

# DOE Announces \$18 Million for Research on Quantum-Enabled Bioimaging and Sensing Approaches for Bioenergy

| Announcement Number:   | DE-FOA-0002603   |  | List Posted:    | 9/13/2022 |                  |
|------------------------|--|--|-----------------|-----------|------------------|
| Principal Investigator | Title  | Institution  | City            | State     | 9-digit zip code |
| Weiss, Shimon          | Quantum-enabled membrane potential imaging of DOE-relevant bacterial communities   | Regents of the University of California, Los Angeles   | Los Angeles     | CA        | 90095-1406       |
| Kasevich, Mark         | Development of high-throughput light-sheet fluorescence lifetime microscopy for 3D functional imaging of metabolic pathways in plants and microorganisms | Board of Trustees of the Leland Stanford Junior University                                     | Redwood City    | CA        | 94063-8445       |
| Wakatsuki, Soichi      | Development of high-throughput light-sheet fluorescence lifetime microscopy for 3D functional imaging of metabolic pathways in plants and microorganisms | SLAC National Accelerator Laboratory   | Menlo Park      | CA        | 94025-7015       |
| Shterengas, Leon       | Mid-infrared single photon counting photodetectors for quantum biosensing.   | Research Foundation for the State University of New York d/b/a RFSUNY - Stony Brook University | Stony Brook     | NY        | 11794-3362       |
| Theis, Thomas          | Non-invasive imaging of nitrogen assimilation in the rhizosphere via quantum-entangled hyperpolarized spin states  | North Carolina State University  | Raleigh         | NC        | 27695-7214       |
| Liao, Chen-Ting        | Quantum Mimicry Optical Coherence Tomography for Advancing Plant Science for Bioenergy   | The Regents of the University of Colorado d/b/a University of Colorado                         | Boulder         | CO        | 80303-1058       |
| Backlund, Mikael       | Quantum Optical Microscopy of Biomolecules near Interfaces and Surfaces (QuOMBIS)  | Board of Trustees of the University of Illinois  | Champaign       | IL        | 61820-7406       |
| Passian, Ali           | Quantum Optical Microscopy of Biomolecules near Interfaces and Surfaces (QuOMBIS)  | Oak Ridge National Laboratory (ORNL)   | Oak Ridge       | TN        | 37831-6118       |
| Ajoy, Ashok            | Quantum Diamond EcoFAB Microscope for in-situ NMR of Root Exudate Molecules  | The Regents of University of California  | Berkeley, CA    | CA        | 94704-5940       |
| Gilbert, Benjamin      | Quantum Diamond EcoFAB Microscope for in-situ NMR of Root Exudate Molecules  | Lawrence Berkeley National Laboratory (LBNL)   | Berkeley, CA    | CA        | 94720-8099       |
| Schwander, Peter       | Establish X-ray Quantum Imaging for Subcellular Structures   | Board of Regents of the UW System for UW-Milwaukee   | Milwaukee       | WI        | 53211-3153       |
| Aquila, Andrew         | Establish X-ray Quantum Imaging for Subcellular Structures   | SLAC National Accelerator Laboratory   | Menlo Park      | CA        | 94025-7015       |
| Yi, Xu                 | Entanglement Enhanced Quantum Stimulated Raman Spectroscopy Imaging Lab on a Chip  | The Rector and Visitors of the University of Virginia  | Charlottesville | VA        | 22904-4195       |
| Passian, Ali           | Entanglement Enhanced Quantum Stimulated Raman Spectroscopy Imaging Lab on a Chip  | Oak Ridge National Laboratory (ORNL)   | Oak Ridge       | TN        | 37831-6118       |