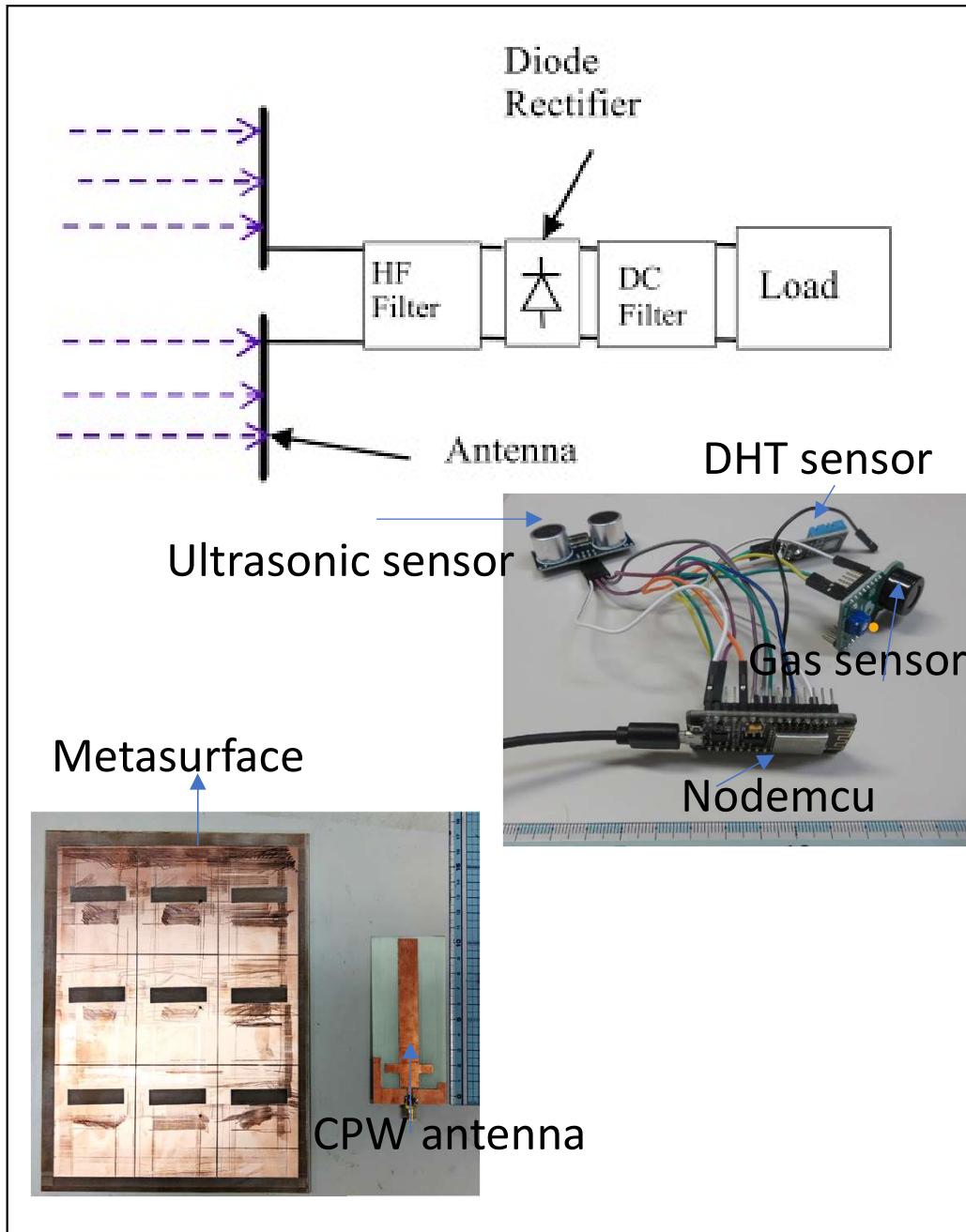


Smart Waste management system



Abstract

To design an energy harvesting circuit that will be regarded as a viable solution to extending battery lifetime of wireless sensor network. Motivated by these, modelling of the radio frequency (RF) energy available to the wireless nodes is required for efficient operation of wireless networks.

Design of novel **metasurface antenna** to take power from ambient and change it into **dc using rectifier**.

To design **dual band and multiband** antenna for RF energy harvesting.

To design **a high efficient single band and dual band rectifier for 0.9 GHz and 2.4 GHz to change AC to dc** another task of this research work.