

PMC-EF2a

(20402)

**U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION**

**RECIPIENT:**The Regents of the University of California**STATE:** CA

PROJECT TITLE : Single-Crystalline InGaAs/InP Dense Micro-Pillar Forest on Poly-Silicon Substrates for Low-Cost High-Efficiency Solar Cells

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000387	DE-EE0005316	GFO-0005316-001	0

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:

Description:

A9

Information gathering (including, but not limited to, literature surveys, inventories, audits), data analysis (including computer modeling), document preparation (such as conceptual design or feasibility studies, analytical energy supply and demand studies), and dissemination (including, but not limited to, document mailings, publication, and distribution; and classroom training and informational programs), but not including site characterization or environmental monitoring.

B3.6

Siting, construction (or modification), operation, and decommissioning of facilities for indoor bench-scale research projects and conventional laboratory operations (for example, preparation of chemical standards and sample analysis); small-scale research and development projects; and small-scale pilot projects (generally less than two years) conducted to verify a concept before demonstration actions. Construction (or modification) will be within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible).

Rational for determination:

DOE is proposing to provide federal funding to the Regents of the University of California to conduct laboratory research and development activities that advance photovoltaic (PV) technology by developing a high conversion efficiency using high quality III-V compound-based three-dimensional micro-structures on silicon and poly-silicon.

All research, prototype fabrication and testing would be conducted in a laboratory environment at the University of California, Berkeley's Marvell Nanofabrication Laboratory (The NanoLab) (520 Sutardja Dai Hall MS 1754, Berkeley, California 94720). The NanoLab is a 15,000 square-foot facility with a wide range of micro and nanofabrication capabilities. The facility has completed an R&D questionnaire addressing the protocols in place for laboratory safety, risk management, chemical handling and waste disposal. The facility complies with standard laboratory safety procedures and labs are inspected by university staff and safety personnel. The safety protocols are monitored by the University's Environmental Health and Safety Offices.

The university has all applicable permits in place to conduct research on campus. Liquid effluents consisting of solvents, acids, bases, chemical reagents and other liquid wastes will be disposed of through the campus Division of Environmental Health and Safety, which picks up waste in approved containers and disposes of it through licensed facilities.

Based on this information, DOE has determined the work outlined is consistent with activities identified in categorical exclusion A9 (information gathering) and B3.6 (indoor bench-scale research and conventional laboratory operation).

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

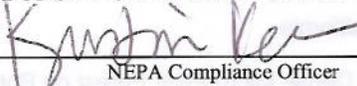
If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

Cristina Tyler 11.07.2011

DOE Funding: \$1,500,000
Total Project Cost: \$1,500,000

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  Date: 11/7/2011
NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

- Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
- Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____ Date: _____
Field Office Manager

Based on my review of the information provided, I have made the following determination:

DOE is proposing to provide federal funding to the Regents of the University of California to conduct laboratory research and development activities that advance photovoltaic (PV) technology by developing a high conversion efficiency using light quality (H-V) compound based three-dimensional nano-structures on silicon and poly-silicon.

All research, prototype fabrication and testing would be conducted in a laboratory environment at the University of California, Berkeley's Material Fabrication Laboratory (The NanoLab) (5200 Suter St., Berkeley, California 94720). The NanoLab is a 12,000 square-foot facility with a wide range of micro and nanofabrication capabilities. The facility has completed an R&D questionnaire concerning the protocol in place for laboratory safety, chemical handling and waste disposal. The facility complies with standard laboratory safety procedures and is regulated by university staff and safety personnel. The safety protocols are monitored by the University's Environmental Health and Safety Office.

The university has all applicable permits in place to conduct research on campus. Liquid effluents consisting of solvent, waste, waste, chemical reagents and other liquid wastes will be disposed of through the campus Division of Environmental Health and Safety, which takes up waste in approved containers and disposes of it through licensed facilities.

Based on this information, DOE has determined the work outlined is consistent with activities identified in categorical exclusion A5 (information gathering) and B2.6 (indoor bench-scale research and conventional laboratory operation).

NEPA PROVISION

DOE has made a final NEPA determination for this award.

From the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer (numbered in block 7) of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing work beyond that currently approved.

Done in Berkeley,

Christine Taylor 11/07/2011