

# arkansas research & technology

# cultivating big ideas

Quarterly Newsletter

OCTOBER 2016

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## HERE COMES THE SUN:



On August 31st, Doug Hutchings, Picasolar CEO, announced the company's latest \$2 million SunShot Tier 2 Incubator Award from the U.S. Department of Energy, which Picasolar will match with another \$2 million. Picasolar was granted this award to produce

1,000 solar panels with their patent-pending Hydrogen Super Emitter Process. Goals with this technology include an increase in the efficiency of solar cells, a reduction of the amount of silver currently used to manufacture solar panels, and, an overall lower cost per solar panel. Picasolar's partners in this project are Yingli Green Energy, one of the world's leading solar panel manufacturers, and the Energy Research Center of the Netherlands, a top global leader in solar technology development. These partnerships

display the expansive reach of Picasolar's technology. Meanwhile, the company is also expanding its roots. Douglas Hutchings recently spoke at the TedX in Little Rock on September 30<sup>th</sup>, his topic was "Our Upcoming Energy Crisis: Ramifications of Free Energy." In photo: Douglas Hutchings announced the SunShot Tier 2 Incubator Award in the Enterprise Center at the ARTP where Picasolar is located.



## THE SUN RISES ON WATTGLASS

After winning the SunRISE TechBridge Challenge and recently receiving a \$679,413 SunShot award from the U.S. Department of Energy, **WattGlass** is soaking it all in. This latest award will be used to help commercialize the company's anti-reflective, self-cleaning and highly transparent glass coating technology. This will be a 14-month process moving WattGlass's technology from the lab to the marketplace by installing 240 solar panels in test arrays around the country and working with leading solar panel manufacturers currently in the industry. WattGlass produces a product that increases efficiency of current solar panels and reduces cleaning and maintenance costs, thus contributing to the SunShot Initiative's national effort to support innovation to make solar energy fully cost-competitive with traditional energy sources before the end of the decade.



Left to Right: Brennen Freiburger, Corey Thompson and Drew Fleming. Photo courtesy of University Relations.



## LITTLE BIRD SOARS FORWARD

Little Bird Systems continues to develop innovative embedded wireless sensing, wireless monitoring, remote data logging, and wireless control products for industrial and consumer electronics applications. Raising over \$250,000 in investment from Tonic Fund, Cadron Creek Capital, AEDC, and individual private investors has allowed Little Bird to upgrade their office space at the ARTP and expand their engineering staff. Much more is on the horizon for Little Bird as they partner with the UofA Poultry Science Department to conduct testing of their feed monitoring system, which is aimed at producing results that will help to improve the system. Little Bird is also producing their first commercially available product with the help of Delta Group Electrics in Fayetteville; a clip on current sensor (pictured right). The sensor is a very small, non-intrusive device for measuring current in the 0-5 amp range. It simply clips around a wire, and the packaging is made to grip the wire so the sensor stays in place. This sensor could be used in automation, robotics, or even certain mechanical health monitoring applications.



## SFC FLUIDICS DEVELOPING PUMP

SFC Fluidics, a portfolio company of VIC Technology Venture Development, has been awarded a \$225,000 grant to support early stage development of a dual hormone patch pump for patients with diabetes. Diabetes is a worldwide issue affecting over 380 million people and is expected to increase to 600 million people in the next 20 years. SFC Fluidics recognizes the gap between healthcare and patients with diabetes and by using proprietary micro-fluidics they are "developing a connected, wearable drug dosing system that automates insulin delivery." This would allow patients to lead active lifestyles without the threat of serious complications including blindness, amputation and heart disease. Their proprietary ePump® system offers patients safe and accurate delivery of both insulin and glucagon in a discreet wearable pump, which is the same size as the current insulin-only dosing system on the market. Patients also face the issue of tracking dose administration and pump system problems. This ePump® system features a flow confirmation sensor which tracks dosage delivery and will alert the user if leaks, mechanical/electrical failure or depleted drug supply occurs. SFC Fluidics has a mission to advance healthcare, improve quality of life and provide affordable and convenient products for patients.



After successfully completing this Phase I project, the company will be eligible for Phase II SBIR funding of up to \$1.5 million.

### Welcome New Hires

#### BlueInGreen

*Eric Stasen*

*Billy Ammons*

#### Little Bird Systems

*Ross Liederbach*

#### Wolfspeed

*Steven Ericksen*

*Kim Granahan*

*Jaylene Van Dine*

*Ajith (AJ) Wijenayake*

**Thank you to everyone who came out for the Food Truck Fridays this year! There will be no more food trucks for 2016. We had a great turn out and plan to start bringing them back late next spring. Suggestions for 2017: [lebeiris@uark.edu](mailto:lebeiris@uark.edu)**

**DID YOU KNOW?**

From their home in Fayetteville, AR to Alberta, Canada you will find BlueInGreen (BIG) systems being installed and improving water quality by providing dissolved gas delivery systems. BIG started in 2004 and now, 12 years later has completed its 25th installation in June, 2016. Locations for future installations include Dickinson, ND, Wichita Falls, TX and Minneapolis, MN. BIG continues to grow and evolve as a company at the Arkansas Research and Technology Park and has recently introduced a new line of product offerings called StreamLineO2. This system utilizes a pressurized process to rapidly and efficiently dissolve oxygen in a sidestream, offering multiple benefits in a host of municipal, industrial and ecological water treatment applications.



Boston Mountain Biotech attended the Hello Tomorrow Global summit in Paris, France October 13-14 as one of the top 500 startups selected to join. The company was also awarded an ASTA seed capital investment to provide the matching funds for the National Science Foundation Phase I STTR commercialization grant for the "Harnessing CRISPR-mediated silencing for the one-step optimization of protein production strains".



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If you are interested in becoming a member of the ARTP community, please contact:

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