



**"It's a great place to do business."**



**James Von Ehr**  
Founder  
Zyvex Corporation

## **New Ideas, Industries Flourish in the Lone Star State**

Michigan native James Von Ehr came to Texas because he wanted to work with computers. He stayed to help kick-start a new industry.

After working at Texas Instruments, and founding and selling his own successful software company, Von Ehr was looking for a challenge. He found it in the field of nanotechnology — a new realm of science that involves manipulating and building structures from individual atoms and molecules.

At this tiny scale, the physical properties of ordinary substances change, yielding useful "nanomaterials" now being incorporated into a variety of products. The longer-term goal, however, is to manufacture not merely substances but mechanisms out of individual atoms.

In 1997, Von Ehr founded Zyvex Corporation in Richardson, Texas, to pursue this exciting new field.

"I started Zyvex to develop atomically precise manufacturing — building products with every atom where we designed it to go," Von Ehr says. He could have started it in Silicon Valley, or anywhere else. But he chose Texas.

"It's a great place to do business," he

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## **Science and Technology Innovation Starts Here**

Texas has been a global leader in science and technology since 1958, when Texas Instruments' Jack Kilby spent a summer in Dallas inventing the first integrated circuit and laid the foundation for a \$200 billion industry.

The state's list of technological achievements is impressive — and an important anchor for the state economy.

- According to the nation's largest technology trade association, TechAmerica, Texas ranks second among states in high-tech employment, with 474,100 high-tech jobs paying an average of \$83,900 annually in 2007 (most recent available data). In that year, Texas gained more high-tech jobs than any other state.
- TechAmerica also ranks Texas second among states for semiconductor manufacturing employment, with 37,100 jobs; engineering services employment, with 92,500 jobs; and communications services employment, with 125,800 jobs.
- Texas' biotechnology industry contributes an estimated \$75 billion to the state's economy each year. Texas is home to more than 4,100 biotechnology and biomedical companies and consortia, medical manufacturing companies and university research programs employing more than 104,400 at an average annual salary of \$67,300.
- Houston's Texas Medical Center (TMC) is the world's largest, with more than 69,000 students and 82,200 employees. TMC spends \$1 billion on research each year and has an annual economic impact of \$14 billion.



*Texas is in the forefront of nanotechnology research and development.*

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says. “It’s not unfriendly to business, as so many states are. Low taxes and reasonable regulations reduce the friction that hampers business elsewhere.

“About eight or nine years ago, I needed a small chemistry lab to prepare samples for some of our projects,” says Von Ehr. “We sent the plans over to the city for approval, and in a week I had my building permit. I have a friend in California who was building a lab, and it took him over a year to get his permit.”

And Von Ehr appreciates the fact that Texas taxes allow him to plow more money back into his business.

“I’m my own venture capitalist,” he says. “I realized early on that, in a lot of other places, I’d be paying more money in state income tax on my stock market gains than I was spending on Zyvex!”

Zyvex is one of hundreds of technology firms that have found that Texas is a place where new ideas are born every day.



*Find more economic development resources for your Texas enterprise at [www.TexasAhead.org](http://www.TexasAhead.org) or [www.TexasEdge.org](http://www.TexasEdge.org) for detailed economic data.*

- In 2009, *U.S. News and World Report* ranked the University of Texas at Austin (UT) as one of the nation’s 10 best schools for engineering and for computer science.
- The Patent Board, a private patent research and advisory service, ranked UT fifth nationally in 2009 for its success in patenting its scientific and technical research.
- In 2009, a peer survey in the industry publication *Small Times* placed Houston’s Rice University among the world’s top 10 university nanotechnology programs in both research and commercialization.
- Texas’ Emerging Technology Fund (ETF) promotes and finances commercial projects that promise to produce medical or scientific breakthroughs or are likely to lead to high-quality new jobs. To date, the program has allocated more than \$130 million to 103 early-stage companies and \$153 million to Texas universities. The ETF received \$203.5 million in funding for fiscal 2010 and 2011.
- Texas ranks second among states in its number of patents issued annually and third in investments into venture-backed companies, according to a 2007 ranking published by the *Wall Street Journal*.

## Funding Research

In fiscal 2008, Texas public and private institutions of higher education spent nearly \$3.2 billion on research and development in the sciences.

### Fiscal 2008 Research and Development Expenditures Texas Institutions of Higher Education

Field	Funding
Agricultural Sciences	\$118,513,096
Biological and Other Life Sciences	811,321,517
Computer Science	116,505,702
Engineering	486,546,887
Environmental Sciences	195,195,382
Mathematical Sciences	65,831,877
Medical Sciences	1,333,575,644
Physical Sciences	192,182,433
Psychology	59,822,456
Social Sciences	66,307,735
Other Sciences	41,029,528
<b>Total</b>	<b>\$3,486,832,257</b>

Source: Texas Higher Education Coordinating Board.