Low-Energy Luminous Surfaces: Residential Lighting Using Ceelite LEC Technology

Impact: The need for alternative energy-efficient lighting systems that reduce energy consumption is increasing as incandescent light sources are being phased out of use and production. CeeLite has developed a Light Emitting Capacitor (LEC) technology that simulates daylight, generates minimal heat, and is made from recycled copolyester resins. An affordable, residential lighting system using CeeLite's LEC technology could revolutionalize the lighting industry by changing the way lighting technology is considered and affect the overall approach to interior illumination.

Project Overview: Drexel University is leading a team to use CeeLite's LEC technology to develop a commercially viable lighting prototype for residential lighting applications that is cost effective, energy efficient and provides interior illumination with daylight qualities. Because the CeeLite LEC panel is a luminous surface, it is necessary to alter the perception of what constitutes a residential luminary, or light fixture, which will require a different methodology for lighting design itself. A well-designed prototype using LEC technology has the potential of being commercialized, manufactured and distributed for residential lighting applications.

GBA Product Innovation Grant Amount: $20,000

Leadership Team: The project team includes Dr. Eugenia Victoria Ellis, Associate Professor in Drexel University's Department of Architecture & Interior Design, the Westphal College of Media Arts & Design, and the College of Engineering. The team also includes several student researchers affiliated with the Drexel Smart House. CeeLite's team members are Gabrielle Santulli, Vice President of Marketing and Huei-Pin Huang, Chief Technical Officer.

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