

Nanotechnology Concepts at Marshall Space Flight Center – Engineering Directorate

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Nanotechnology is the art and science of building materials and devices at the ultimate level of finesse: atom by atom. Our nation's space program has need for miniaturization of components, minimization of weight, and maximization of performance, and nanotechnology will help us get there. MSFC's Engineering Directorate is committed to developing nanotechnology that will enable MSFC missions in space transportation, space science, and space optics manufacturing. MSFC has a dedicated group of technologists who are currently developing high-payoff nanotechnology concepts. This poster presentation will outline some of the concepts being developed including, nanophase structural materials, carbon nanotube reinforced metal and polymer matrix composites, nanotube temperature sensors, and aerogels. The poster will outline these concepts and discuss associated technical challenges in turning these concepts into real components and systems.