NREL
NATIONAL RENEWABLE ENERGY LABORATORY

An Optical Probe for Semiconductor

Cooperative Research and Development Final Report

CRADA Number: CRD-06-206

NREL Technical Contact: Bhushan Sopori

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Cooperative Research and Development Final Report

In accordance with Requirements set forth in Article XI.A(3) of the CRADA document, this document is the final CRADA report, including a list of Subject Inventions, to be forwarded to the Office of Science and Technical Information as part of the commitment to the public to demonstrate results of federally funded research.

CRADA number: CRD-06-206

CRADA Title: An Optical Probe for Semiconductor

Parties to the Agreement: GT Solar, Inc.

Joint Work Statement Funding Table showing DOE commitment:

Estimated Costs	**NREL** Shared Resources
Year 1	$75,000
Year 2	$75,000
Year 3	$0
TOTALS	$150,000

Abstract of CRADA work:

DOE laboratories, including NREL, have been placing subcontracts for research and development services with scientific institutes in the NIS under various DOE programs for many years. Currently, there are approximately 190 subcontracts under a relatively new DOE program known at the New Independent States - Industrial Partnering Program (NIS-IPP). The remaining subcontracts with NIS scientific institutes are under various other DOE programs.

The NIS-IPP supports the national security interest of preventing the proliferation of weapons of mass destruction through cooperative projects between the United States and military -related institutes in the NIS. The goal of NIS-IPP projects is to redirect technologies, materials, resources and personnel in the NIS to non-military scientific and commercial research and development. NIS-IPP projects are being implemented through subcontracts funded by the U.S. Government between NIS military-related institutes and the following 10 DOE national laboratories: Argonne National Laboratory, Brookhaven National Laboratory, Idaho National Engineering Laboratory, Lawrence Berkeley National Laboratory, Lawrence Livermore National Laboratory, Oak Ridge National Laboratory, Pacific Northwest Laboratory, and Sandia National Laboratories Los Alamos, NETL, and NREL.

This CRADA involves development of a new semiconductor characterization tool, Optical Probe, which can be commercialized by GT Solar. GT Solar will participate in the design and testing of this instrument that will be developed under an IPP project.

Summary of Research Results:

This system has been built and is being tested at the American University in Armenia. When completed, it will be shipped to NREL (expected Dec. 2010).

Subject Inventions listing:

US Patent # 7, 420, 699, Optical Probe for Semiconductor Characterization, Sopori and Hambarian

Report Date: 8/8/10 Responsible Technical Contact at Alliance/NREL: Sopori, Bhushan

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