



## Company Watch



## Technology Review's 50 Most Innovative Companies

To select the 50 most innovative companies in the world, the editors of *Technology Review* looked for those that over the last year have demonstrated their superiority at inventing technology and using it both to grow as businesses and to transform how we live. We identified the companies that have the most promising technologies, whether they are giant corporations or fledgling startups with initial venture capital investments. Then we examined their business models, their strategies for deploying and scaling up their technologies, and the likelihood that they will succeed. The result is the first annual TR50.

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### TR50 Public Energy Companies

[A123 Systems](#)  
[American Superconductor](#)  
[First Solar](#)  
[GE](#)  
[Nissan](#)  
[Suntech](#)

### TR50 Public Web Companies

[Adobe](#)  
[Akamai](#)  
[Google](#)  
[IBM](#)

### TR50 Public Materials Companies

[Applied Materials](#)  
[DuPont](#)  
[Prime View International](#)

### TR50 Public Biomedicine Companies

[Alnylam](#)  
[AthenaHealth](#)  
[GlaxoSmithKline](#)  
[Illumina](#)

### TR50 Private Energy Companies

[Amyris](#)  
[Coskata](#)  
[eSolar](#)  
[Joule Biotechnologies](#)  
[Synthetic Genomics](#)  
[Tesla Motors](#)  
[1366 Technologies](#)

### TR50 Private Web Companies

[Hulu](#)  
[Obopay](#)  
[StreamBase](#)  
[Twitter](#)  
[Ushahidi](#)  
[Yelp](#)  
[Zynga](#)

### TR50 Private Materials Companies

[Novomer](#)  
[Serious Materials](#)  
[Solyndra](#)

### TR50 Private Biomedicine Companies

[BIND Biosciences](#)  
[Complete Genomics](#)  
[Fate Therapeutics](#)  
[Fluidigm](#)

[Medtronic](#)

[Nanosphere](#)

TR50 Public Computing Companies

[Amazon.com](#)

[Apple](#)

[HTC](#)

[Infinera](#)

[Intel](#)

[iRobot](#)

[Pacific Biosciences](#)

TR50 Private Computing Companies

[Luxtera](#)

[Plastic Logic](#)

[Tilera](#)

## Company Watch



# Novomer

**Innovation:** Sustainable plastics made from carbon dioxide

**Technology:**

A cobalt-based catalyst developed by founding chemists from Cornell University facilitates the reaction of petroleum compounds with carbon dioxide or carbon monoxide to form common plastics used in packaging, electronics cases, and absorbent materials. The process sequesters the greenhouse gases and can be used to make biodegradable plastics.

**Market:**

The company hopes to compete with producers of conventional industrial polymers made entirely from petroleum. Novomer emphasizes the green aspect of its products to capitalize on consumer concerns about the environment, but the primary advantage of making polymers from carbon gases is that it's cheaper, which may help the company grab market share.

**Strategy:**

Earlier this year, Novomer partnered with Dutch chemical giant DSM to develop compounds called polyols for use in coatings for food packaging and in automobile and industrial finishes. Other polyols on the market are made with bisphenol A, a suspected carcinogen. The Novomer/DSM product, which will be marketed as BPA-free, will be made of 50 percent carbon dioxide.

**Challenges and Next Steps:**

No new polymers have been introduced into the coatings industry for more than a decade. The company's partnership with DSM will be key to breaking into this mature market for the coatings that line soda cans, floors, furniture, and electrical coils. Novomer's target is to have coatings to its customers in the fourth quarter of this year. The company is currently working with DSM to fine-tune its polymers' properties as the production process is scaled up. Future products may take advantage of another property of the company's coatings: while most industrial polymer coatings compromise between hardness and flexibility, Novomer says its CO<sub>2</sub>-based coatings are both scratch-resistant and flexible.