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(54) Title of the invention : SOLAR WATER HEATER WITH NANOCOATED ABSORBER PLATE FOR INCREASED ENERGY ABSORPTION

<p>(51) International classification :B82Y30/00, B82Y40/00, C01G9/02, C09D5/32, F24J2/04, F24J2/48, F24J2/50, F24S10/40</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant :</p> <p><b>1)Dr. CH V K N S N Moorthy</b> Address of Applicant :Professor of Mechanical Engineering, Associate Director R&amp;D, Vasavi College of Engineering, Ibrahimbagh, Hyderabad, Telangana, India, Pincode: 500031 -----</p> <p><b>2)Dr. N. Alagappan</b> <b>3)Mr. Markndeyulu Vuggirala</b> Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor :</p> <p><b>1)Dr. CH V K N S N Moorthy</b> Address of Applicant :Professor of Mechanical Engineering, Associate Director R&amp;D, Vasavi College of Engineering, Ibrahimbagh, Hyderabad, Telangana, India, Pincode: 500031 -----</p> <p><b>2)Dr. N. Alagappan</b> Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Annamalai University, Annamalai Nagar, Tamil Nadu, India, Pincode: 608002 -----</p> <p><b>3)Mr. Markndeyulu Vuggirala</b> Address of Applicant :Assistant Professor, Department of Mechanical Engineering, St. Anns College of Engineering and Technology, Chirala, Andhra Pradesh, India, Pincode: 523187 -----</p>
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(57) Abstract :

The present invention is a solar water heater with a nanocoated absorber plate for increased energy absorption. The absorber plate is coated with a layer of zinc oxide nanoparticles using a sol-gel process, which maximizes the absorption of solar energy. The nanocoated absorber plate can be used in various applications, such as providing hot water for cleaning and disinfecting equipment and facilities, as well as for showers, laundry, and kitchen facilities in the hospitality industry. It can also be used in remote areas where access to electricity and gas is limited. The invention has several unique properties and can be combined with other technologies to further improve its performance and efficiency. It is a low-cost, reliable, and sustainable source of hot water and has potential for use in solar photovoltaic systems and solar thermal power plants. The present invention provides a valuable technology for the renewable energy industry and has the potential to significantly improve the performance and efficiency of solar water heaters.

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