

K. Eric Drexler, PhD

2005-2006 selected milestones

Publications:

Books:

Engins de Creation: L'avenement des nanotechnologies (*French translation with Introduction by Bernadette Bensaude-Vincent*) Vuibert, Paris, 2005.

Engines of Creation (*Simplified-Chinese translation*) January 2005, serialized on sina.com.

Other Publications:

Drexler, K.E. (in press, 2006) Toward Integrated Nanosystems: Fundamental Issues in Design and Modeling in *Handbook of Theoretical and Computational Nanotechnology*, M. Rieth, W. Schommers, eds. American Scientific Publishers. (Co-published in *Journal of Computation and Theoretical Nanoscience*, 2006:3:1, 1-10)

Drexler, K.E. (in press, 2006) Nanotechnology in *McGraw-Hill Encyclopedia of Science and Technology*, 10th edition.

Drexler, K.E. (2005) Productive Nanosystems: the physics of molecular fabrication *Physics Education* **40**:339-346.

Allis, D.G. and K.E. Drexler (2005) Design and Analysis of a Molecular Tool for Carbon Transfer in Mechanosynthesis *J. Comput. Theor. Nanosci* **2**:45-55.

Reprint for anthology:

Drexler, K.E. (1981) Molecular engineering: An approach to the development of general capabilities for molecular manipulation *Proceedings of the National Academy of Sciences USA* **78**:5275-5278. To be in: *Nanotechnology*, Milestone series of selected reprints, International Society for Optical Engineering, (in press, 2006).

Selected past and upcoming lectures:

11 December 2006: TBA Christmas Seminar, Heidelberg, Germany

6 November 2006: TBA. ICE 2006, Edmonton, Alberta, Canada

3-4 November 2006 TBA. Novartis/MIT forum, Cambridge, MA

4-8 September 2006, TBA Symposium, Ministry of Construction and Transport, (Seoul, South Korea)

19 May 2006: Keynote Address, Proctor and Gamble, Inc. symposium Nostradamus 2010, (Cincinnati, OH)

29 March 2006: “Engineering from the Bottom Up,” Keynote address, Society of Manufacturing Engineers, (Los Angeles, CA)

12 January 2006: “Engineering from the bottom up: Productive nanosystems and the future of technology” Public Seminar, National Nanotechnology and Nanoscience Initiative, National University of Singapore (Singapore)

8 December 2005: “Productive Nanosystems: Toward a Bottom-up Revolution in Organizing Matter” Frontiers in Science award speaker, Society for Cosmetic Chemists (New York, NY)

31 July 2005 “Productive Nanosystems: Roadmap to a Bottom-up Revolution” Symposium-wide plenary, Optics and Photonics 2005 (San Diego, California)

9-12 June 2005 “Design and Analysis of a Molecular Tool for Carbon Transfer in Mechanosynthesis” presentation, China Nano 2005 (Beijing, China)

18-21 February 2005 Keynote Address at the 30th Anniversary SISCTI conference, Tecnológico de Monterrey, (Monterrey, Mexico)

8-9 February 2005 Invited Presenter, National Academy of Sciences/National Research Council workshop on Molecular Self-Assembly / Molecular Manufacturing (Washington, DC)

Additional:

Productive Nanosystems: from Molecules to Super-products, a *computer-generated animated short film* was produced to help people to visualize the potential of future of nanotechnology. Version 1.0, completed June 2005, was a collaborative project of animator and engineer John Burch and K. Eric Drexler. The film depicts an animated view of a nanofactory and demonstrates key steps in a process that converts simple molecules into a billion-CPU laptop computer. Version 1.1 with updated sound track completed March 2006.

Honoree: **Top 100 Living Contributors to Biotechnology**, CODRIA biotechnology convention, London England (October 2005). To be printed *The Scientist Magazine* (January 2006) and forthcoming hardback volume, Reed Elsevier publishers.

Published molecular artwork:

Cover, *Journal of Computational and Theoretical Nanoscience*, Vol. 3, No.1 2006, rendered image of a molecular-mechanics based model of a molecular differential gear.

Cover, *Journal of Computational and Theoretical Nanoscience*, Vol. 2, No.1, 2005; rendered image of a quantum-chemistry based model of the DC10c tool for carbon-dimer transfer.

Cover, and foreword *Nanofuture* by John Storrs Hall, PhD, Prometheus 2005, depiction of molecular mill.

Cover, *Chemical & Engineering News*, American Chemical Society, 1 Dec. 2003, depiction of molecular mill.