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A Flash of the Future



TIME unveils the World Economic Forum's Tech Pioneers, who are changing our lives in amazing new ways.

By BILL SAPORITO

Not that we needed it, but 2005 reminded us again that fossil fuels are finite and that poverty and terrorism seem to be inexhaustible. The World Economic Forum Technology Pioneers this year include entrepreneurs who are working to alleviate pain at the pump as well as human suffering. They produce energy-sparing new approaches to solar power, nanolighting and even a handheld haz-mat detector. Others are doing amazing work in creating synthesized disease killers, minting silver bullets for pathogens or using stem cells to cure heart disease. On the security front, there are new analyzers, sensors and antivirus hardware that could make our cities and computer networks safer. **Finally, someone invented a way to clean up the e-waste left over when all that technology goes out of date in the next minute and a half.**

MBA Polymers, Inc.
Michael Biddle

E-Waste Meets Its Re-Maker

By LAURA A. LOCKE/SAN FRANCISCO

Mike Biddle hates waste. As a kid, he was forever switching off lights at home to save energy. Years later, while working at Dow Chemical, he suggested that he focus on recycled plastics instead of high-tech composites. "We didn't hire a Ph.D. engineer to



work on garbage," one of his bosses told him. When Biddle launched a company to recycle and sell plastic from complex waste streams like junked electronics and automobiles, he says, "a lot of people, including some of my board members, thought I was nuts."

Today Biddle's dream is finally taking shape--a mere 11 years after launch. MBA Polymers Inc. is the world's most advanced recycler of plastics used in durable goods. MBA raised \$30 million to develop its patented technology for extracting and recycling

plastic from trashed computers, printers, mobile phones, TVs, VCRs, fax machines, refrigerators, vacuum cleaners and other forms of e-waste. Biddle claims he can recycle "anything with a cord" and then some.



Some MBA Team members just before the China Plant Opening on Nov. 18. L to R: Ron Rau, Dr. Darren Arola, Dr. Biddle, Richard McCombs, Arnold Lim.

“We save the world incredible amounts of energy by making new plastics from scrap plastics.” - Michael Biddle

That's good news, since e-waste, of which plastic is a significant part, is accumulating rapidly--choking landfills and creating toxic plumes when incinerated. Some 100 billion pounds of plastic are used in the U.S. annually, yet only 2% to 4% of complex plastics are recycled, compared with 95% for steel and aluminum. That's because it's difficult to identify and sort engineered plastic by type and grade. At its 50,000-sq.-ft. Richmond plant, MBA figured out how to do it more affordably and efficiently and on a mass scale. In November, MBA opened the world's largest commercial-scale plastic-recycling facility for durable goods, in Guangzhou, China. The plant can process 40,000 metric tons of plastic annually. Another plant is set to open in Austria next year.

With rising oil prices, a consumer push for greener products and the growth of take-back legislation--which pressures manufacturers to recycle their end-of-life products--demand for the less expensive recycled plastic exceeds supply. Which means that none of Biddle's new plastic will go to waste. That should make him happy.

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