

# EPA SBIR 2014 PHASE I AWARDS

Supporting the Development and Commercialization  
of Innovative Technologies That Help Protect Human  
Health and the Environment

## HOMELAND SECURITY



### EnChem Engineering, Inc.

Proprietary reactive agent that dissolves and destroys adhered or trapped target compounds such as pesticides on wetted porous surfaces (e.g., pipe walls).

## AIR QUALITY



### N5 Sensors, Inc.

Low-cost, low-power trace air toxic monitors that utilize highly selective sensor architecture with nanoengineered photoconductors with potential for use by communities.

### Vista Photonics Inc.

Optical technology-based air pollution sensor, capable of remote wireless data logging, for highly sensitive and selective continuous measurement of atmospheric ammonia.

### Precision Combustion, Inc.

Innovative air filter technology that is regenerable, low-cost and high-efficiency for removal of gaseous pollutants from contaminated air streams.

### ETSVP-JV, LLC

Dual-stage nanoporous filter media to remove particulate matter and volatile organic compounds (VOCs) from contaminated air streams.

## WASTE



### Unified Science LLC

Hand-held ion-selective electrode (ISE) device that can screen soils for perfluorochemicals (PFCs), a family of emerging environmental contaminants.

### Sustainable Bioproducts, LLC

Process for conversion of municipal solid wastes and agricultural wastes to biodiesel and ethanol using a newly identified unique extremophilic fungus.

### Environmental Fuel Research, LLC

Conversion process to take low-value grease trap waste to higher value biofuels such as biodiesel.

## ENERGY CONSERVATION



### Lucid

Novel software for energy conservation that uses LEDs and empathetic animated characters to deliver real-time feedback on resource consumption to commercial building occupants.

## MANUFACTURING



### Reactive Innovations, LLC

Greener manufacturing method for dimethyl carbonate, an environmentally benign solvent used in numerous products, including batteries and plastics.

### Grow Plastics

Alternative to current plastics used in food service and food packaging that is made from renewable resources, uses less energy to produce than current technologies and is biodegradable.

### MesoCoat

Environmentally friendly corrosion-resistant zinc coatings for steel that replace current methods that generate hazardous wastewater.

### NEI Corporation

Aqueous electrolyte-based lithium-ion (Li-ion) battery system that eliminates the toxicity and flammability risks from the organic electrolytes currently used in almost all commercial Li-ion batteries.

### HJ3 Composite Technologies, LLC

New carbon fabric material that is threaded into pipes, pressurized and cured *in situ* with resistive heating to extend the life of the Nation's drinking water infrastructure.

### UltraCell Insulation, LLC

Advanced cellulose insulation made from 100% recycled cardboard uses a unique patented process to reduce greenhouse gas emissions from old and new buildings, takes less energy to produce than other forms of insulation, and uses wood fibers impregnated with fire retardant to directly sequester carbon.

## WATER



### AquaNano LLC

High-capacity resins for single-pass ion exchange systems to remove harmful perchlorate from drinking water.

### Aspen Products Group, Inc.

High-flux, fouling-resistant nanofiltration membranes to remove emerging contaminants, including pharmaceuticals, antibiotics, steroids, hormones, flame retardants, perfluorinated compounds, personal care products, and herbicides and pesticides from drinking water.

### MetaMateria Technologies LLC

Nanostructured sorption media to improve phosphorus removal from wastewater, helping prevent nutrient overload of lakes, estuaries and other bodies of water.

### Simple Water

A radically affordable arsenic treatment solution for small communities.

### Biopico Systems

Portable, inexpensive, label- and reagent-free instrument that remotely detects different strains of pathogens in water.

### CLEW Systems

Complete onsite wastewater treatment and recovery system that can be independent of existing energy and sewer infrastructures.