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EWGP--a work in progress....

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Energy Working Group @ Penn

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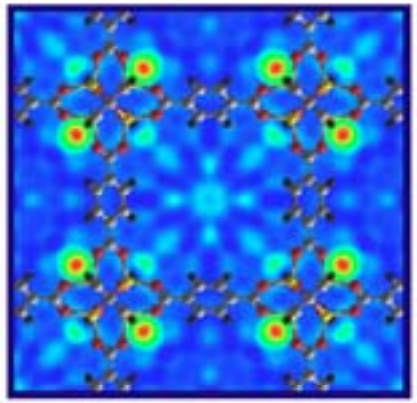
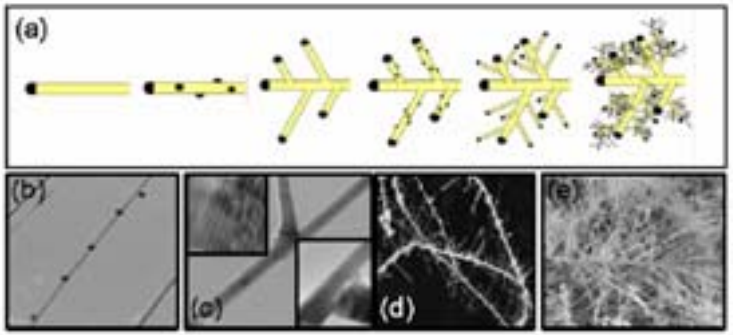
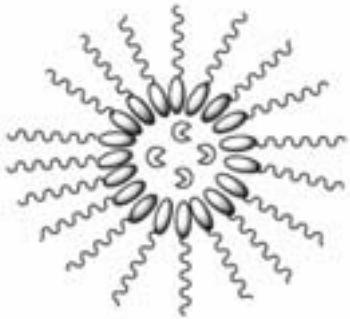
The need for energy affects almost every aspect of modern society. Indeed, the advent of coal as a widely-used energy source is sometimes viewed as the spark that started the Industrial Revolution. However, we are about to enter a new era due to increased competition from developing nations for the world's dwindling energy supplies and to the growing recognition that our current energy usage is unsustainable and is affecting the world's climate. It is apparent that research on energy-related issues will become increasingly important in the coming years.







EWGP – a work in progress….

ENERGY - an important societal issue with lots of sci/tech challenges
- very high student interest; boost sci/eng enrollments?
- lots going on at Penn already, mostly in isolation.

EWGP - an informal group of interested faculty members

GOALS - mutual education, appreciation for the “big picture”;
- encourage new collaborations, joint proposals.

FUTURE? - seek block funding
- education programs at all levels; IGERT etc.
- industrial partnerships
- include environmental & earth sciences, geology, to address challenges in remediation, sequestration, Landsat image analysis etc.
- connect with public policy, economics, law, business, entrepreneurship, ……..

Vol 443|7 September 2006|doi:10.1038/nature05040 nature

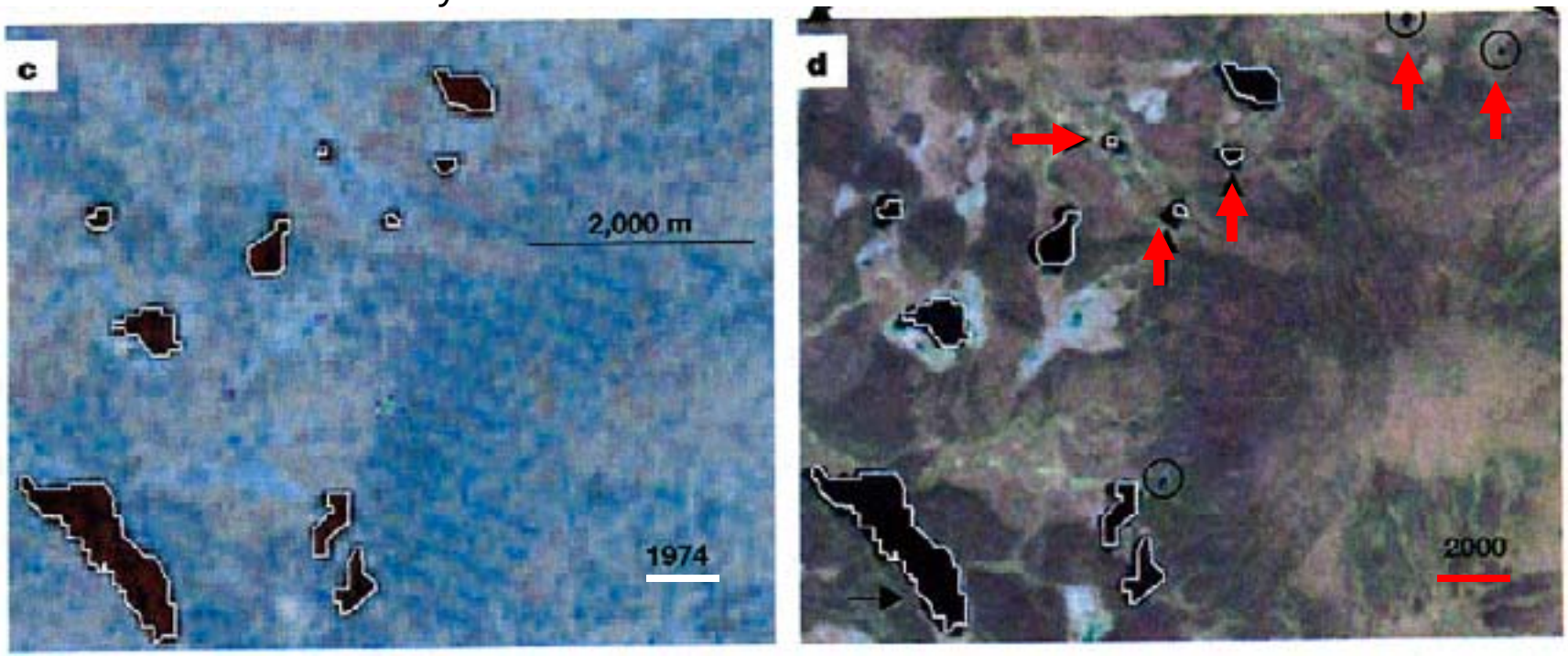
LETTERS

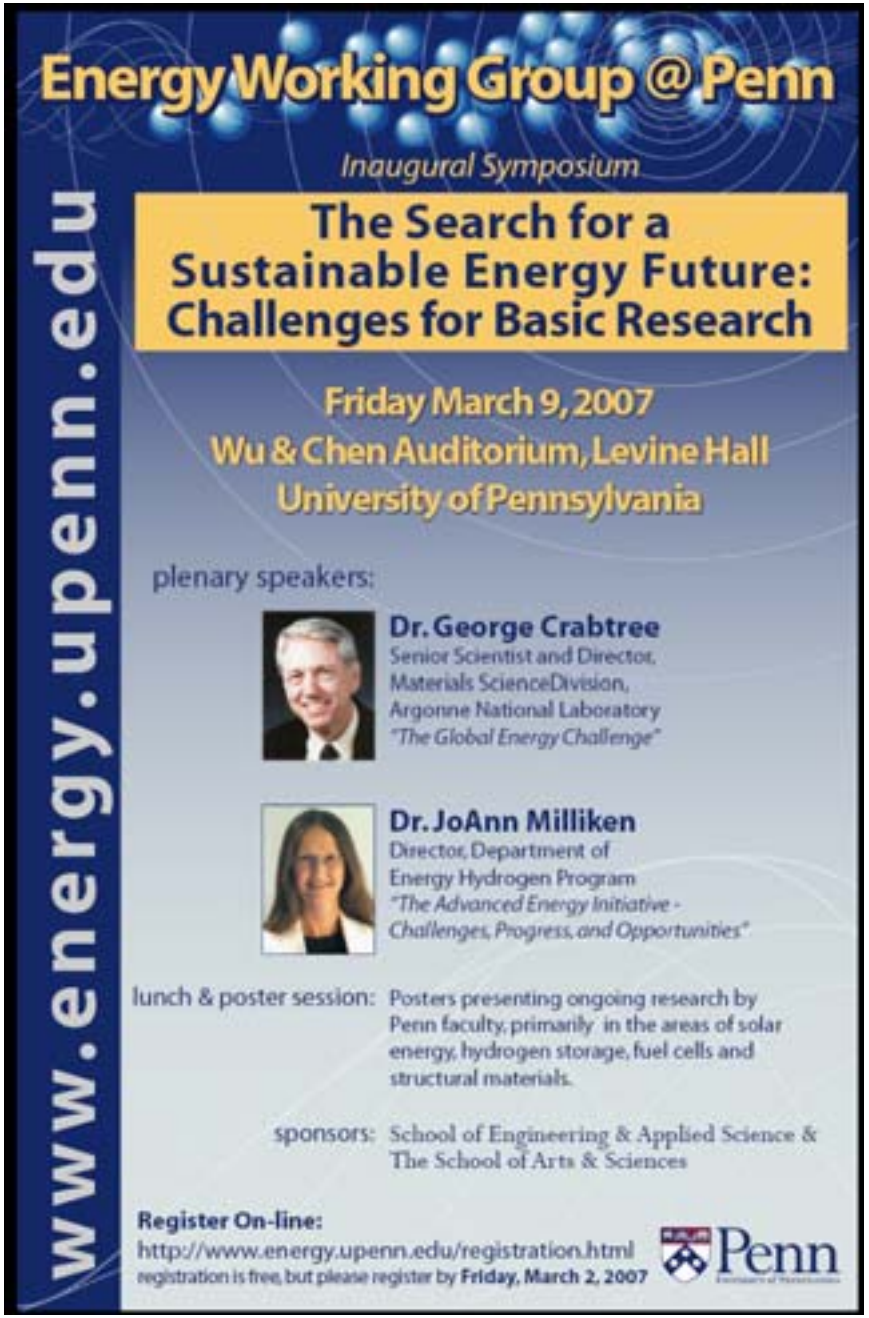
Methane bubbling from Siberian thaw lakes as a positive feedback to climate warming

K. M. Walter[1], S. A. Zimov[2], J. P. Chanton[3], D. Verbyla[4] & F. S. Chapin III[1]

<u>CH_4 is ~ 10x more effective per mole than CO_2 as a greenhouse gas.</u>

Improvements in Landsat image analysis show that CH_4 bubbling from North Siberian lakes has accelerated from 1974 to 2000 and now accounts for 95% of new CH_4 in the atmosphere. As the earth warms from CO_2 accumulation, CH_4 bubbling will increase correspondingly; permafrost melts, lakes get bigger, new ones are born. This feedback instability has yet to be incorporated in models of climate change. Main conclusions have been corroborated by a second team.





9:00 am Poster set-up
10:00 am Welcome

10:15 am
George Crabtree
"The Global Energy Challenge"

11:45 am Posters & Lunch

1:45 pm
JoAnn Milliken
"The Advanced Energy Initiative - Challenges, Progress and Opportunities"

3:15 pm Close

Get involved!
http://www.energy.upenn.edu

THANKS TO …….

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Felice Macera, webmaster and a lot more

John Linscheid, Pat Overend, etc – arrangements

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GEORGE AND JOANN FOR PARTICIPATING!!