

Conversion of Atmospheric Carbon Dioxide into Minerals at Room Conditions by Using the Sea Water Plus Various Additives

Authors : Muthana A. M. Jamel Al-Gburi

Abstract : Elimination of carbon dioxide (CO₂) gas from the atmosphere is very important but complicated since there is increasing in the amounts of carbon dioxide and other greenhouse gases in the atmosphere, which mainly caused by some of the human activities and the burning of fossil fuels. So that will lead to global warming. The global warming affects the earth temperature causing an increase to a higher level and, at the same time, creates tornadoes and storms. In this project, we are going to do a new technique for extracting carbon dioxide directly from the air and change it to useful minerals and Nano scale fibers made of carbon by using several chemical processes through chemical reactions. So, that could lead to an economical and healthy way to make some valuable building materials. Also, it may even work as a weapon against environmental change. In our device (Carbon Dioxide Domestic Extractor), we are using Ocean-seawater to dissolve the CO₂ gas and then converted it into carbonate minerals by using a number of additives like Shampoo, clay, and MgO. Note that the atmospheric air includes CO₂ gas, has circulated within the seawater by the air pump. More, that we will use a number of chemicals agents to convert the water acid into useful minerals. After we constructed the system, we did intense experiments and investigations to find the optimum chemical agent, which must be work at the environmental condition. Further to that, we will measure the solubility of CO₂ and other salts in the seawater.

Keywords : global warming, CO₂ gas, ocean-sea water, additives, solubility level

Conference Title : ICCD 2023 : International Conference on Carbon Dioxide

Conference Location : Amsterdam, Netherlands

Conference Dates : May 04-05, 2023