Iddo K. Wernick

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EMPLOYMENT HISTORY

2010 - *Senior Research Associate,* Program for the Human Environment, The Rockefeller University, New York, NY.

2010 (Fall) *Adjunct Professor*, City University New York, Courses taught: Industrial Ecology and Life Cycle Analysis & Energy Systems Engineering for Global Sustainability

2004 - 2009 *Medical Physicist*, Department of Radiation Oncology, St. Lukes-Roosevelt Medical Center, New York, NY

DABR (conditioned). Extensive experience in txt planning, brachytherapy (prostate, gynecological and lung), and imaging diagnostics

2004-2007 Consultant to USEPA, Center for Responsible Environmental Strategies, Austin, TX

Led project with USEPA Radiation Protection Division on material accounting for commercial radionuclides.

2002 - 2004 *Senior Associate,* World Resources Institute, Washington, DC.

Public policy analysis of national-level physical resource accounting systems; Manage international partnerships; Database and data network development.

2000 - 2002 *Vice President Content Development,* Ecos Technologies, New York, NY.

Raise initial venture capital funding; Product design and development; Issue patent for corporate EHS data-management system.

1997 - 2000 *Senior Research Associate*, Columbia Earth Institute & *Associate Professor,* Department of Earth and Environmental Engineering, Columbia University, New York, NY.

Develop new curricula and teach graduate engineering courses in Industrial Ecology; Develop organizational strategy and goals, Manage grants from government agencies and corporate sponsors for the Columbia Earth Institute, 1999 AT&T Industrial Ecology Faculty Fellowship.

1992 - 1997 *Research Associate,* The Rockefeller University, New York, NY.

Began by splitting time in experimental physics program and environmental program. Migrated to environmental program, focusing on the development of the field of Industrial Ecology; Conduct research on environmental technologies, trends in US resource and energy sectors, US land use patterns, and governance structures for environmental decision-making.

1990 - 1994 *Adjunct Professor of Physics,* Yeshiva University, New York, NY.

EDUCATION

Ph.D. Applied Physics, Columbia University, New York, 1992
M.S. Applied Physics, Columbia University, New York, 1989
B.S. Physics, University of California, Los Angeles, 1987

PUBLICATIONS

A Rautiainen, IK Wernick, PE Waggoner, JH Ausubel, PE Kauppi, 2011 A National and International Analysis of Changing Forest Density. PLoS ONE 6(5): e19577. doi:10.1371/journal.pone.0019577

AV Young, AW Wortham, IK Wernick, A Evans, RD Ennis, 2011, Atlas-Based Segmentation Improves Consistency And Decreases Time Required For Contouring Postoperative Endometrial Cancernodal Volumes, *Int. J. Radiation Oncology Biol. Phys.,* Vol. 79, No. 3, pp. 943–947, 2011doi:10.1016/j.ijrobp.2010.04.063

IK Wernick, 2010, Book Review of Changing Stocks, Flows and Behaviors in Industrial Ecosystems & The Dynamics of Regions and Networks in Industrial Ecosystems edited by Matthias Ruth and Brynhildur Davidsdottir. *Journal of Industrial Ecology* 14(6):978-80..

JD Blasberg, SJ Belsley, GS Schwartz, A Evans, I Wernick, RC Ashton Jr, FY Bhora, and CP Connery, 2010, Robotic Brachytherapy and Sublobar Resection for T1 Non-Small Cell Lung Cancer in High-Risk Patients. *Ann. Thorac. Surg.*, February 2010; 89: 360 – 367

D Rogich, A Cassara, IK Wernick, and M Miranda, 2008, Material Flows in The United States: A Physical Accounting Of The U.S. Industrial Economy, World Resources Institute, Washington, DC, 51 pp.

IK Wernick, Book Review, 2008, Useless Arithmetic: Why Environmental Scientists Can't Predict the Future by Orrin H. Pilkey and Linda Pilkey-Jarvis Columbia University Press, *Journal of Industrial Ecology 12(2): 249-251*

IK Wernick, 2007, Global Warming and the Industrial System, International Relations and Security Network (ISN), Zurich, Switzerland. See http://www.isn.ethz.ch/pubs/ph/details.cfm?lng=en&id=30366

JH Ausubel, IK Wernick, AM Barret, and P Waggoner, 2006, Industrial Ecology for Leverage to Let Loose Less Cadmium, *Progress in Industrial Ecology* 3(6):522-537.

LT Lu, IK Wernick, TY Hsiao, YH Yu, YM Yang, HW Ma, 2006, Balancing the life cycle impacts of notebook computers: Taiwan's experience, *Resources, Conservation and Recycling* (2006) 48:13-25.

JH Ausubel, PE Waggoner, and IK Wernick, 2005, Foresters and DNA in Williams, C.G. (ed.), *Landscapes, Genomics and Transgenic Forests,* Springer New York, LLC.

IK Wernick and FH Irwin, 2005, Material Flow Accounts: A Tool for Making Environmental Policy, Policy Brief, The World Resources Institute, Washington, DC, 49 pp.

TY Hsiao, IK Wernick, YH Yu, and LT Lu, 2005, Materials Flow Analysis of Pollutants in Taiwan, *International Journal of Environment and Pollution*, Vol. 23(3):259-272.

IK Wernick, Book Review, 2005, The Economics of Industrial Ecology: Materials, Structural Change, and Spatial Scales, Jeroen C.J.M. van den Bergh, Marco A. Janssen (Eds.), *Journal of Ecological Economics* 55(3):449-51.

TY Hsiao, YT Huang , YH Yu, IK Wernick , 2003, Modeling materials flow of waste concrete from construction and demolition wastes in Taiwan, *Resources Policy* 28 (2002) 39–47.

IK Wernick, 2003, Environmental Knowledge Management, *Journal of Industrial Ecology 6(2):7-9.*

TY Hsiao, YH Yu, and IK Wernick, 2002, Analyzing Materials Flows from Construction Aggregates in Taiwan, *Journal of the Chinese Institute of Environmental Engineering* 12(2):103-112

IK Wernick and P Eisenberger, 2002, A Task Driven Environmental/Business Taxonomy And Applications Delivery Platform Using an Enhanced Industrial Ecology Model. Provisional Patent filed 01/24/02. Application No. 60/352.064

TY Hsiao, YH Yu, and IK Wernick, 2001, A Note on Material Flows of Construction Aggregates in Taiwan, *Resources Policy,* 27(2001)135-7.

IK Wernick, 2001, Industrial Ecology and the Built Environment, pp. 177-195 in *Construction Ecology: Nature as a Basis for Green Buildings*, *Edited by Charles J. Kibert, Jan Sendzimir, G. Bradley Guy,* Spon Press, London, UK

IK Wernick, 2001, Industrial Ecology, in *Managing Human-Dominated Ecosystems*, pp. 235-248. Edited by Victoria C. Hollowell. Missouri Botanical Garden Press, St. Louis, MO.

JH Ausubel, PS Meyer, and IK Wernick, 2001, Death and the Human Environment: The United States in the 20th Century *Technology in Society* 23(2):131-146.

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IK Wernick, PE Waggoner, and JH Ausubel, 2000, The Forester's Lever: Industrial Ecology and Wood Products, *Journal of Forestry* 98(10):8-14.

IK Wernick, 2000, The Future of Metal Recycling, *American Metals Market*, p. 14A, January 1, 2000.

IK Wernick, 2000, Book Review, "Upsizing: The Road to Zero Emissions, More Jobs, More Income, and No Pollution," Pauli, G., *Journal of Industrial Ecology*, 3(2):190-1, 2000.

T Amari, NJ Themelis, and IK Wernick, 1999, Resource Recovery from Used Rubber Tires, *Resources Policy* 25(3):179-188.

IK Wernick, 1999, The Role of U.S. and Soviet Scientists in Nuclear Arms Control Activities: The Example of the Committee on the International Security and Arms Control, online at: https://wwwc.cc.columbia.edu/sec/dlc/ciao/conf/nya02/nya02ai.html

IK Wernick, 1998, Material Flows: Definitions and Data, *Managing a Material World*, pp. 85-96. Edited by P. Vellinga, F. Berkhout, and J. Gupta. Kluwer Academic Publishers, Norwell, MA, USA.

IK Wernick and NJ Themelis, 1998, Recycling Metals for the Environment, *Annual Review of Energy and Environment* 23:465-97.

IK Wernick, PE Waggoner, and JH Ausubel, 1998, Searching for Leverage to Conserve Forests: The Industrial Ecology of Wood Products in the U.S., *Journal of Industrial Ecology*, 1(3):125-145.

NJ Themelis and IK Wernick, 1997, Metal Production and Greenhouse Gases, Proceedings of The Julian Szekely Memorial Symposium on Materials Processing, Cambridge, MA October, 6-8 1997, pp. 595-610.

IK Wernick and JH Ausubel, 1997, *Industrial Ecology: Some Directions for Research*, Report commissioned by the Energy and Environmental Systems Division, Lawrence Livermore National Laboratory, U.S. Department of Energy.

IK Wernick, 1997, Book Review, "Design for Environment: Creating Eco-efficient Products and Processes" Fiksel, J. (ed.), *Journal of Industrial Ecology* (1)1, 1997.

PE Waggoner, JH Ausubel, and IK Wernick, 1996, Lightening the Tread of Population on the Land: American Examples, *Population Development and Review* 22(3):531-45.

IK. Wernick, R Herman, S Govind, and JH Ausubel, 1996, Materialization and Dematerialization: Measures and Trends", *Daedalus* 125(3):171-98.

IK Wernick, 1996, Consuming Materials: The American Way, *Technological Forecasting and Social Change* 53(1):111-22.

IK Wernick, 1996, Book Review, “Industrial Ecology and Global Change” Socolow R., et al. (eds.), *Climatic Change* 32(1):117-19, 1996.

IK Wernick, 1996, Guest Editorial, Better Risk Information for Communities, *Risk Analysis* 16(5):601-3, 1996.

IK Wernick and JH Ausubel, 1995, National Materials Flows and the Environment, *Annual Review of Energy and the Environment* 20:462-92.

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JH Ausubel, DG Victor, and IK Wernick, 1995, The Environment Since 1970, *Consequences* 1(3):3-15.

IK Wernick and JH Ausubel, 1995, National Material Metrics for Industrial Ecology, *Resources Policy* 21(3):189-98, 1995.

IK Wernick, 1995, Book Review, “Lean and Clean Management,” Romm, J., *International Journal of Environment and Pollution* 5(2/3):314-6, 1995.

IK Wernick, 1994, Dematerialization and Secondary Materials Recovery: A Long-Run Perspective, *Journal of the Minerals, Metals, and Materials Society* 46(4):39-42.

IK Wernick and TC Marshall, 1992, Experimental Test of the Free Electron Laser Accelerator Principle, *Physical Review A* 46(6):3566-68.

IK Wernick and TC Marshall, 1992, An Inverse Free Electron Laser Auto-accelerator Experiment, *Nuclear Instruments and Methods of Physics Research* A318:754-57.

PRESENTATIONS

Gordon Research Conference
Japanese Ministry of Environment (Japan)
Leiden University (Netherlands)
Missouri Botanical Garden
National Academy of Engineering
National Taiwan University
National Materials Advisory Board
Naval Research Laboratory
National Science Council (Taiwan)
National Taiwan University
New York Academy of Sciences
RAND Corporation
Robert Wood Johnson Foundation
Technical Chamber of Greece (Greece)
Technion University (Israel)
The New School
University of California Los Angeles
University of Florida Gainesville
US Nat'l Acad. of Sciences Board on Earth Resources
US Forest Service Forest Products Laboratory
US Environmental Protection Agency
US Geological Survey
White House Office of Science & Technology Policy
Wuppertal Institute (Germany)