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(71)**Name of Applicant :**
1)S.DURGADEVI
Address of Applicant :Department of Electronics and Instrumentation Engineering, Sri Sai Ram Engineering College, Sai Leo Nagar, West Tambaram, Chennai, Tamil Nadu, India-600044. ---------- ----------
2)VARSHARUBINI E
3)SATHYA PRIYA R
4)KIRUTHIKA S
Name of Applicant : NA
Address of Applicant : NA
(72)**Name of Inventor :**
1)S.DURGADEVI
Address of Applicant :Department of Electronics and Instrumentation Engineering, Sri Sai Ram Engineering College, Sai Leo Nagar, West Tambaram, Chennai, Tamil Nadu, India-600044. ---------- ----------
2)VARSHARUBINI E
Address of Applicant :Department of Electronics and Instrumentation Engineering, Sri Sai Ram Engineering College, Sai Leo Nagar, West Tambaram, Chennai, Tamil Nadu, India-600044. ---------- ----------
3)SATHYA PRIYA R
Address of Applicant :Department of Electronics and Instrumentation Engineering, Sri Sai Ram Engineering College, Sai Leo Nagar, West Tambaram, Chennai, Tamil Nadu, India-600044. ---------- ----------
4)KIRUTHIKA S
Address of Applicant :Department of Electronics and Instrumentation Engineering, Sri Sai Ram Engineering College, Sai Leo Nagar, West Tambaram, Chennai, Tamil Nadu, India-600044. ---------- ----------

(57) Abstract :
Bio electricity production involves generation of electricity by anaerobic digestion of organic substrates by microbes. A microbial Fuel cell (MFC) is a device that converts chemical energy released as a result of oxidation of complex organic carbon sources which are utilized as substrates by microorganisms to produce electrical energy thereby proving to be an efficient means of sustainable energy production. The electrons released due to microbial metabolism are captured to maintain a constant power density, without an effective carbon emission in the eco system. The various parameters involved in MFC technology toward power generation include maximum power density, coulombic efficiencies and sometimes chemical oxygen demand removal rate which evaluate the effectiveness of the device, Application of microbes toward remediation at the same time resulting in generation of electricity makes MFC technology a highly advantageous proposition which can be applied in various sectors of industrial, municipal and agriculture waste management. Although the initial efficiency of MFCs in power generatipn was pogr, recent modification to their design, components, and operation have significantly increased power output, enabling MFCs to be applied in a variety of applications including waste water treatment, biosensors, and biological remediation. The objective of the proposed system starts with preparation of graphene from rice husk by chemical degradation method .The characterization of graphene is carried out using TEM study by analysing the stability of nano-fluids and by dynamic light scattering (DLS).

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