



## T'imani a Multifunctional Solar System to Provide Cooking and Water Heating Rural Energy Needs

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### Abstract:

Es study describes the development of a multifunctional solar system designed for implementation in some communities in the Meseta Purepecha, Michoacan, Mexico. The multifunctional solar system device—called T'imani (in the Purepecha language) – consists of two modules designed for domestic use: one for cooking food, the other for heating water. The thermal characterization is based on the use of standardized tests for both modules. The

parameters obtained indicate that use device is suitable for in the conditions of solar resources in this region. Additionally, a pilot test was carried out to implement some devices that show favorable preliminary results for domestic use. Hence, due to the device functionality and that in Mexico there is abundant solarresources it is feasible to implement the device in many places throughout the country.

### Biography:

José Ángel Rodríguez Morales, originally from a rural community in Michoacán, Mexico, has a degree in Sustainable Development with a specialty in Alternative Technologies from the Universidad Intercultural Indígena de Michoacán (UIIM). He completed the Master's degree in Sustainability Science and Technology at the Polytechnic University of Catalonia, Barcelona, Spain. Since 2012, he has been involved in research related to the development and implementation of solar thermal technologies. José Ángel worked more than 7 years as a technical research assistant, designing and building innovative devices to take advantage of solar radiation and determining their thermal parameters. Since 2019, Ángel is attached to the academic program in Engineering in Sustainable Technological Innovation at the UIIM. He



currently has the title of full professor B and is part of the Basic Academic Nucleus of the Master in Engineering for Energy Sustainability of the same university.

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