

(54) Title of the invention : NANOCOATED SOLAR WATER HEATER SYSTEM AND METHOD FOR ENHANCING HEAT TRANSFER EFFICIENCY

<p>(51) International classification :F24S0060300000, F24S0010400000, C09D0005080000, F24S0050000000, F24H0009200000</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 : 1)Dr. S. Selvakumar Address of Applicant :Associate Professor of Physics, Department of Science and Humanities, Thamirabharani Engineering College, Thachanallur, Tirunelveli, Tamilnadu, India, Pincode: 627358 -----</p> <p>2)Dr. V. B. Sreedhar 3)Mr. R. Ram Kumar 4)Dr. Guddappa Halligudra 5)Mrs. Asha Budhram Madavi 6)Dr. M.S.N.A. Prasad 7)Dr. Pooja 8)Dr. L. Jino 9)Mr. Amancha Thirupathi 10)Dr. Sumanta Bhattacharya</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Dr. S. Selvakumar Address of Applicant :Associate Professor of Physics, Department of Science and Humanities, Thamirabharani Engineering College, Thachanallur, Tirunelveli, Tamilnadu, India, Pincode: 627358 -----</p> <p>2)Dr. V. B. Sreedhar Address of Applicant :Assistant Professor, Department of Physics, RGM College of Engineering and Technology, Nandyal, Andhra Pradesh, India, Pincode: 518501 -----</p> <p>3)Mr. R. Ram Kumar Address of Applicant :Research Scholar, Department of Chemistry, Jamal Mohamed College (Autonomous), (Affiliated to Bharathidasan University), Tiruchirappalli, Tamilnadu, India, Pincode: 620020 -----</p> <p>4)Dr. Guddappa Halligudra Address of Applicant :Assistant Professor and Researcher, Department of Chemistry, ATME College of Engineering, Mysuru, Karnataka, India, Pincode: 570028 -----</p> <p>5)Mrs. Asha Budhram Madavi Address of Applicant :Assistant Professor in Geography, Department of Geography, Patangrao Kadam Mahavidyalaya Ramanandnagar, Palus, Sangli, Maharashtra, India, Pincode: 416308 -----</p> <p>6)Dr. M.S.N.A. Prasad Address of Applicant :Assistant Professor, Department of Chemistry, Institute of Aeronautical Engineering (IARE), Dundigal, Hyderabad, Telangana, India, Pincode: 500043 -----</p> <p>7)Dr. Pooja Address of Applicant :Research Associate, Department of Animal Biotechnology, LUVAS, Hisar, Haryana, India, Pincode 125004 -----</p> <p>8)Dr. L. Jino Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Sathyabama Institute of Science and Technology, Chennai, Tamilnadu, India, Pincode: 600119 -----</p> <p>9)Mr. Amancha Thirupathi Address of Applicant :Assistant Professor, Department of Physics, Malla Reddy Engineering College (Autonomous), Maisammaguda, Secunderabad, Hyderabad, Telangana, India, Pincode: 500100 -----</p> <p>10)Dr. Sumanta Bhattacharya Address of Applicant :Research Scholar, Department of Textile Technology, MAKAUT, Kolkata, West Bengal, India, Pincode: 700064 -----</p>
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(57) Abstract :  
The present invention pertains to a nanocoated solar water heater system designed to elevate the efficiency and durability of traditional solar water heating. By utilizing a specially-engineered nanocoating on the solar collector surface, the system maximizes sunlight absorption and reduces heat losses, leading to enhanced performance. In addition, the nanocoating offers inherent anti-corrosive properties and the potential for aesthetic customizations. Embedded micro-sensors enable real-time monitoring, providing users with valuable feedback and predictive insights. This holistic approach amalgamates efficiency, durability, aesthetics, and smart features, setting a new benchmark in solar water heating solutions.

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