Center for Environmental Technology

Mission

To strengthen participation in environmentally conscious manufacturing and service markets through university-based research, technology transfer and assessment services, and environmental education programs.

The Center

Established as a Utah Center of Excellence in 1993, the Center for Environmental Technology (CET) operates through the College of Engineering at the University of Utah. Over 350 companies in Utah are involved in activities which will be significantly impacted by developments in environmental technology. Many of Utah's leading businesses have included integration or acquisition of environmental technologies in their strategic plans. *The rapid conversion of military to civilian technologies at national facilities, and the formation of new technology policy in the U.S. will be heavily influenced by needs in environmental restoration and conservation.* The Center for Environmental Technologies will be developing new ideas in three key technology areas: sensing and monitoring, waste stream reduction, and pollutant destruction & environmental remediation.

SENSING AND MONITORING

Many sensing technologies are under development at CET. Among these, sensing devices based on mass spectrometry have been found to have market-driven applications to environmental monitoring problems. CET will take advantage of its existing expertise in this field to gain a strong foothold in markets related to timely identification of toxins, hazardous waste, and to drug interdiction. These are areas in which there is a need for low cost, accurate and robust field measurement devices for discovery, analysis and delineation of these hazardous chemicals. Development of the theory, and associated software and hardware for these monitoring systems is a key mission of the Center.

WASTE STREAM REDUCTION

As available landfill space becomes more restricted, and as clean air and water become scarce commodities, it is increasingly important to develop technologies which will reduce all kinds of waste streams. CET, in conjunction with industrial and academic researchers, is developing methods for cleanup of soils and process streams contaminated with industrial explosive and radioactive waste. Each of these technologies reflects CET's commitment to pollution prevention.

POLLUTION DESTRUCTION AND ENVIRONMENTAL REMEDATION

CET is also working with industry to identify safer and more effective methods for destruction of pollutants and for environmental restoration. Beginning with environmental restoration opportunities, CET will be developing technologies which will cover a range of needs, from autonomous and teleoperated sensor-laden robotics to provision of higher efficiencies in conventional remediation equipment.

Center Accomplishments

- Introduction of a Utah company to U.S. Customs Agency officials in Washington to demonstrate its newest developments in remote sensing technology. Development of this new time-of-flight mass spectrometry system may also be instrumental in making airports safer by detecting explosives and will help stop the flow of hazardous materials and drugs across the borders.
- Development of Air-sparged Hydrocyclone (ASH) flotation, a separation process common in the minerals extraction industry, which uses hundreds of times less water than conventional flotation methods and is being applied effectively in solving many environmental problems.
- In conjunction with an international company based in Salt Lake City, CET is developing a knowledge-based expert system which will define parameters and automatically control the operation of cement kilns. This will ensure that important operating variables such as temperature and fuel feed rates are integrated so that the kilns will operate efficiently, completely destroying pollutants and leaving plant emissions clean.

For more information, please contact:

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