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## Hope on the horizon

*MIT researchers point to potential economy-boosting technologies*

May 21, 2008

As the economy appears to falter and as more Americans fear that the country is on the wrong track, here's something to keep in mind: There is hope on the horizon.

History is filled with examples of how technology helped usher in new eras of prosperity. To help build the case for optimism, the MIT News Office asked a collection of MIT faculty and researchers for their thoughts on the potentially life-altering technologies that lie just around the corner. Here's a sample of what they said:

**Bioengineering - Phillip Sharp****Biosolar Cells - Shuguang Zhang****Digital Fabrication - Neil Gershenfeld****Education - Eric Klopfer****Electrochemical Energy - Paula Hammond****Embedded Electronics - Michael S. Strano****Fusion - Leslie Bromberg****Life Extension - Mehmet Fatih Yanik****Mitigating Autism - Rosalind W. Picard****Problem Solving - Ed Boyden****Robots - Rodney Brooks****Sustainable Cities - William J. Mitchell****Transcending Technology - Rebecca Henderson****Biosolar Cells****Shuguang Zhang**

Associate Director, Center for  
Biomedical Engineering

Among the most pressing challenges to civilization, nothing is greater than securing our energy future.

A low-cost and flexible biosolar energy nanodevice is one of the long-term solutions. Currently, solar cells are expensive and not affordable—even for the most-developed nations. Radical solutions must be

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## YOUR THOUGHTS?

What technologies do you think will help usher in a new era of prosperity? Feel free to send us your submissions and we will publish a sampling online. Submissions should be no more than 125 words and should be e-mailed to [frost@mit.edu](mailto:frost@mit.edu).

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found. Nature has already made efficient photosynthesis molecular nanomachines in thermophilic photosynthetic bacteria, algae and plants. We can isolate or emulate them to stabilize them in extended time onto inexpensive semiconducting nanostructured surface in extremely high density to directly harvest photons. This process must be simple, easy to follow and affordable even for developing nations. Our laboratory is developing the process for a decentralized or individualized system for a very low cost photovoltaic device: biosolar cells.

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