

THE UNIVERSITY OF MICHIGAN
REGENTS COMMUNICATION

ACTION REQUEST

Subject: Subcontract Agreement between the University of Michigan and Amphionic LLC

Action Requested: Authorization to enter into Agreement

Preamble:

A statutory conflict of interest situation was identified by the Office of Research and Sponsored Projects while reviewing the Proposal Approval Form which then triggered a review by the UMOR Conflict of Interest Review Committee. A plan for management of the possible risks associated with the conflict of interest was then developed and approved by the Committee and agreed to by the parties involved.

This proposed agreement (“Agreement”) falls under the State of Michigan Conflict of Interest Statute because Professor Mark Hammig is an employee of the University of Michigan (“University”), and a partial owner of Amphionic LLC. The law permits such an Agreement provided it is disclosed to the Board of Regents (“Regents”) of the University of Michigan and approved in advance by a 2/3 vote.

Background:

Dr. Mark Hammig, an Associate Research Scientist in the Department of Nuclear Engineering and Radiological Sciences, is a partial owner of a for-profit company called Amphionic LLC (the “Company”). The Company wishes to fund a National Science Foundation (prime) SBIR Phase I project entitled, “Low-Cost, High Resolution Gamma-ray and X-ray Detection Technologies based on Methyl Ammonium Lead Tri-Halide Semiconductors” (ORSP #20-PAF08520) in the Department of Nuclear Engineering and Radiological Sciences under the direction of Dr. Hammig. The purpose of this project is to obtain broadly applicable information on the solution-growth physics of single-crystalline perovskite solids and the fundamental sources of instability in organic-inorganic hybrid perovskites, knowledge that can be applied across the photon wavelength range including to visible detectors such as photovoltaics.

Agreement Terms:

The terms of the Agreement conform to University policy. The period of performance for the project is approximately one (1) year. The amount of funding support will not exceed \$46,526. Since research projects are often amended, this agreement includes provisions for changes in time and scope. University procedures for approval of these changes will be followed and additional conflict of interest review will be done as appropriate.

Impact of the Agreement:

The Agreement will support an effort by Dr. Hammig to use his expertise and University laboratory, as well as other University resources, to (1) utilize an axial-flow solution-based growth method to optimize the material properties (mobility, carrier lifetime, minimization of trap states) of organic-inorganic hybrid perovskites (OHIPs) in the form of perovskite single crystals (PSCs), (2) optimize the PSC's anode and cathode interfaces for sensing structures, and (3) demonstrate a pathway towards larger-area (> 1 cm²) pixelated detectors.

Recommendations:

This matter has been reviewed and approved by the UMOR Conflict of Interest Review Committee. In light of this disclosure and our finding that the Agreement was negotiated in conformance with standard University practices, I recommend that the Board of Regents approve the University's entering into this Agreement with Amphionic LLC.

Respectfully submitted,



Rebecca Cunningham
Vice President for Research

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