

(54) Title of the invention : Nanotechnology Based Water Purification System with Automated Assembly WAPURE

<p>(51) International classification :C02F0001280000, C02F0001000000, C02F0101300000, B01D00061080000, C02F0003300000</p> <p>(86) International Application No :PCT// Filing Date :01/01/1900</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 : <b>1)Daniel Lawrence I</b> Address of Applicant :2/83, Kottagaimedu, Arumbanur (Post), Madurai-625104. ----- -----</p> <p><b>2)M.S.Karthik</b> <b>3)M.Mathanbabu</b> Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : <b>1)I.Daniel Lawrence</b> Address of Applicant :Assistant professor, Department of Mechanical Engineering, Loyola Institute of Technology, Chennai, Tamilnadu, India - 600123. Chennai ----- -----</p> <p><b>2)M.S.Karthik</b> Address of Applicant :Business Development Manager, Profenaa technologies, Agni amman complex, Opp to ABC mobiles, Pollachi, Tamilnadu, India - 642001. Pollachi ----- -----</p> <p><b>3)M.Mathanbabu</b> Address of Applicant :1/9, West street, Kilavipatti, Kovilpatti Taluk, Thoothukudi (Dt)-628502,Tamilnadu,India. Thoothukudi ----- -----</p> <p><b>4)D.Thirumalaikumarasamy</b> Address of Applicant :Assistant professor,Department of Manufacturing Engineering, Annamalai University, Annamalai Nagar, Chidambaram-608002, Tamilnadu, India. Chidambaram ----- -----</p> <p><b>5)M.Ashokkumar</b> Address of Applicant :No: 06, Minnagar, Sugar Mill(Opp.), Sethiyathope, Bhuvanagiri(Tk), Cuddalore(Dt), Tamilnadu, India -608702 Cuddalore ----- -----</p> <p><b>6)M.Anbarasu</b> Address of Applicant :NO.14- Big Street, Kozhipuliyur Village, Melacheri Post, Chetpet Taluk, Thiruvannamalai District, Tamil Nadu, India - 604502. Thiruvannamalai ----- -----</p> <p><b>7)A.Kajavali</b> Address of Applicant :Associate professor, Department of Mechanical Engineering Annamalai University, Annamalai Nagar, Chidambaram-608002, Tamilnadu, India. Chidambaram ----- -----</p> <p><b>8)S. Deepak</b> Address of Applicant :Assistant Professor, Department of Mechanical and Automation Engineering, Agni College of Technology, OMR, Navallur, Thallambur, Chennai – 600130, Tamil Nadu, India Chennai ----- -----</p> <p><b>9)B.Pitchia Krishnan</b> Address of Applicant :Assistant Professor, Nandha College of Technology, Erode-638052, Tamilnadu, India. Erode ----- -----</p> <p><b>10)V.Manimekalai</b> Address of Applicant :Assistant Professor, Virudhunagar Hindu Nadars' Senthikumara Nadar College, Virudunagar-626001, Tamilnadu, India. Virudunagar ----- -----</p> <p><b>11)A.Arunkumar</b> Address of Applicant :Narasipuram(Vill),Kalappambadi(Po), Pennagaram(Tk), Dharmapuri(Dt) – 636811, Tamil Nadu, India. Dharmapuri ----- -----</p> <p><b>12)R.Barathiraja</b> Address of Applicant :648/1A, 15 South Street, Palayamkottai, Tirunelveli, Tamil Nadu, India - 627011 Tirunelveli ----- -----</p>
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## (57) Abstract :

Nanotechnology Based Water Purification System with Automated Assembly WAPURE Abstract: One of the most challenging problems that our nation faces is the availability of pure water to drink. As in the case of the flood in Kerala, Chennai and UP, the major threat the people of our nation face during any such natural calamity is the availability of pure water to drink. As a solution for this never-ending crisis, WAPURE a nanotechnology-based water purification system, which purifies the filthy water of any intensity into pure consumable water within minutes is ideated. WAPURE is the most modern sophisticated system which purifies all the filthy water in domestic and industries, collected at a single reservoir and purifies it into edible water within minutes. WAPURE also converts the organic filth inside the water, which causes the major contamination in the water into other useful products such as methyl gas or bio gas, which would be further used for domestic applications. A typical miniature product of WAPURE consists of basically three different units of purification. All the filthy water in the ecosystem is collected at the single inlet of the WAPURE and is deposited into the filtration tank. Here the basic sand filtration process is carried out and the heavy organic matter and other contaminants of water are all separated. The organic filth in the water is send to the external aeration tank where it is processed and decomposed to form methyl gas. The water is then allowed to flow into the nano filtration tank where the water is purified. All the filth in the water will be removed and be converted into useful form of energy and the biological contaminants in the water, such as viruses, viroids, bacteria, bacteriophage, fungus, etc. will be removed from this water and it will regain the typical standard for ideal drinking water. With WAPURE, a common man could purify a maximum of 7 lakhs litres of water, which means once installed there is no need for any sort of renewal of filters for an average of two years. Nano Carbon Adsorption is another feature which makes WAPURE unique choice for DYE and other chemical industries. With a wide range of scope and utility, WAPURE is the choice for water purification of the generation.

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