

Societal Implications of Fourth Generation Nanotechnology: Molecular Manufacturing

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Predictions for the future of nanotechnology range from the mundane, to the revolutionary, to the catastrophic. In reality, you should expect mostly the first over the next few years, a lot of the second in the next decade or two, and hopefully none of the last — although we must take that possibility seriously. Nanotechnology is sometimes called "the next Industrial Revolution," and with good reason. Fourth generation nanotechnology — molecular manufacturing — could radically transform the world, and the people, of the 21st century. Whether that transformation will be peaceful and beneficial or horrendously destructive is unknown. The task ahead of us is to explore and understand the environmental, humanitarian, economic, military, political, social, medical, and ethical implications of molecular manufacturing, and to prepare wise, comprehensive, and balanced plans for responsible use of this transformative technology. Although nanotechnology carries tremendous promise, unwise or malicious use could seriously threaten the survival of the human race. An ironic curse/blessing says, *May you live in interesting times*. The seminar will describe that future and its effects on all of us: from the mundane, to the revolutionary, and, possibly, the catastrophic.

Mike Treder, executive director of the Center for Responsible Nanotechnology (CRN), is a professional writer, speaker, and policy advocate with a background in media and communications. In 2002, he co-founded CRN, a non-profit research and advocacy organization that promotes public awareness and education, and works for the crafting of effective policy to maximize benefits and reduce dangers. Mike is also a consultant to the Millennium Project of the American Council for the United Nations University, serves on the Scientific Advisory Board for the Lifeboat Foundation, is a Research Fellow with the Institute for Ethics and Emerging Technologies, is on the Nanotech Briefs Editorial Advisory Board, is a consultant to the Future Technologies Advisory Group, and is a member of the World Future Society. Mike has published more than 30 articles and papers, and has been interviewed numerous times by the media. As an accomplished presenter on the societal implications of emerging technologies, he has addressed conferences and groups in the United States, Canada, Great Britain, Spain, Germany, Italy, Switzerland, Australia, New Zealand, and Brazil. Mike lives in New York City.

