödinger. "Our collaboration with Ansys delivers a dramatic and necessary acceleration in materials discovery that will greatly impact our understanding of their applications. Providing customers with the right materials information before conducting physical tests can significantly reduce costs and shorten project timelines."

For example, when evaluating how a material behaves under force, engineers need to know how much it can stretch and how much force it can withstand before permanently changing or breaking. Schrödinger's platform enables virtual testing of these properties to determine their reactions to stress factors, and the results can be stored and managed in an Ansys materials information database. From there, the materials data can be applied to an Ansys structural simulation workflow to observe the material's behavior in context.

"Using the right material for product development is crucial for the success of its intended application," said Shane Emswiler, senior vice president of products at Ansys. "But when it can take up to 20 years to test and validate new materials, the types of products our customers can develop are stymied by the current selection or worse, the most suitable material doesn't exist. Together with Schrödinger, Ansys will provide an accelerated path to discovering new materials that have better performance and longevity for a host of applications, ensuring our customers can stay on the cutting-edge of innovation."

To learn more about the collaboration and workflow, register to attend [Ansys Simulation World 2024](#), a free simulation event designed to inspire, equip, and empower innovation, hosted virtually May 14-16.

## **/ About Ansys**

Our Mission: Powering Innovation that Drives Human Advancement™

When visionary companies need to know how their world-changing ideas will perform, they close the gap between design and reality with Ansys simulation. For more than 50 years, Ansys software has enabled innovators across industries to push boundaries by using the predictive power of simulation. From sustainable transportation to advanced semiconductors, from satellite systems to life-saving medical devices, the next great leaps in human advancement will be powered by Ansys.

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