



## Sparking Economic Growth 2.0 Quotes from Company Founders

*\*photo available*

*+ available to speak to press*

**Name:** Dana Z. Anderson\*  
**Title:** Professor, Departments of Physics and Electrical and Computer Engineering  
**University:** University of Colorado  
**Company:** Co-founder & Chief Technology Officer, ColdQuanta

"Federally supported university research has enabled Nobel-caliber discoveries in ultracold matter science to emerge as a far-reaching technology likely to have impact comparable to the laser. University spin-off companies like ColdQuanta play a key role by placing ground-breaking technology into the hands of the innovators, the applications engineers, and the developers, who give life and substance our nation's high-tech economy."

**Name:** John Busbee+  
**Title:** Chief Executive Officer  
**Company:** Xerion Advanced Battery Corp.  
**University:** University of Illinois at Urbana-Champaign

"Our product is based upon technology that was developed over a period of years by sustained funding from the Department of Defense. Without this funding, our product—and our company—would not exist. We feel the military's return on its investment will be a product with a high potential to be an enabling technology for new military capabilities needed to sustain our national military preeminence, while also contributing to the march of progress towards energy independence for our nation."

**Name:** Dr. John Carlisle+  
**Title:** Staff Scientist, Materials Science Division at Argonne National Laboratory (ANL)  
**University:** University of Chicago  
**Company:** Co-founder & CTO, Advanced Diamond Technologies

"Advanced Diamond Technologies is a great example of how investments in basic research lead to job growth & products with high societal impact. ADT was spun out of Argonne National Laboratory in 2003 to commercialize disruptive products that leverage the unique properties of thin, smooth, ultrananocrystalline diamond (UNCD) coatings. The fundamental science that led to the innovation that is UNCD today was originally supported by the Department of Energy, Office of Basic Energy Sciences."

**Name:** John Cavanagh\*  
**Title:** William Neal Reynolds Distinguished Professor, Department of Molecular & Structural Biochemistry; Assistant Vice Chancellor for Research Development  
**University:** North Carolina State University  
**Company:** Founder, Agile Sciences

"Research performed under the auspices of NIH grants forms the basis of the technology that Agile Sciences is developing. The fundamental breakthroughs are done in the academic labs, but those breakthroughs need to be advanced by the company so that the medical benefits can get to the public as quickly as possible. But the discovery aspect is all federally funded."

**Name:** Jim Collins\*+  
**Title:** William F. Warren Distinguished Professor, Professor of Biomedical Engineering  
**University:** Boston University  
**Company:** Founder, Sample6  
**Video Link:** <https://www.youtube.com/watch?v=i8M582h4W0E>

"It would have been impossible to have founded Sample6 without the federal support we received from the NIH and the NSF. Our grants enabled us to do breakthrough work to show that it's possible to engineer phage to both detect and treat bacteria and to conduct the proof of principle experiments to validate those discoveries. I think investing in science is one of the best ways we can impact the economy – we create new technology, we create new jobs, we train the next generation. I think dollar-for-dollar it's one of the best things this country can do."

**Name:** Stephen DiMagno\*+  
**Title:** Professor of Chemistry  
**University:** University of Nebraska-Lincoln  
**Company:** Founder, Ground Fluor Pharmaceuticals, Inc.

"Our original NSF grant 'Anhydrous Fluoride Salts' that formed the basis of Ground Fluor's technology, focused on the behavior of ions in solution. Although that topic seems very basic and far removed from preparing medical imaging agents, it was only by developing fundamental understanding that we were able to make the fluorinated radiotracer synthesis methodology practical."

**Name:** Alexander W. Fang\*  
**University:** University of California, Santa Barbara  
**Company:** Co-founder and Chief Executive Officer, Aurrion

"Federally supported university research is the seed for technological innovation in America. It enabled the fundamental development of technology that led to the founding of Aurrion, along with many other companies in the area of semiconductors."

**Name:** Dr. Guang R. Gao\*  
**Title:** Distinguished Professor in Computer and Electrical Engineering  
**University:** University of Delaware  
**Company:** Founder, ET International, Inc.

"Federally supported research completed at the University of Delaware and ETI by Dr. Guang Rong Gao allowed his deep-rooted belief in fundamental dataflow principles technologies to be successfully explored, designed and implemented on the DOD's first petascale computing system. The initial foundational research and successful implementation of the technologies now provides the solid principles that can be leveraged for how future computing chips and system architectures solve the current challenges of parallel computing systems at extreme scale from high end supercomputing to ultra-smart mobile devices."

**Name:** John Giacomoni\*+  
**University:** University of Colorado Boulder  
**Title:** Senior Architect at F5 Networks (which acquired LineRate Systems)  
**Company:** Co-founder, LineRate Systems  
**Video Link:** <https://www.youtube.com/watch?v=P11fodFS0-g>

"I believe that serendipitous foundational inventions resulting from federally funded projects are a vital link in the engine driving American innovation. The reason is that as with all serendipitous inventions, including the Internet and the technologies driving LineRate Systems, one cannot predict a priori the impact of a federally funded project but the economic impact has been vital."

**Name:** Vincent Harris\*  
**Title:** University Distinguished Professor, Department of Electrical and Computer Engineering  
**University:** Northeastern University  
**Company:** Founder, Metamagnetics Inc.

"The role of federally funded university research cannot be overstated. We have leveraged our federally funded programs to develop game changing Department of Defense centric technologies that have in some cases led to the spinning out of small businesses such as Metamagnetics Inc. Metamagnetics transitions university innovation to the war fighter – creating much-needed high skill jobs in addition to solving mission critical challenges."

**Name:** Dina Markowitz, Ph.D.  
**University:** University of Rochester  
**Company:** Founder and President, Science Take-Out

"Funding through the NIH Science Education Partnership Award program was essential to developing the hands-on lab activities which led us to found Science Take-Out. We now have 13 employees and make 35 different science kits being used by students in all 50 states and around the world. Thanks to federal support, our Science Take-Out kits and teacher professional development workshops offer low-cost, high quality content in an engaging and thoughtful way that help meet teacher and student needs."

Unfortunately, recent federal budget cuts have forced us to curtail some of our unique programs which aim to boost science literacy and increase enthusiasm towards learning science among students and teachers.”

**Name:** Primit Parikh\*  
**University:** University of California, Santa Barbara  
**Company:** President and Co-founder, Transphorm

"The long-standing research funding at University of California, Santa Barbara, from the early 1990s by federal agencies like ONR, DARPA, AFOSR was instrumental in developing Gallium Nitride (GaN) material and technology feasibility to the point where commercialization of GaN power conversion solutions could be begun in a company like Transphorm, cofounded by Professor Umesh Mishra and Primit Parikh in 2007. Today, Goleta-CA based Transphorm leads global innovation in GaN power conversion solution by providing solutions that will reduce energy loss by more than 50% in wide variety of electrical systems ranging from power supplies to solar inverters to motion control and electric vehicles. Transphorm itself continues to get select federal support for its high risk R&D for future products from agencies like ARPA-E and ONR."

**Name:** Martin Saar\*  
**Title:** Associate Professor and Gibson Chair of Hydrogeology and Geofluids, Institute on the Environment Resident Fellow, Department of Earth Sciences  
**University:** University of Minnesota  
**Company:** Founder, Heat Mining Company

“Heat Mining Company stands at the convergence of the practical need to burn fossil fuels to generate the vast majority of the world’s energy needs and the growing concern over emissions of CO<sub>2</sub> as the primary driver of global warming.”

**Name:** Valentino Stella\*+  
**Title:** University Distinguished Professor, Department of Pharmaceutical Chemistry, School of Pharmacy  
**University:** University of Kansas  
**Company:** Founder, CyDex Pharmaceuticals, Inc.

“While working with the National Cancer Institute we identified a serious need for a new and safe way to deliver poorly water-soluble anti-cancer drugs that did not further exacerbate the toxicity of the drug itself. With the partial support from NCI, we successfully identified Captisol. To capitalize on our findings we helped create the company, Cydex, a very successful University of Kansas start-up.”

**Name:** Dr. George Whitesides  
**Title:** Professor, Department of Chemistry  
**University:** Harvard University  
**Company:** Founder, Diagnostics for All

“Federal funding plays four essential roles in the development of science and technology in the U.S. i) It makes possible the long-term research—whether directed toward knowledge or the solution of

problems—in universities that provides an increasingly important part of the foundation of the technical enterprise in the U.S. ii) The same support makes it possible to educate the next generation of research scientists and engineers in U.S. graduate students, and to recruit the most capable young people from abroad. iii) It is much more important than is commonly understood—especially by managers in large companies—in supporting the transfer of university-derived technology into commercial reality, and thereby into direct benefit to the public, by providing low-cost capital during the critical early stages of university-based startups. iv) It (together with funds from private Foundations) provides the financial support necessary to work on problems that fill an important social need, but are not necessarily immediately attractive targets for financially directed investments.

Federal support (amplified by much higher levels of support from the Bill and Melinda Gates Foundation) was critically important in building the Harvard University program in so-called “paper diagnostics” (very low-cost diagnostic “chips” designed for initial use in the developing world), and in founding Diagnostics for All (a not-for-profit 501-c-3 corporation having the objective of doing the engineering development necessary to make these chips successful.”

**Name:** Dr. Rich Wolski\*  
**University:** University of California, Santa Barbara  
**Company:** Co-founder and Board Member, Eucalyptus Systems

"Federally supported research, particularly for computer science through the National Science Foundation, continues to play a key role in the technology industries. Eucalyptus, which began as an NSF-funded research project at UCSB, would never have launched the private cloud industry without the federal investment in computer science research that made it possible."

**Name:** Dr. Hongcai Zhou  
**Title:** Professor of Chemistry, Texas A&M University  
**Company:** Co-Founder, framergy™

“Federal funding is not only essential for the advancement of basic sciences, but also vital for the development and commercialization of new technologies that are critical for a sustainable future.”

**Also Available to Speak to Media:**

**Kyle Teamey**  
CEO & Co-Founder  
Liquid Light, Inc.  
Monmouth Junction, NJ