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**Op-Ed Columnist**

## **Signs of Hope**

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Detroit

I came to Detroit and its environs, the seat of America's glorious industrial past, to see if I could get a glimpse of the future. Is the economic, social and physical deterioration that has caused so much misery in the Motor City a sign of what's in store for larger and larger segments of the United States?

Or are there new industries waiting in the wings — some of them right here in the Detroit metropolitan area — with new jobs and bright new prospects for whole new generations of American dreamers?

I found real reason to hope when a gentleman named Stan Ovshinsky took me on a tour of a remarkably quiet and pristine manufacturing plant in Auburn Hills, which is about 30 miles north of Detroit and is home to Chrysler's headquarters. What is being produced in the plant is potentially revolutionary. A machine about the length of a football field runs 24 hours a day, seven days a week, turning out mile after mile after mile of thin, flexible solar energy material, from which solar panels can be sliced and shaped.

You want new industry in the United States, with astonishing technological advances, new

mass production techniques and jobs, jobs, jobs? Try energy.

Mr. Ovshinsky knows as much or more about the development and production of alternative energy as anyone on the planet. He developed the technology and designed the production method that made it possible to produce solar material “by the mile.” When he proposed the idea years ago, based on the science of amorphous materials, which he invented, he was ridiculed.

But the thin-film photovoltaic solar panel was just one of his revolutionary ideas. He invented the nickel metal hydride battery that is in virtually all hybrid vehicles on the road today. And when I pulled into the parking lot outside his office in Bloomfield Hills, he promptly installed me in the driver’s seat of a hydrogen hybrid prototype — a car in which the gasoline tank had been replaced with a safe solid-state hydrogen storage system invented by Mr. Ovshinsky.

Within minutes, I was driving along a highway in a car that produced zero pollution. No carbon footprint whatsoever. How’s that for a wave of the future?

The point is that these (and many more) brilliant, innovative technologies are here. They are real, tangible. They exist. What’s needed now is the will to develop policies that will vastly expand these advances and radically reduce their costs. The United States should be leading the world in the creation of whole new energy technologies and industries, instead of allowing the forces of the old carbon-based industries — coal, oil, gasoline-powered vehicles — to stand obstinately in the way of real progress.

“Now,” Mr. Ovshinsky told me, “is when we have to build the new industries of the future.” He has always been driven by the desire to use science and technology to solve the real-world problems of real people, and that has meant creating employment and stopping the pollution of

the planet. He and his late wife, Iris, formed a company (to become known as Energy Conversion Devices) in Detroit in 1960 with the idea of using their considerable talents, as he put it, “to do good, to change the world.”

After nearly a half-century of revolutionary innovations with the company, Mr. Ovshinsky retired two years ago to focus his attention on the difficult and time-consuming effort to make solar energy economically competitive with coal and oil. “I know solar energy can’t live up to its possibilities unless it’s a hell of a lot cheaper,” he said.

He believes he has assembled a team that, with sustained, intense work under his direction — and if sufficient funding can be secured — will bring the price of solar power below that of coal and oil within a few years.

What’s weird is that this man, with such a stellar track record of innovation on products and processes crucial to the economic and environmental health of the U.S., gets such little attention and so little support from American policy makers. In addition to his work with batteries, photovoltaics and hydrogen fuel cells, his inventions have helped open the door to flat-screen televisions, new forms of computer memory and on and on.

So when Stan Ovshinsky tells us that we should be putting our chips on hybrid and electric vehicles, and that solar and hydrogen power can be the cornerstone of an industrial renaissance in the U.S. as well as a cleaner planet, we should be listening very, very closely.

As oil defined the 20th century, new forms of energy will define the 21st. The U.S. has the opportunity, the intellectual resources and the expertise to lead the world in the development of clean energy. What we’ve lacked so far has been the courage, the will, to make it happen.

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