

Abstract for an Invited Paper
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Profile of Clean Technology Commercialization in the U.S.

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In 2009, the National Center for Manufacturing Sciences (NCMS) performed its third successive study of the growth and transition of nanotechnology into commercial products, under award from the National Science Foundation (NSF). Nanotechnology is a recently recognized cross-disciplinary field of a variety of potentially disruptive technologies that involves the creation and operation of objects at the nanoscale, up to 100 nanometers in size. Nanomanufacturing is the large-scale manipulation of matter at the nanoscale, to produce value-added components. Because of the economically significant new markets and breadth of applications that can benefit from the exploitation of these size-driven aspects, much international research and commercial effort is being expended to create revolutionary value-added products using the many capabilities and tools enabled by nanotechnology. In the context of Michigan and many other US states, startup and commercialization activity is especially important in market diversification and job growth initiatives. This trend has accelerated new applications of nanotechnology in industrial and consumer markets related to energy efficiency and environmentally conscious manufacturing, known as “cleantech.” Dr. Mehta’s presentation will illustrate the industry’s major trends, concerns and barriers across key strategic indicators, as well as highlight the characteristics of startup businesses and established players in this important field.