

## Energy

**Title:** Integrated Renewable Fuel Generation Process

**Description:** The technology identifies a process that utilizes generated hydrogen, atmospheric carbon dioxide and bacteria to produce bioethanol.

## Nanotech

**Title:** Polymers Attached to Carbon Nanotubes

**Description:** A method for producing polymer/nanotube composites in which the polymers are chemically bonded to the nanotubes. Effective for functionalization and solubilization of carbon nanotube materials.

## Advanced Materials

**Title:** Method of Fabricating Amorphous Coatings on Crystalline Substrates

**Description:** Method of processing iron based amorphous coating on metallic substrate presents tremendous potential for improving the properties of wear components such as dies, cutting tools, etc.

## Semiconductor

**Title:** Passive, Wireless Corrosion Sensors for Transportation Infrastructure

**Description:** A passive wireless sensor based on RFID tags to detect the egress of corrosive agents into concrete.



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## Technologies Available

### Chemical

**Title:** Process for Water Softening

**Description:** A method for removing hard water components and heavy metals. It can be used for potable water and does not require regeneration solutions.

**Title:** Removing Phosphorus from Surface and Drainage Waters

**Description:** The structure removes dissolved Phosphorus in passing runoff water by utilizing Phosphorus sorption materials allowing for the trapped P to be removed from the watershed.

**Title:** Sulfur Dioxide and Sulfite Disproportionation Catalysts

**Description:** A mechanism to produce elemental Sulfur and Sulfuric acid from the by-product sulfite produced in sorbent technologies.

**Title:** Sensors for Chemicals and Chemical Agents

**Description:** A method and apparatus for rapidly detecting nerve agents, organophosphates, and other chemical warfare agents.

**Title:** Instantaneous Catalyzed Formation of Gas Hydrates from Vapour Phases, including Air, at Moderate Pressures and Temperatures

**Description:** Organic ethers are used as catalysts in the concentration of permanent gases, within the cages of solid hydrates at reduced pressures, which can be released as needed.

### Software

**Title:** A Decision Support Software System for Movie Industry

**Description:** A prediction system to assess and analyze the financial performance of a movie while in the conceptual stage. It helps in optimizing movie related parameters.

**Title:** Video Reduction Technology

**Description:** The technology identifies and reduces key information from video. The software recognizes characters, symbols, and words in noisy video and increase pattern recognition.

**Title:** Near Time Optimal Jerk Trajectory Design for Multiple Constraints

**Description:** Method and apparatus for control object manipulation from an initial position to a final position which is useful for more precise control of data storage devices for positioning transducers more precisely over data storage

### Life Science

**Title:** An Easy, Rapid, Field Test for Canine Parvovirus

**Description:** Two tests for the presence and amount of Canine Parvovirus in feces as well as antibodies in the blood. It can detect all the strains.

**Title:** A Mannheimia Haemolytica Outer Membrane Protein as a Vaccine or Vaccine Component for Shipping Fever of Cattle

**Description:** The Vaccine compositions include a recombinant outer membrane protein of M. haemolytica alone or in combination with other antigenic components, and a carrier or diluent.

### Biotech

**Title:** Direct Serum Lipids Assay

**Description:** A method to simultaneously measure certain unsaturated lipids and certain vitamins present either as single substances or in complex mixtures such as exist in serum.

**Title:** Design of Improved Permeation Enhancers for Transdermal Drug Delivery

**Description:** A virtual screening algorithm for generation of potential chemical penetration enhancers which can be used in transdermal drug delivery.

