



Welcome to Vol. 9 No. 8 of Design Science News, the e-bulletin of the Buckminster Fuller Institute

Design Science News brings you news from around the world related to humanity's option for success and comprehensive design science. It also features updates from BFI and periodic special offers for our members.

2009 Buckminster Fuller Challenge call for proposals will be published September 18th



THE BUCKMINSTER
FULLER CHALLENGE

Catalyzing the vanguard of a design science revolution

Get ready for the 2009 Buckminster Fuller Challenge! We will send out the 2009 call for proposals to our mailing lists on September 18th.

For more details about the call for proposals, selection process, eligibility requirements, and entry guidelines check challenge.bfi.org regularly over the next two weeks.

To read about John Todd's winning entry and over 150 other entries to the 2008 Challenge, visit the [Idea Index](#)

DYMAXION ARTIFACTS STORE: The World of Buckminster Fuller DVD



Buckminster Fuller was an architect, engineer, geometrician, philosopher, futurist, inventor of the famous geodesic dome, and one of the most brilliant thinkers of his time. His legacy becomes ever more relevant, providing us a road map to steer our planet away from oblivion and toward a sustainable future for all humanity.

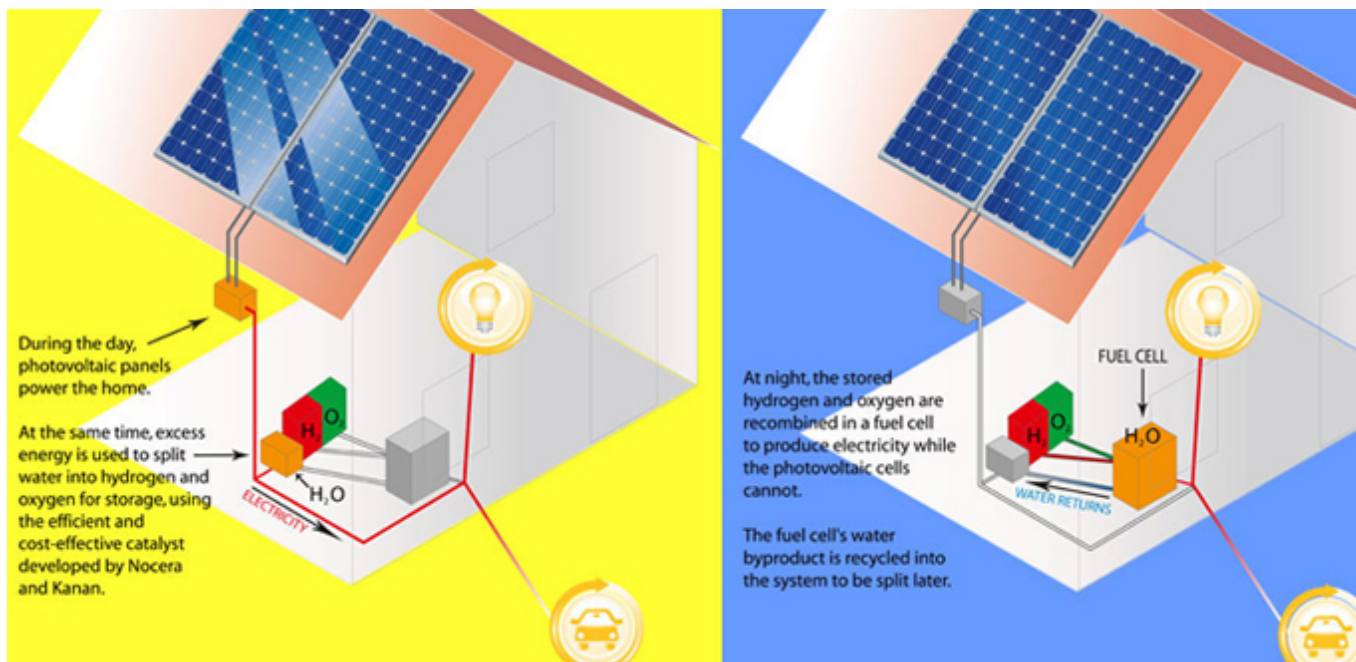
This film by Oscar-winning filmmaker Robert Snyder, like his other documentaries on “the greats” (Michelangelo, Henry Miller, Willem de Kooning, Pablo Casals, among others), transports the viewer into Fuller’s mind and soul. Told entirely in his own words, the film is an intimate, personal and inspiring message from Fuller to our fragile world. 85 min. DVD

Also includes the short film Modeling the Universe by Jaime Snyder.

[Order yours today!](#)

TRENDS & PERSPECTIVES

Major discovery from MIT primed to unleash solar revolution



In a revolutionary leap that could transform solar power from a marginal, boutique alternative into a mainstream energy source, MIT researchers have overcome a major barrier to large-scale solar power: storing energy for use when the sun doesn't shine.

Until now, solar power has been a daytime-only energy source, because storing extra solar energy for later use is prohibitively expensive and grossly inefficient. With today's announcement, MIT researchers have hit upon a simple, inexpensive, highly efficient process for storing solar energy.

Requiring nothing but abundant, non-toxic natural materials, this discovery could unlock the most potent, carbon-free energy source of all: the sun. "This is the nirvana of what we've been talking about for years," said MIT's Daniel Nocera, the Henry Dreyfus Professor of Energy at MIT and senior author of a paper describing the work in the July 31 issue of *Science*. "Solar power has always been a limited, far-off solution. Now we can seriously think about solar power as unlimited and soon."

Inspired by the photosynthesis performed by plants, Nocera and Matthew Kanan, a postdoctoral fellow in Nocera's lab, have developed an unprecedented process that will allow the sun's energy to be used to split water into hydrogen and oxygen gases. Later, the oxygen and hydrogen may be recombined inside a fuel cell, creating carbon-free electricity to power your house or your electric car, day or night. (Source: [MIT News](http://web.mit.edu/newsoffice/2008/oxygen-0731.html))

<http://web.mit.edu/newsoffice/2008/oxygen-0731.html>

Japan to launch carbon footprint labelling scheme



Japan is to carry carbon footprint labels on food packaging and other products in an ambitious scheme to persuade companies and consumers to reduce their greenhouse gas emissions.

The labels, to appear on dozens of items including food and drink, detergents and electrical appliances from next spring, will go further than similar labels already in use elsewhere.

They will provide detailed breakdowns of each product's carbon footprint under a government-approved calculation and labeling system now being discussed by the trade ministry and around 30 firms.

The labels will show how much carbon dioxide is emitted during the manufacture, distribution and disposal of each product, the ministry said.

The Japanese campaign is loosely modeled on a British pilot scheme involving Tesco and several other firms, though that scheme has yet to gain official approval.

Furthermore, the trade ministry's Takuma Inamura told the Guardian: "We believe our labeling will be even more detailed, to allow consumers to make the best possible choice." (Source: [The Guardian](http://www.guardian.co.uk/environment/2008/aug/20/carbonfootprints.carbonemissions))

<http://www.guardian.co.uk/environment/2008/aug/20/carbonfootprints.carbonemissions>

Prescriptions for health, the environmental kind



In a bright studio at New York University, Natalie Jeremijenko welcomes visitors to her environmental health clinic. She wears a white lab coat with a rotated red cross on the pocket. A clipboard with intake forms hangs by the door.

Inside, circuit boards, respirators, light bulbs, bike helmets and books on green design clutter the high shelves. In front of a bamboo consultation desk sits a mock medicine cabinet, which turns out to be filled with power tools.

Dr. Jeremijenko, an Australian artist, designer and engineer, invites members of the public to the clinic to discuss personal environmental concerns like air and water quality. Sitting at the consultation desk, she also offers them concrete remedies or “prescriptions” for change, much as a medical clinic might offer prescriptions for drugs.

“It’s a widely familiar script,” said Dr. Jeremijenko, 41, who has a doctorate in engineering and is an assistant professor of visual art at N.Y.U. “People know how to ring up and make an appointment at their health clinic. But they don’t really know what to do about toxins in the air and global warming, right?”

“So the whole thing is how do we translate the tremendous amount of anxiety and interest in addressing major environmental issues into something concrete that people can do whose effect is measurable and significant?” (Source: [The New York Times](http://www.nytimes.com/2008/08/12/health/12clin.html?_r=1&oref=slogin))

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Raising energy efficiency in a new materials economy



The following is adapted from Chapter 11, “Raising Energy Efficiency,” in Plan B 3.0: Mobilizing to Save Civilization by Lester R. Brown. The Earth Policy Institute has made each chapter of the book available for free download [here](#)

The production, processing, and disposal of material in our modern throwaway economy wastes not only material but energy as well, thus producing unnecessary, climate-disrupting carbon dioxide emissions. In nature, one-way linear flows do not survive long. Nor, by extension, can they survive long in the expanding global economy. The throwaway economy that has been evolving over the last half-century is an aberration, now itself headed for the junk heap of history.

The potential for sharply reducing materials use was pioneered in Germany, initially by Friedrich Schmidt-Bleek in the early 1990s and then by Ernst von Weizsäcker, an environmental leader in the German Bundestag. They argued that modern industrial economies could function very effectively using only one fourth the virgin raw material prevailing at the time. A few years later, Schmidt-Bleek, who founded the Factor Ten Institute in France, showed that raising resource productivity even more-by a factor of 10-was well within the reach of existing technology and management, given the right policy incentives.

In 2002, American architect William McDonough and German chemist Michael Braungart wrote *Cradle to Cradle: Remaking the Way We Make Things*. They concluded that waste and pollution are to be avoided entirely. “Pollution,” said McDonough, “is a symbol of design failure.” (Source: [Celsias](#))

RESOURCES

Amory Lovins on advanced energy efficiency, concepts and practice. Stanford University lecture series

A fantastic series of free lectures by Amory Lovins of the Rocky Mountain Institute made available by Stanford University. Watch video, download pdfs, or listen as podcasts [here](#)

REVIEW: Buckminster Fuller Starting with the Universe



A review of the Whitney Museum's show Buckminster Fuller Starting with the Universe, open until September 21st.

The show will travel to the Museum of Contemporary Art in Chicago in March 2009.

[Time Out NY](#)

EVENTS

Symposium: Buckminster Fuller Starting with the Universe



Friday, September 12 - Saturday, September 13
The Great Hall of the Cooper Union
7 East 7th Street, at Astor Place
New York, NY

Visionary designer, philosopher, poet, inventor, engineer, and advocate of sustainability, Buckminster Fuller was one of the great transdisciplinary thinkers of the last century with a legacy that extends to nearly every field of the arts and sciences. This symposium takes its cue from Fuller's dictum, "I always say to myself, what is the most important thing we can think about at this extraordinary moment," and explores the diverse ways in which contemporary scholars and practitioners are pushing Fuller's ideas and projects into the 21st century.

For more information, [visit the Whitney Museum website](#)

Have you come across interesting Design Science news articles, resources, or events?

We invite you to forward them so we can consider them for inclusion in future e-bulletins. Send them to: [designsciencenews \(at\) bfi \(dot\) org](mailto:designsciencenews@bfi.org)

If we use your suggestion for future e-bulletins and you would like to be credited by name, please indicate it in your e-mail.

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