SUNY TURBO

"Turning University Research into Business Opportunities"

The Research Foundation for SUNY connects academia to industry - providing platforms to translate academic research and innovation into products and services that diagnose and treat diseases, solve energy challenges, and otherwise improve human health and welfare worldwide.

Through targeted intervention and support for the most disruptive inventions arising from SUNY's 64 campus enterprise, the RF moved SUNY technology from lab to market. Entrepreneurs, lawyers, venture capitalists, community leaders and champions of technology innovation - SUNY has access to the brightest minds, all of whom are working toward a common goal: Turning University Research into Business Opportunities

Haptic Video Game Controller

Dr. Thomás Henriques, Associate Professor of Music at SUNY Buffalo State and winner of the 2010 Guthman New Musical Instrument Competition, has invented a new video game controller based on his Sonik Spring electronic concertina. The design resembles a slinky with a handle on each end. The Haptic Controller is designed to increase player interactivity by providing an articulated game controller that offers intuitive 3D spatial manipulation of in-game objects and characters, as well as haptics, or force feedback.

Phase Innovations Air Conditioner

Inventors Dr. Jon Owejan, Assistant Professor of Mechanical and Electrical Engineering Technology at SUNY Alfred, and his senior student advisee, Nathan DeMario, have created an advanced air conditioner that uses less energy than conventional AC systems. This environmentally sustainable AC unit, also known as a membrane chiller, is based on evaporative cooling using water permeable membranes, and therefore does not require harmful chemical refrigerants. Their technology enables precise control of temperature and humidity in any climate and operates on the same principle at work when you sweat. When water evaporates from your skin, it carries away excess body heat and cools you down. This system also uses evaporated water to capture and transport heat out of the cooled environment. A unique, patent pending design also offers the option to use low temperature waste heat from manufacturing and other industrial sources to drive the cooling process instead of electricity. Phase Innovations, LLC was recently formed as a start-up company to commercialize this technology.

3-D Chocolate Printing

Dr. Daniel Freedman, Dean of the School of Science & Engineering at SUNY New Paltz, advised a team of SUNY New Paltz students who invented and built a prototype of a unique 3D printer for producing true, tempered chocolate into any shape. Competing products, such as the Hershey's 3D chocolate printer, generally print a line of coco powder which is then fixed in place with an edible epoxy. As true chocolate is crystalline, with the crystals being formed at a specific temper temperature, these competing products do not produce a true chocolate product. The 3D printer developed by Dr. Freedman's students provides for proper heating of the chocolate throughout system through to the 3D print-head for printing a true, tempered chocolate product.

Green Synthesis of Imine Compounds

Using the biodegradable solvent ethyl lactate, approved by the FDA as a food additive, Dr. Jacqueline Bennett, Associate Professor of Chemistry at SUNY Oneonta and the Eastern New York Intellectual Property Law Association 2016 Inventor of the Year, has patented a new process to synthesize imine compounds. Her process is safer, greener and more efficient than traditional methods used to make imines, a class of chemical compounds that are useful in household and

industrial applications, including as precursors in the manufacture of pharmaceuticals and as additives in the manufacture of biodegradable plastics.

Waste to Energy Gasifier

David Waage, a Research Engineer at SUNY Cobleskill, has invented a novel waste-to-energy gasifier system that produces a syngas with higher energy content than conventional gasification systems. The system converts flammable organic waste, which may include agricultural wastes, plastics, rubber and municipal solid wastes, into syngas that can be used to fuel an integrated system to produce electrical power and heat. The syngas can fuel a variety of combustion devices that operate on gas fuels, including diesel power generators, gas turbines, internal combustion engines and combustion boilers. Offering a solution to remove the time and resource consuming pre-processing and drying of waste, the patent pending system can be portable or permanently located and is ideally suited to be coupled with commercial anaerobic digester systems.

Glaucoma Protection Compounds

Dr. Stewart Bloomfield, Associate Dean for Graduate Studies and Research at SUNY Optometry, has invented a patent pending method for treating the progressive loss of eyesight in patients with glaucoma and other neurodegenerative conditions. Dr. Bloomfield has characterized the role played by protein signaling channels, known as connexins, in cell-to-cell communications and bystander cell death in the retina and optic nerve. His work has demonstrated that blockade of certain specific connexins can prevent bystander cell death and associated vision loss secondary to glaucoma and related conditions. Next steps include development of a high-throughput screening assay to identify prospective compounds capable of specific blockade of the relevant connexins for FDA clinical trials.

See something you like? For more information about SUNY innovation and partnering through the RF, please contact the Office of Innovation and Partnerships.

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