

Carbon rich fly ash; its Nanostructures & Potential Applications

Numan Salah,



Center of Nanotechnology, King Abdulaziz University, Jeddah, 21589, Saudi Arabia
nsalah@kau.edu.sa; alnumany@yahoo.com

Abstract

Carbon rich fly ash is produced every day from power and desalination plants. It is produced worldwide in huge quantities by the combustion of heavy/crude oil as a fuel in these plants. This material is considered as a hazardous waste material and create serious environmental problems. In the last few years we could successfully convert this material into quite useful nano and micro structures. And then few evolutions were already performed on using these nano and microstructures for some applications. These applications include lubricant additives, wastewater treatment, polymer nanocomposites reinforcements. Other applications are still under investigations and will be reported shortly. The ultimate goal in this case is to solve two problems: (1) making use for the huge quantity of fly ash which creates environmental problems, (2) include these cheap effective nanomaterials for some important applications.

Keywords:

Carbon rich fly ash, Nanostructures, Carbon nanotubes.