

# NASA Spinoff 2012: Health and Medicine, Transportation, Public Safety, Consumer Goods, Energy and Environment, Information Technology, Industrial Productivity



NASA continues to be an investment in the future of American innovation. As a nation of explorers and trailblazers, we lead the world in space, achieving breakthroughs that make our challenging missions possible, all the while pushing the boundaries of frontiers in aviation, space travel, and science. NASA's renewed focus on technology development and the capabilities to reach higher in the future is yielding real dividends as we find new uses for exploration technology on our home planet. Every dollar spent on space exploration is spent here on Earth, and in the case of our spinoff technologies, those benefits continue to multiply. Entrepreneurs and researchers are continuously developing new ways to improve life around the world by building on our ongoing work to send humans to new destinations, launch scientific spacecraft for breathtaking discoveries, and improve our Nation's air travel system. Each year in Spinoff, we tell some of the amazing stories that have come about from NASA technologies being adapted for uses on Earth. Among the many incredible examples this year are: An invisible coating, developed by a NASA Dual-Use Technology partner and tested at NASA facilities, that is capable of breaking down pollutants, eliminating odors, and inhibiting the buildup of grime. The technology's many applications include enhancing the efficiency of solar cells, sanitizing air in the homes of those suffering from cystic fibrosis, and even transforming buildings and towering modern art sculptures into massive air purifiers.

Foreword \* Introduction \* Spinoffs in Manufacturing \* Executive Summary \* NASA Technologies Benefiting Society \* Aeronautics and Space Activities \* Education News \* Partnership News \* Award-Winning Technologies \* Space Technology for Tomorrow \* Health and Medicine \* Water

Treatment Technologies Inspire Healthy Beverages \* Dietary Formulas Fortify Antioxidant Supplements \* Rovers Pave the Way for Hospital Robots \* Dry Electrodes Facilitate Remote Health Monitoring \* Telescope Innovations Improve Speed, Accuracy of Eye Surgery \* Superconductors Enable Lower Cost MRI Systems \* Transportation \* Anti-Icing Formulas Prevent Train Delays \* Shuttle Repair Tools Automate Vehicle Maintenance \* Pressure-Sensitive Paints Advance Rotorcraft Design Testing \* Speech Recognition Interfaces Improve Flight Safety \* Polymers Advance Heat Management Materials for Vehicles \* Wireless Sensors Pinpoint Rotorcraft Troubles \* Public Safety \* Ultrasonic Detectors Safely Identify Dangerous, Costly Leaks \* Detectors Ensure Function, Safety of Aircraft Wiring \* Emergency Systems Save Tens of Thousands of Lives \* Oxygen Assessments Ensure Safer Medical Devices \* Collaborative Platforms Aid Emergency Decision Making \* Consumer Goods \* Space-Inspired Trailers Encourage Exploration on Earth \* Ultra-Thin Coatings Beautify Art \* Spacesuit Materials Add Comfort to Undergarments \* Gigapixel Images Connect Sports Teams with Fans \* Satellite Maps Deliver More Realistic Gaming \* Elemental Scanning Devices Authenticate Works of Art \* Energy and Environment \* Microradiometers Reveal Ocean Health, Climate Change \* Sensors Enable Plants to Text Message Farmers \* Efficient Cells Cut the Cost of Solar Power \* Shuttle Topography Data Inform Solar Power Analysis \* Photocatalytic Solutions Create Self-Cleaning Surfaces \* Concentrators Enhance Solar Power Systems \* Innovative Coatings Potentially Lower Facility Maintenance Costs \* Information Technology \* Simulation Packages Expand Aircraft Design Options \* Web Solutions Inspire Cloud Computing Software \* Behavior Prediction Tools Strengthen Nanoelectronics \* Power Converters Secure Electronics in Harsh Environments

\* Diagnostics Tools Identify Faults Prior to Failure \* Archiving Innovations Preserve Essential Historical Records \* Industrial Productivity \* Meter Designs Reduce Operation Costs for Industry \* Commercial Platforms Allow Affordable Space Research

[\[PDF\] Thing Music \(Wave Books\)](#)

[\[PDF\] Osmium: Synthesis, Characterization and Applications \(Chemistry Research and Applications\)](#)

[\[PDF\] Strengthening of Concrete Structures with Adhesive Bonded Reinforcement: Design and Dimensioning of CFRP Laminates and Steel Plates](#)

[\[PDF\] Reconstruction of Motor Vehicle Accidents: A Technical Compendium \(Progress in Technology\)](#)

[\[PDF\] Moby-Dick](#)

[\[PDF\] Annual Bulletin of Electric Energy Statistics for Europe 1993/Bulletin Annuel De Statistiques De LEnergie Electrique Pour LEurope 1993/Sales No. E/ ... De Lenergie Electrique Pour Leurope\)](#)

[\[PDF\] High-Quality, Low-Cost Preservation, Storage and Transportation of Foods: Normal temperature, refrigeration, freezing, and electromagnetic field](#)

**NASA Spinoff 2012 - SlideShare** 7, 2012 David E. Steitz Headquarters, Washington 202-358-1730 @nasa.gov  
NASA spinoffs have proven benefits in health and medicine, transportation, public safety, consumer goods, energy and the environment, information technology, and industrial productivity, stimulating the economy **See Space Technology Making Life Better on Earth in NASA Spinoff** Fri, Feb 10, 2012 NASA spinoffs have proven benefits in health and medicine, transportation, public safety, consumer goods, energy and the environment, information technology, and industrial productivity, stimulating the economy and creating new jobs and businesses. Among the technologies highlighted in the edition: including health and medicine, transportation, public safety, consumer goods, energy and environment, information technology, and industrial productivity. **Spinoff 2012 - Google Books Result** transportation, public safety, consumer goods, energy and environment, information technology, and industrial productivity. Health and Medicine .. The product line was released in 2012, and is already in its second generation, NODE+, **NASA Spinoff 2012 Features New Space Tech Bettering Your Life** in the areas of (from left to right) information technology, health and medicine, consumer goods, and energy and the environment. areas of (from left to right) public safety, transportation, and industrial productivity. Spinoff 2012. 36. **National Aeronautics and Space Administration - Health and Safety.** 138 sector develop safe and affordable transportation systems. in the fields of health and medicine, transportation, public safety, consumer goods, energy and environment, information technology, and industrial .. industrial productivity. .. Environment Mission Operations (NEEMO) 16 in June 2012. **NASAs Spinoff 2012 highlights its contribution to mankind** **The** NASAs Spinoff 2011 publication, now available online, reveals how the space

agencies This years Spinoff demonstrates once again how through productive and in health and medicine, transportation, public safety, consumer goods, energy and the environment, information technology, and industrial **Health and Medicine, Transportation, Public Safety, Consumer** some of NASAs latest spinoff technologies in health and medicine, transportation, public safety, consumer goods, energy and environment, information technology, and industrial productivity. Some of the of yield. In 2012, NASAs Stennis Space Center in Bay St. Louis, Mississippi, granted. Applied **2012 - NASA Spinoff** NASA Spinoff 2012: Health and Medicine, Transportation, Public Safety, Consumer Goods, Energy and Environment, Information Technology, Industrial **Goddard View - NASA** the fields of health and medicine, transportation, public safety, consumer goods, energy and environment, information technology, and industrial productivity. **text-only version of this release - NASA** NASA technologies are being used to locate underground water in some of the driest places on Earth, build quieter and across the economy, in areas such as health and medicine, transportation, public safety, consumer goods, energy and environment, information technology, and industrial productivity. **NASA Spinoff 2011 Unveils Benefits of NASA Technologies on Earth** NASA technologies are being used to locate underground water in some as health and medicine transportation public safety consumer goods energy and environment information technology and industrial productivity. How a Solution for Mars Architecture Helped with Energy Efficiency in the Home. **National Aeronautics and Space Administration - NASA Spinoff** The 2012 edition of NASAs annual Spinoff publication captures a nation and world made better by advancements originally achieved for space technology. health and medicine, transportation, public safety, consumer goods, energy and environment, information technology and industrial productivity. **Spinoff** Fri, Feb 10, 2012 NASA spinoffs have proven benefits in health and medicine, transportation, public safety, consumer goods, energy and the environment, information technology, and industrial productivity, stimulating the economy and creating new jobs and businesses. Among the technologies highlighted in the edition: **Spinoff 2015 Features Space Technology Making Life Better - NASA** The Nations investment in NASAs aerospace research has brought practical benefits back to in the fields of health and medicine, transportation, public safety, consumer goods, environmental resources, computer technology, and industrial Energy and Environment information technology, and industrial productivity. **NASA Spinoff** NASA technology is all around us, turning trash into oil, saving women and more energy-efficient spectrometers for a variety of industries health and medicine, transportation, public safety, consumer goods, energy and environment, information technology and industrial productivity. February 9, 2012. **NASA spinoff technologies - Wikipedia** SPINOFF 2012 t Office of the Qhiefjechnologistww - NASA Headquarters - ~ I :Danie/ Lockney, of (from left to right) information technology, health and medicine, consumer goods, and energy and the environment. their benefits in the areas of (from left to right) public safety transportation, and industrial productivity This **Spinoff 2016 Highlights Space Technologies Used in Daily - NASA** Read NASA Spinoff 2012: Health and Medicine, Transportation, Public Safety, Consumer Goods, Energy and Environment, Information Technology, Industrial Innovations Preserve Essential Historical Records \* Industrial Productivity **NASA Spinoff 2011 Unveils Benefits Of NASA Technologies On Earth** NASA spinoff technologies are commercial products and services which have been developed Information on new NASA technology that may be useful to industry is health and medicine, public safety, transportation, recreation, and industrial . a new compressor whose rotary pump design runs off an energy-efficient, **2013 - NASA Spinoff** and medicine, transportation, public safety, consumer goods, energy and environment, information technology, and industrial productivity. Health and Medicine. **NASA spinoff 2016space technologies used on earth -** Spinoff Brochures 2012 Health and Medicine flyer Health and. Medicine (PDF) + Health and. Medicine Transportation Flyer Public Safety (PDF) Consumer Goods Environmental and Agricultural Resources flyer Energy and. Environment Computer Technology flyer Information Industrial Productivity flyer **NASA Technologies Benefit Society - NASA Spinoff Spinoff 2016 Brochure - NASA Spinoff** NASA Technology Astronauts in space must make use of everything at their . Spinoff 2012 Health and Medicine Water Treatment Technologies Inspire . Spinoff 2012 Public Safety Ultrasonic Detectors Safely Identify Dangerous, Spinoff 2012 Consumer Goods Space-Inspired Trailers Encourage **NASA Spinoff 2011 Unveils Benefits Of NASA Technologies On Earth** NASA terms these advantages spinoffs: A spinoff is a technology originally developed to including health and medicine, transportation, public safety, consumer goods, energy and environment, information technology and industrial productivity.4 The International Space Station view of Moscow at night, March 2012. **NASA - NASA Spinoff 2012 Features New Space Tech Bettering** transportation, public safety, consumer goods, energy and environment, information technology, and industrial productivity. to read it in full online, visit us at <http://.> Health and Medicine .. The product line was released in 2012, and is already in its second generation, NODE+,

which is faster, uses less **Space Architecture: The New Frontier for Design Research - Google Books Result**  
Annual Report Of Technology Developed For Space Now In Use On Earth A plant texts a farmer to say it needs more water. with benefits across the economy: health and medicine, transportation, public safety, consumer goods, energy and environment, information technology and industrial productivity. **NASA SPINOFF 2012 FEATURES NEW SPACE TECH BETTERING** Front Insets: Images representing NASA spinoff technologies and their benefits in the areas of (from left to right) information technology, health and medicine, consumer goods, and energy and the environment. areas of (from left to right) public safety, transportation, and industrial productivity. Page 3. Spinoff 2012. **Print - NASA** consumer goods, energy, environment, industrial productivity, information technology, public safety and transportation. some of NASAs latest spinoff technologies in health and medicine, transportation, public safety, consumer In 2012, NASAs Stennis Space Center in Bay St. Louis, Mississippi, granted. **Benefits Stemming from Space Exploration - NASA** NASA technology is all around us, turning trash into oil, saving women oil from Vadxx Energy president Jim Garrett during a March 18, 2015 visit. that improve health and medicine, transportation, public safety, consumer goods, energy and environment, information technology and industrial productivity.