

Name of product : i – Water (The Intelligent of Water Pollution Sensor)

Researcher details

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Faculty : FPBSM

Cluster/Area of study : Water pollution

Status of the product : Prototype

Product description :

Water pollution is a real public health and environmental problem that can lead to deterioration of aquatic life and human health. i-Water have been developed by using multispectral optical sensor to measure Total Suspended Solids (TSS) concentrations in the water. TSS are solid materials, including organic and inorganic, that suspended in the water. i-Water system has been designed using one pair of red and two pairs of infrared LEDs ($\lambda=660, 880$ and 950nm) as sensing emitters and silicon photodiode as radiations detectors. An electronic circuit was designed to perform the i-Water algorithm implementation. i-Water were calibrated for measuring total suspended solids concentrations between the range of 0 and 500mg/l. The results showed a good correlation between pollutant's concentrations with the absorption irradiation. i-Water is very important for monitoring the water quality of our rivers, reservoirs, and coastal water.

