

Faculty of Girls, Arts
Science and Education
Ain Shams University

Spectroscopic, electric and magnetic studies of some diluted organic complexes

**Submitted for the
Ph.d. Degree in Physics**

To

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Faculty of Girls for Art, Science and Education,
Ain Shams University**

By

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M. Sc. in physics. 1996**

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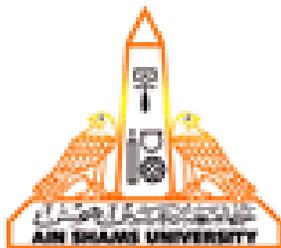
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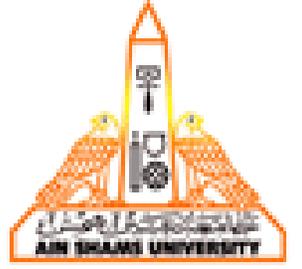
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كلية البنات للآداب
و العلوم و التربية
قسم الطبيعة

الدراسات الطيفية و الكهربائية و المغناطيسية لبعض المعقدات العضوية المخففة

رسالة مقدمة من
نبيلة محمد حلمى عبد اللطيف

للحصول على
درجة دكتوراه الفلسفة فى الفيزياء

الى
قسم الطبيعة

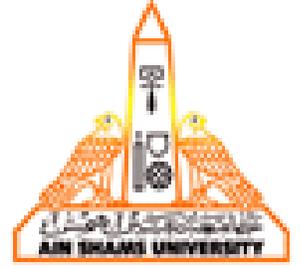
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Aim of the present work

Due to their wide range of applications, the diamine complexes containing different transition elements or rare earth element play an important role in many technological and medical applications after changing their structure either by changing the spacing between the metallic layers through increasing the number of carbon atoms in the chain or by changing the halides ions. One of our goals in this research is to reach the critical concentration of the nonmagnetic ions at which the electric and magnetic properties reach the optimum values. Another goal is to throw light on the replacement of trivalent ions such as Ce^{3+} and La^{3+} ions instead of transition element Mn^{2+} where the conductivity varies drastically due to this replacement.

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