

***Removal of Hazardous Waste by Some
Adsorbents Prepared by Radiation
Induced Graft Copolymerization***

Submitted

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باستخدام التطعيم الأشعاعي

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5- مستخلص الرسالة

5-1 باللغة العربية

تهدف هذه الدراسة الى :

١ - تحضير مواد سليوليوزية ثنائية الوظيفة ومشتقة من المخلفات الزراعية بواسطة التطعيم المباشر بالإشعاع على حطب القطن ثم عملية التحوير (BA) وبيوتيل أكريلات (GMA) لمونومري جليسيدل ميثاأكريلات الكيميائي للمونومرات الطعمة بواسطة الترائ إثيل أمين. وقد تمت دراسة العوامل المؤثرة على عملية التطعيم الإشعاعي مثل الجرعة الإشعاعية، تركيز المونومر و تركيز المذيب. وقد تمت دراسة الخواص الفيزيائية بواسطة الاشعة تحت الحمراء، الديناميكا الحرارية (GMA co BA) للمواد السليوليوزية المطعمة بمونومري و الميكروسكوب الإلكتروني.

٢ - تحضير هيدروجيل ثنائي الوظيفة بواسطة التطعيم الإشعاعي المباشر لمونومري ٢-أكريل أميدو ٢- ميثيل على النشا (DMAEMA) ، داي ميثيل أميتو إيثيل ميثاأكريلات(AMPS)بروبان-١- سلفونك أسيد والمعالجة الكيميائية للهيدروجيل بواسطة كلوريد البنزين. وقد تمت دراسة العوامل المؤثرة على عملية التطعيم الإشعاعي مثل الجرعة الإشعاعية، مكونات المونومر وكذلك تمت دراسة الخواص الكيميائية و الفيزيائية للهيدروجيل المحضر و المعالج كيميائيا بمجموعات يبادل أيوني بواسطة الأشعة تحت الحمراء و تحليل الديناميكية الحرارية و الميكروسكوب الإلكتروني وكذلك خواص الإنتفاشية و محتوى الجيل. وقد تم إستخدام الهيدروجيل المحضر و المعالج كيميائيا في إزالة بعض الملوثات مثل أملاح عنصر الكوبالت، الصبغة القاعدية و انيونات الفوسفات من محاليلها المائية

Abstract ٢٠٥ – باللغة الاجنبية

Firstly radiation induced graft copolymerization of (GMA (glycidyl methacrylate) co BA (butyl acrylate)) onto cotton lentre waste and sub sequent ring opening of the epoxy group of the poly-GMA graft chains with triethylamine and its application in the removal of lead, basic dyes, Sulphate from aqueous solution in a laboratory scale.

Secondly radiation induced graft copolymerization of (AMPS) (2-acrylamido-2-methyl propane-1-sulphonic acid co (DMAEMA) dimethyl amino ethyl methacrylate) onto starch and subsequent chemical modification of copolymer (AMPS-DMAEMA) graft chains by benzyl chloride and its application in the removal of cobalt, basic dyes, phosphate from aqueous solution in a laboratory scale.

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LIST OF ABBREVIATION

abbreviations	
GMA	glycidyl methacrylate
BA	butyl acrylate
CMGCL	chemically modified grafted cotton linter
AMPS	2-acrylamido-2-methyl propane-1-sulphonic acid
DMAEMA	dimethyl amino ethyl methacrylate
EDS	equilibrium degree of swelling
BOD	biochemical oxygen demand
PCBs	polychlorinated biphenyls
TTAB	tetradecyltrimethylammonium bromide
AAm	Acrylamide

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