

الاستهلال

(اللَّهُ لَا إِلَهَ إِلَّا هُوَ الْحَيُّ الْقَيُّومُ ۚ لَا تَأْخُذُهُ سِنَّةٌ وَلَا نَوْمٌ ۚ لَهُ مَا فِي السَّمَاوَاتِ
وَمَا فِي الْأَرْضِ ۗ مَنْ ذَا الَّذِي يَشْفَعُ عِنْدَهُ إِلَّا بِإِذْنِهِ ۗ يَعْلَمُ مَا بَيْنَ أَيْدِيهِمْ وَمَا
خَلْفَهُمْ ۗ وَلَا يُحِيطُونَ بِشَيْءٍ مِنْ عِلْمِهِ إِلَّا بِمَا شَاءَ ۗ وَسِعَ كُرْسِيُّهُ السَّمَاوَاتِ
وَالْأَرْضَ ۗ وَلَا يَئُودُهُ حِفْظُهُمَا ۗ وَهُوَ الْعَلِيُّ الْعَظِيمُ) [255]

Special Dedication

*Dedicate to the soul that tired in raising me to the
spirit that has always encouraged me to excel and
study to my future in life after the Messenger of
Allah peace be upon him to the spirit of my father,
may God have mercy on him and forgiven him.*

Dedication

I dedicate this research to which I was embraced by her

tenderness my dear mother,

to the secret of my strength and happiness to my brother

and sister,

to my fellow travelers of M.Ziada , Maryam and Shrooq ,

to all my friend, to all my teacher, to my inspiration

to all my work friend

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Abstract

The aim of this study was to investigate the product of treatment of vinass by laser and to convert it into valuable materials. For this purposes, vinass sample was burned for 30 s using Nd: YAG laser with output power 60 W. The product of this process was characterized by X-ray diffractometer (XRD), Fourier transform infrared (FTIR) and X-ray Fluorescence (XRF) so as to investigate its crystal structure and chemical components and elements. XRD results of the treated vinass showed Iron Silicide and Sodium Carbonate – Beta in different phases. FTIR showed a number of absorbance peaks attributed to Iron Silicide and Sodium Carbonate, also percentages of 0.27% from iron, 0.06% from chrome and 0.01% from nickel were found using XRF.

المستخلص

تهدف هذه الدراسة إلى تقصي ناتج معالجة الفيناس (vinass) بالليزر وتحويله إلى مواد قيمة. لهذا الغرض، تم حرق عينة الفيناس لمدة 30 ثانية باستخدام ليزر Nd: YAG بقوة 60 وات. تم فحص ناتج هذه العملية بجهاز حيود الأشعة السينية (XRD)، ومطيافية تحويل فورييه بالأشعة تحت الحمراء (FTIR) والأشعة السينية المتفلورة (XRF) وذلك للتحقيق في بنيته البلورية والمجموعات والعناصر الكيميائية. أظهرت نتائج XRD للفيناس المُعالج احتوائه على سليسيد الحديد و كربونات الصوديوم - بيتا في هياكل بلورية مختلفة. أظهرت FTIR عدداً من القمم الامتصاصية التي تعزى إلى سليسيد الحديد و كربونات الصوديوم، كما تم العثور على نسب مئوية 0.27 % من الحديد ، 0.06 % من الكروم و 0.01 % من النيكل باستخدام XRF.

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