

Microbially mediated formation of CIGS and CIGSu photovoltaic nanoparticles

Disclosure Number

201002492

Technology Summary

Solar cells composed of photovoltaic (PV) materials can play an important role in generating electricity in the next centuries due to rising oil price and demanding the reduction of green house gases. The global solar electricity market is recently more than \$ 10 billion/year and the industry is growing at more than 30 % per annum. Microbially-mediated formation of photovoltaic nanoparticles is the unique biotechnology to produce inexpensive massive copper indium gallium diselenide and copper indium gallium disulfide raw material without complicate multiple steps that can be applied to build solar cell device as an absorbing layer and that can be applicable to various substrates such as conventional soda lime glass or even flexible substrates, accordingly, enable to adapt various processes such as role-to-role, printing, and spray.

Inventor

MOON, JI WON

Biosciences Division

Licensing Contact

SPECK, ROBERTA R

UT-Battelle, LLC

Oak Ridge National Laboratory

Rm 141, Bldg 4500N, MS: 6196

1 Bethel Valley Road

Oak Ridge, TN 37831

Office Phone: (865) 576-4680

E-mail: SPECKRR@ORNL.GOV

Note: The technology described above is an early stage opportunity. Licensing rights to this intellectual property may be limited or unavailable. Patent applications directed towards this invention may not have been filed with any patent office.