hossam maghraby

شبكة المعلومات الجامعية

بسم اللّه الرحمن الرحيم

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شبكة المعلومات الجامعية

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

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بالرسالة صفحات
لم ترد بالأصل

Spectroscopic and Electrical Studies of Some Lanthanide Complexes

Thesis

Submitted for the Degree of

Ph.D. in Physics

By

Roshdi Seoudi Mohamed Awed

National Research Center

Physics Department

Faculty of Science

Cairo University

(2002)

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِيْمِ

نٓ وَالْقَلَمِ وَمَا يَسْطُرُوْنَ

صَدَقَ اللّٰهُ الْعَظِيْم

سورة القلم آیہ (۱)

APPROVAL SHEET

Title of the Ph. D. Thesis

Spectroscopic and Electrical Studies of Some Lanthanide Complexes

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Title of thesis: Spectroscopic and Electrical Studies of Some Lanthanide Complexes.

Degree (Ph.D.): Thesis, Faculty of Science, Cairo Univ. 2001

Abstract: Infrared, ultraviolet, and visible are applied to investigation the molecular and electronic structure of dithizone and some lanthanide (lanthanum, cerium, neodymium, samarium, gadolinium, dysprosium, and erbium) dithizone complexes. X-ray is used to study the form complexes. Thermogravimetric analysis is used to study the decomposition of some complexes. The phase transition and melting point are shown by differential thermal analysis. The type of conduction mechanism is studied by seebeck coefficient. The DC and AC conductivity are measured and discussed. The real part of dielectric constant (ε') and imaginary part (ε'') are measured. Generally all used lanthanides form complexes except dysprosium.

Key Words: Infrared, ultraviolet, visible, molecular and electronic spectroscopy, X-Ray diffraction, differential thermal analysis, thermogravimetric analysis, seebeck coefficient, DC conductivity, AC conductivity, Real and Imaginary parts of dielectric constant.

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To my Mother,

Family

and Soul my Father

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