

Notice of Exemption**Form D**

To: Office of Planning and Research
PO Box 3044
1400 Tenth Street, Room 113
Sacramento, CA 95812-3044

From: California Energy Commission
1516 Ninth Street, MS-48
Sacramento, CA 95814

Project Applicant: The Regents of the University of California, San Diego

Project Title: High-Efficiency Perovskite Tandem Modules with Resilient Interfaces

Project Location – Specific: 9500 Gilman Dr

Project Location – City: La Jolla 92093 **Project Location – County:** San Diego

Description of Nature, Purpose and Beneficiaries of Project:

The purpose of this Agreement is to develop robust, high-power perovskite-on-silicon tandem photovoltaic (PV) modules that achieve a power conversion efficiency of greater than 32% using low-cost manufacturing approaches. The perovskite top cell will be deposited on textured silicon cells, increasing energy production by 30% when the sun is near the horizon, reducing the ramp rate necessary for other grid participants, and improving reliability at future high PV penetration that is under statutory mandate. This Agreement will result in ratepayer benefits of greater reliability, lower costs, and improved safety by developing PoSiT technology that use mechanically-compliant conductive adhesives to robustly integrate tandem cells into durable modules.

Name of Public Agency Approving Project: California Energy Commission

Name of Person or Agency Carrying Out Project: The Regents of the University of California, San Diego

Exempt Status: (check one)

- Ministerial Exemption (Pub. Resources Code § 21080(b)(1); Cal. Code Regs., tit 14, § 15268);
- Declared Emergency (Pub. Resources Code § 21080(b)(3); Cal. Code Regs., tit 14, § 15269(a));
- Emergency Project (Pub. Resources Code § 21080(b)(4); Cal. Code Regs., tit 14, § 15269(b)(c));
- Categorical Exemption. State type and section number
Cal. Code Regs., tit 14, § 15301 ; Cal. Code Regs., tit 14, § 15306
- Statutory Exemptions. State code number.
- Common Sense Exemption. (Cal. Code Regs., tit 14, §15061(b)(3))

Reasons why project is exempt:

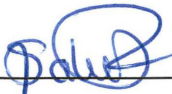
The proposed research project would involve developing a perovskite-on-silicon tandem photovoltaic (PV) panel that would be increase efficiency than current silicon PV panels. The durability of this module will be demonstrated via accelerated indoor stress tests and validated by real-life outdoor performance for at least six months on UC San Diego's energy technology testbed, which includes installation of small electronic components for testing. The project would include encapsulate the shingled tandem cells into a glass-glass mini-module format of at least 100 cm² area. Additionally, the proposed project consists of research and data collection activities on the performance of the perovskite solar cells and tandem PV module, which do not result in a serious or major disturbance to an environmental resource. Based on the above project description, the project is classified as exempt from the provisions of CEQA under Section 15306, Information Collection and Section 15301, Existing Facilities. In addition, none of the exceptions to the exemptions apply. A Notice of Exemption (NOE) will be filed with the Office of Planning and Research at the time of project approval.

Lead Agency

Contact Person: Silvia Palma-Rojas **Area code/Telephone/Ext:** 916-327-1716

If filed by applicant:

- 1. Attach certified document of exemption finding.
- 2. Has a Notice of Exemption been filed by the public agency approving the project? Yes No

Signature:  **Date:** 9/25/19 **Title:** EGSS

Signed by Responsible Agency

Signed by Lead Agency

Signed by Applicant

Date received for filing at OPR: SEP 30 2019

Governor's Office of Planning & Research

STATE CLEARINGHOUSE