

- **KQED**
-
- [TV](#)
- |
- [RADIO](#)
- |
- [COMMUNITY](#)
- |
- [NEWS](#)
- |
- [ARTS](#)
- |
- [FOOD](#)
- |
- [SCIENCE](#)
- |
- [EDUCATION](#)
- |
- [SUPPORT KQED](#)
- |
- [ABOUT KQED](#)



- [Blog Home](#)
- [Tag Cloud](#)
- [Map: Rising Sun](#)

• **Recent Posts**

- [Annual Climate Report Shows a Warming World](#)
- [A Glimpse of How Regional Carbon Trading Might Work](#)
- [Climate Action May Be Up to the States](#)
- [The Biggest Solar Project in the World](#)
- [Another Climate Change Impact: Smog](#)
- [The Next Frontier: Artificial Photosynthesis](#)
- [California Counties Face Water Crunch](#)
- [For Roofs, White Is the New Cool](#)
- [Schneider's Legacy: Speaking Truth to Power](#)
- [Climate Science Loses a Bright Light](#)

• Recent Comments

- Betsy White on [The Biggest Solar Project in the World](#)
- Christopher Penalosa on [For Roofs, White Is the New Cool](#)
- [Lenard Woliver](#) on [For Roofs, White Is the New Cool](#)
- [Joe Earth](#) on [Another Climate Change Impact: Smog](#)
- Kim Williams on [The Biggest Solar Project in the World](#)

• Calendar

July 2010

M	T	W	T	F	S	S
		1	2	3	4	
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	
« Jun						

• Categories

- [Agriculture](#)
- [Air](#)
- [Alpine](#)
- [Beliefs](#)
- [Coastal](#)
- [Conservation](#)
- [COP15](#)
- [Cryosphere](#)
- [Desert](#)
- [Economics](#)
- [Ecosystems](#)
- [Emissions](#)
- [Energy](#)
- [Fisheries](#)
- [Health](#)
- [Interactive](#)
- [International](#)
- [Oceans](#)
- [Policy](#)
- [Technology](#)
- [Temperature](#)
- [Transportation](#)
- [Uncategorized](#)
- [Urban Planning](#)
- [Warming](#)
- [Water](#)

- [weather](#)
- [Wetlands](#)
- [Wildfire](#)
- [Wildlife](#)

• Climate News

- [BBC: Earth Watch](#)
- [CNET Green Tech](#)
- [LA Times: Greenspace](#)
- [Nature: Climate Feedback](#)
- [NYT: Dot Earth](#)
- [NYT: Green](#)
- [Pew: Climate Compass](#)
- [Real Climate](#)
- [SacBee: Sierra Summit](#)
- [Science Blogs](#)
- [The Climate Desk](#)
- [Yale Environment 360](#)

• Environmentalists

- [Climate Progress](#)
- [DeSmog Blog](#)
- [Grist](#)
- [It's Getting Hot in Here](#)
- [Treehugger](#)

• Other Voices

- [Climate Debate Daily](#)

• Climate Watch Bloggers

- [Amanda Dyer](#)
- [Amy Standen](#)
- [Andrea Kissack](#)
- [Christopher Penalosa](#)
- [Climate Central](#)
- [Craig Miller](#)
- [Dan Brekke](#)
- [David Ferry](#)
- [David Gorn](#)
- [Gretchen Weber](#)
- [Lauren Sommer](#)
- [Louise Bedsworth](#)
- [Molly Samuel](#)
- [Rachael Myrow](#)

- [Rob Schmitz](#)
- [Sasha Khokha](#)
- [Tom Banse](#)

• ABOUT COMMENTS

There's a lot of debate about climate change, and we want some of it to happen here. Please read our [Community Discussion Guidelines](#) before posting.

The Next Frontier: Artificial Photosynthesis

July 22, 2010 · Posted By Lauren Sommer · Filed Under [Energy](#), [Technology](#)



The ultimate model for clean fuels?
(Photo: KQED QUEST)

Amidst all the fretting over the development of solar and wind technology, it hasn't been lost on some scientists that there are organisms on the planet that have already cracked the renewable energy code: plants.

Photosynthesis is a highly efficient way of converting sunlight to fuel. So why not try to copy them?

That's a bet that Energy Secretary Steven Chu is taking. Today, the Department of Energy [announced \\$122 million in funding](#) to create the Joint Center for Artificial Photosynthesis, a new research hub based in California. The California Institute of Technology (Cal Tech) and the Lawrence Berkeley National Lab will lead the effort, along with other universities around the state. Their goal will be to create an "integrated solar energy-to-chemical fuel conversion system" and to make it commercially viable.

Artificial photosynthesis isn't a new idea. Research has gone on for decades in search of the right chemistry to make it happen. But plant mimicry is no easy task. Last year, [I visited the lab of Heinz Frei at LBNL](#), one of the researchers there working on the chemistry. His big breakthrough was [developing a chemical catalyst](#) that speeds up the process of using light to break apart water molecules. That's the same thing that plants do, but they create sugar molecules as a result. The sunlight-to-fuel process would create liquid combustible fuels, like benzene.

Finding a way to make these fuels at scale would be a "transformative breakthrough," according to the Department of Energy, given our current dependence on oil. DOE is making the bet that even if cars and trucks run on electricity in the future, liquid fuels aren't going away anytime soon.

[Share This](#)

Related posts

- [No Crystal Ball for Fusion Power](#) (1)
- [Mapping Out Solar Power Hotspots](#) (0)
- [CNN: Berkeley Lab's Chu to Head DOE](#) (0)
- [Capturing Carbon in California](#) (0)
- ["Smart Grid" Getting Some Juice](#) (0)

Tags: [artificial photosynthesis](#), [Cal Tech](#), [DOE](#), [Energy](#), [fuel](#), [LBL](#), [plants](#), [research](#), [Sommer](#)

Comments

Leave a Reply

 Name Mail (will not be published) Website Notify me of followup comments via e-mail

• Get the Climate Watch Blog

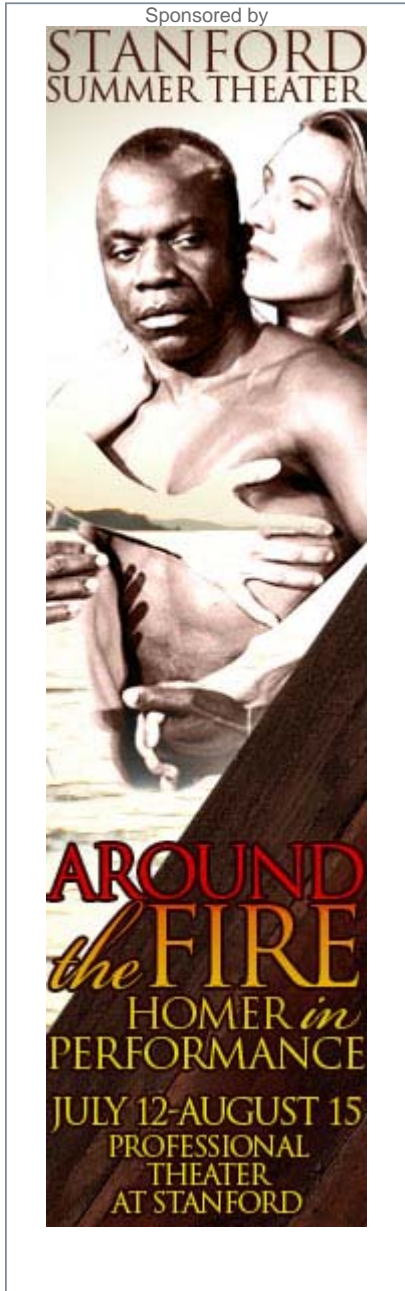


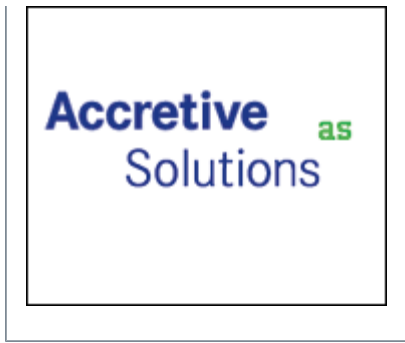
Subscribe to the Climate Watch Blog and never miss a post.

Enter your email address to receive Climate Watch blog posts via email:

Subscribe

Delivered by [FeedBurner](#)





Copyright © 2010 [KQED](#). All Rights Reserved. | [Terms of Service](#) | [Privacy Policy](#)

[Revolution WordPress](#) theme by [Brian Gardner](#)