Agum Technologies LLC

Agum Technologies LLC is a startup company founded by Prof. Dhandapani Venkataraman (“DV”), former postdoc Monojit Bag and current postdoc Tim Gehan. The company is based on the founders’ UMA research, which has been aimed at eliminating the use of toxic organic solvents in making polymer-based solar panels, making the panels more environmentally-friendly both in fabrication and in everyday use. Because of this safety factor, such panels are well suited to indoor use, capturing power from indoor lighting that is usually dissipated as heat. And by adjusting the light frequency response of the panels to match the frequencies of indoor lighting, e.g., fluorescent, incandescent, LED, etc., prototypes of the panel material outperform commercial amorphous silicon cells in converting indoor light to power. Agum has taken an exclusive option to license the UMA patent rights covering this technology. Agum has given these cells the name PowerStripe™.

Prof. Venkataraman received an award from the 2014 CVIP Technology Development Fund to optimize the performance and fabrication of PowerStripe panels. Postdoctoral fellow and Agum co-founder Dr. Timothy Gehan received a Manning Inventor Fellowship in 2015, to develop a variety of tunable parameters to ease the scale-up process for the fabrication of PowerStripe panels. Agum is currently planning to scale up the fabrication of PowerStripe panels using ink-jet printing and roll-to-roll processing, and to generate prototype devices for specific end use applications.

Products

The power requirements of items we use every day can be met by PowerStripe technology. The power demands of laptops, cell phones, tablets, calculators, Bluetooth speakers, etc. are relatively small; Forbes Magazine estimates that a phone, iPad and laptop taken together use less than $10.00 of electricity per year. But if you consider a company like IBM, with 377,000 employees, powering these devices costs almost $4 million per year, or $40 million over 10 years! Agum plans to produce low-cost PowerStripe panels that can eliminate these costs by using wasted light energy instead of plugging in. And wouldn’t it be nice to have a PowerStripe panel on your suitcase to power your cellphone during those long airport waits? The applications are endless.