Singapore Upcycles Old Solar Panels into Heat-Harvesting Electricity Materials

Yen Ocampo, July 6, 2022

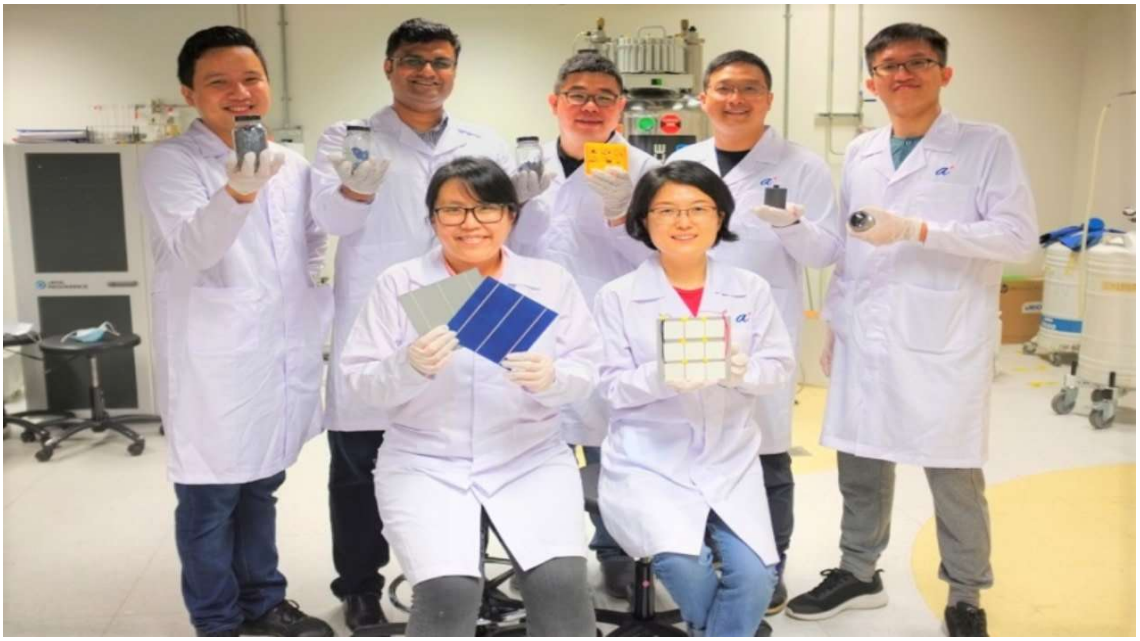

Image credits: ntu.edu.sg

Researchers from Nanyang Technological University, Singapore (NTU Singapore) and the Agency for Science, Technology, and Research (A*STAR) have created a technology that can transform old solar panels into a new, high-performance thermoelectric material that harvests heat and converts it into electricity.

“This study demonstrates that thermoelectrics is a fertile ground for upcycling defect and impurity-sensitive semiconductors,” says Dr Ady Suwardi, team lead from A*STAR’s Institute of Materials Research and Engineering (IMRE).

To identify the ideal combination of materials, scientists from A*STAR’s IMRE and the Institute of High-Performance Computing (IHPC) each contributed their area of expertise in computational modelling and material properties.

On the other hand, under the direction of Associate Professor Nripan Mathews, researchers from NTU’s Singapore-CEA Alliance for Research in Circular Economy (SCARCE) used their knowledge of recovering valuable materials from solar waste to create the technologies necessary for recovering silicon from solar panel waste.

Read full article here: https://opengovasia.com/singapore-upcycles-old-solar-panels-into-heat-harvesting-electricity-materials/