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**What
is
nanoHUB?**

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nanoHUB.org is the premier platform for computational nanotechnology research, education, and collaboration, hosting a diverse community of researchers, students, and educators.

nanoHUB features:

-  An extensive suite of simulation programs for nanotechnology research and education
-  Transparent computational resources for running complex simulations seamlessly in a web browser
-  Learning resources related to simulation programs and nanotechnology
-  A venue to explore, collaborate, and publish new content



nanoHUB has been serving a large community with simulation tools and educational resources for several years. Simulations range from well-vetted apps in domains such as nanoelectronics and nanobiology to new cutting edge apps in nanobiology, nanomanufacturing, and visualization. Current network partners, **the hierarchical nano-manufacturing node (nanoMFG) and the engineered nanoBIO node (nanoBIO)**, collaborate with nanoHUB to implement and deploy important apps in these domains, based on community input. The nodes are looking for new users, contributions, and collaborators.

Our partners share our mission to support and grow the nanotechnology community and to generate new modes of discovery, innovation, learning, and engagement in the study of nanotechnology.



The Engineered nanoBIO node develops a powerful set of experimentally-informed, user-friendly computational nanotechnology tools and educational materials that address the multiscale problem of designing customized and safe nanotechnology-based devices for biological applications. The computational tools will be tested and validated experimentally and they will be integrated with nanoHUB leveraging the node team expertise in high-performance computing and data-analysis platforms to enable both research and educational activities.

The nanoMFG node targets the development of computational software tools, data, and educational resources aimed at creating smart, model-driven and experimentally informed nanomanufactured structures, devices, and processes. The main features of the nanoMFG node include: a range of simulation tools that leverage team expertise in combinatorial chemistry, microfluidics, photonics, electronics, and manufacturing at various scales; promotion of node theme and tools through STEM outreach and broad dissemination activities; and updating tools based on regular feedback from their manufacturing industry partners.

