Chemical Studies of water resources and their treatment for pollution control using nanotechnology in some localities in estern nile delta-Egypt

Amr Ahmed Mohamed Hussien

I have the pleasure to inform you that your article entitled:” Synthesis and characterization of saturated and unsaturated copolyesters based on bisphenol A” has been accepted for presentation in the conference.With my best -regards,Chairman of the ConferenceM. Abd El-GhaffarProf. Dr. Mahmoud A. Abd El GhaffarPublished WorkPart of the present work have been subsequently published as follows:1- Synthesis and characterization of saturated and unsaturated copolyesters based on bisphenol-A. Ahmed Abd-Elsalam Khalil, Amal A. Mahmoud, Mohammed M. Hamza and Laila M. Reda Chemistry Department, Faculty of Science, Benha University.Hp1- Synthesis and characterization of saturated and unsaturated copolyesters based on bisphenol AAhmed Abd-Elsalam Khalil1, Amal. A.Mahmoud1, Mohammed M.Hamza2 and Laila M.Reda2(1)Chemistry Department, Faculty of Science, Benha University, Benha EgyptAbstractSaturated copolyester were prepared by copolyesterification of bisphenol A (BPA) and phthalic anhydride with ethylene glycol, diethylene glycol 1,3-propane diol, 1,6-hexamethylene glycol, 1, 5-pentane diol and cis-2-butene-1,4-diol. Also, tetrabromophthalic anhydride with ethylene glycol, diethylene glycol 1,3-propane diol, 1,6-hexamethylene glycol, 1, 5-pentane diol and cis-2-butene-1,4-diol. Also, unsaturated copolyesters were prepared by copolyesterification of bisphenol A and maleic anhydride with the same glycol. All the copolyester resin obtained have been characterized. The properties of the copolyester in the form of films were determined. IR and H1NMR spectroscopy were used for both quantitative and qualitative analysis of the copolyester resin.Aim of the workThe work in this thesis aims to synthesize some new sat. polyesters by the reation of besphenol-A and phthalic anhydride or tetrabromphthalic anhydride with some glycols. Also, prepareation of some unsaturated polyesters by the reaction of bisphenol-A and maleic anhydride with the some glycol. The prepared unsaturated polyesters were cured with styrene to form insoluble crosslinked polymers. The properties of these cured polyesters in the form of films showed good film properties on glass and metalplatis.This work also aims to synthesize some new polyurethranes and polywrethane-ureas based on bisphenol A. by the reaction of hydroxyteminated polyesters and TDI with some diols and diamines. In addition to this work the thermal analysis and biological activity of some synthesized

compounds was screened against some selected bacteria and fungi. The works also aimed to prepare some polymers have good resistance to fire retard and good resistance to water making them excellent adhesion.