Advanced Materials and Nanosystems
Delivering Solutions

Where Nanotechnology and Advanced Manufacturing Become One

Nanotechnology is the control of matter on the atomic and molecular scale. While still in its infancy, nanotechnology aims to drive the next major technological revolutions in space flight, computing, medicine, aeronautics, energy systems, and manufacturing. Some specific applications include molecular-scale electronics, optical computing, ultra-strong materials, hybrid biological-artificial systems, and self-replicating nanoelectromechanical systems.

Dynetics is developing methods of manufacturing nano-scale materials, where it is possible to control not only the resulting material properties (e.g., strength, conductivity, etc.), but also to control the shape, composition, and placement of materials on the large scale. In this way, it is possible (for the first time) to perform additive manufacturing of entire complex systems, rather than just manufacturing individual components. For example, entire automobile engines could be printed from computer drawings, and they would function just as well as or better than a traditionally machined and assembled engine. And at that same time, the printed engines would cost less.

Today, manufacturing begins with raw materials, casts or forms them to create components, then machines and assembles them to create systems. The traditional approach results in high labor costs and wastes valuable materials. A unique capability within the US, nano-additive manufacturing is typically limited to national research laboratories and universities. Dynetics recently invested in a 226,000-square-foot Solutions Complex to bring greater capabilities in research and development to this area. The new facility has a dedicated laboratory to do this specialized applied research.
Innovating Unique Capabilities Since 1974

At Dynetics, we help customers accomplish complex, high-value missions. By combining the capabilities of a large business with the responsiveness of a small business, Dynetics put in place extensive R&D capabilities and deep technical expertise in systems engineering, systems analysis, modeling and simulation, cyber, software development, rapid prototyping, test and evaluation, manufacturing, integration, and operations. Using our considerable engineering, scientific, and other technical resources, we help customers identify, analyze, and respond to complex threats to their missions.

FOR MORE INFORMATION

www.dynetics.com
256-964-4000
CorporateCommunications@dynetics.com