

## **Development of a Superlattice Solar Cell Prototype**

***Impact:*** Existing solar electric technology is limited in performance to 15% to 20% efficient silicon solar cells and costs more than \$4/watt. This technology is not very useful for power generation in buildings, where area is limited. The conceptual solar cell prototype to be developed under this funding will lead to higher performance and lower cost solar cell technology.

***Project Overview:*** This project aims to demonstrate a novel solar cell concept that has the potential for very high efficiency (>50%) and low cost (<\$1/watt). Work will involve building a prototype of a superlattice solar cell device structure and characterizing its performance.

***GBA Product Innovation Grant Amount:*** \$20,000

***Leadership:*** Dr. Pritpal Singh is Professor and Chairman of the Department of Electrical and Computer Engineering at Villanova University. Dr. Singh has been working on solar cell research for the last 25 years and has served as a consultant to the U.S. Department of Energy.

***Contact:*** Dr. Pritpal Singh ■ Villanova University ■ 610.519.7378 ■ [pritspal.singh@villanova.edu](mailto:pritspal.singh@villanova.edu)

