

Achromatizing textile waste water and purifying it by industrial waste

Chinmoy Patel and Ashrita Das

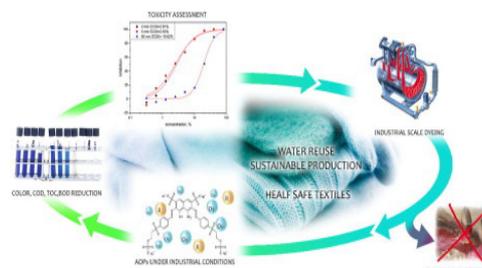
Gandhi Institute of Engineering and Technology, India

Abstract

Water is our life line that is very important for living organisms. It provides the Earth with the capacity of supporting life. Water is a transparent fluid. It is one of the weirdest compounds known to humans. It is a remarkable solvent, where almost all the elements and compound can dissolve in its powerful molecular structure. Water is the chemical substance with chemical formula H_2O (one molecule of water has two hydrogen atoms covalently bonded to a single oxygen atom). The textile waste water is collected and a sample of 1000 ml waste water is taken to carry out the experiment. In the sample of waste water, we added 10 ml of hydrogen peroxide, which act as a decolorizing agent and pH is maintained at 7 using acid (Sulfuric acid) and base (Sodium hydroxide). 1 gram of steel scrap in a black pan was taken and waste water solution was added to the pan and it was covered by glass slab and kept in the sunlight for 30 minutes. After 30 minutes decolorized of the solution is observed and then the water is stirred at

3000 rpm for 3 minutes so that it is fully decolorized and this water can directly be used for irrigation purpose. This occurs due to the generation of hydroxyl radical (OH) during the iron catalyzed decomposition of hydrogen peroxide in acid medium. After the decolourization of the water it is passed through the industrial waste which is fly ash. Passing the water from fly ash gives pure water which can used for drinking.

Image



Biography

Chinmoy Patel has completed his graduation in the year 2016 at Gandhi Institute of Engineering and Technology, India and currently working as a Trainee Engineer in Production Department. His open and contextual ideas create new pathways for improving the recycling waste world which allows for ethical pluralism. His research helps to improve the relation between the solar and recycling world and will helps to create a new innovation for the renewable world.

chinmoypatel@gmail.com

Notes/Comments: