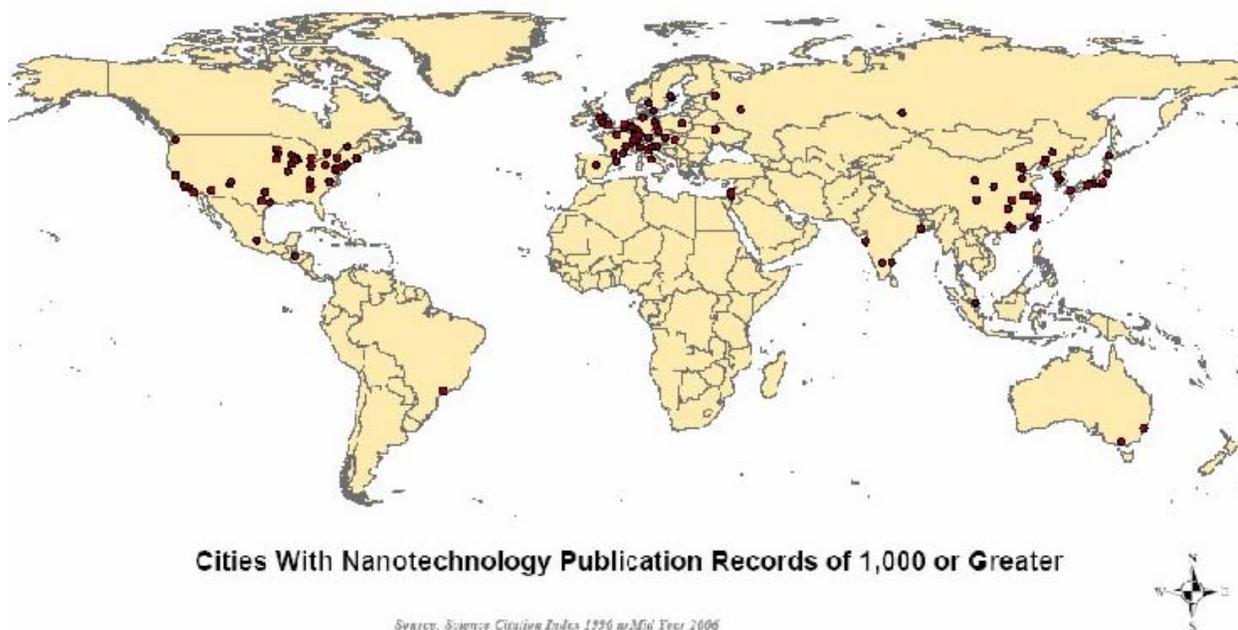


Characterizing Nanotechnology Research and Innovation

Research at the Georgia Institute of Technology, led by Philip Shapira, Alan Porter, and Jan Youtie, is characterizing the emerging scope and nature of nanoscale science and engineering (NSE) research and innovation. Supported through the Center for Nanotechnology in Society at Arizona State University, the researchers developed a complex search algorithm and then applied data-mining techniques to create databases of global NSE publication and patenting. These data can be mined for details including the fields of NSE represented in nano-districts, the most active institutional players, and the orientation towards commercialization. The research has identified global nano-districts concentrated in the United States, Europe, and Japan, as expected, but also found them in China, India, and some smaller countries such as Israel. Researchers note that progress in technological innovation often comes in waves, originating with a platform or general purpose technology (GPT). GPTs are normally identified once the technology is sufficiently matured, so that researchers can collect adequate patent information. However, through a novel approach to analyzing the characteristics of patents in NSE compared with other areas, Youtie and other Georgia Tech colleagues have already found evidence that nanotechnology may serve as a GPT, a discovery with business and public policy implications.



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Patents or other steps toward commercialization:

Contributing Agency: NSF