Ain Shams University
Faculty of Science
Chemistry Department

New nano probes for the assessment of some diuretics in different body fluids

A Thesis
Submitted for the Degree of Master of Science
As Partial Fulfillment for the Requirements of Master of Science
(Chemistry Department)

Presented By

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B.Sc.in major chemistry, Faculty of science
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2007

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To
Chemistry Department
Faculty of Science
Ain Shams University
For the degree
M.SC. in chemistry
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APPROVAL SHEET FOR SUBMISSION

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Statement

This thesis is submitted in partial fulfillment of the M.Sc Degree, Faculty of Science, Ain Shams University.

In addition to the work carried out in this thesis the candidate, **Ahmed Sayed Abd El-Motaleb Mohamed Abozaid** has attended postgraduate studies in the following topics and passed successfully in the final examination in the academic year 2009-2010:

621	Coordination Chemistry
622	Radiochemistry and Separation Techniques
623	Electrochemistry and Electrochemical Analysis
624	Group Theory and Computer Programming
625	Spectroscopic Methods for Structural and Analytical Chemistry
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Highly sensitive Eu3+ doped in sol-gel matrix optical sensor for the assessment of Ciprofloxacin in different real samples

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Abstract

The efficiency of excited-state interaction between Eu^{3+} doped in sol- gel matrix and the industrial product ciprofloxacin of (CFX) has been studied in different solvents and pHs. A high luminescence intensity peak at 617 nm of europium- ciprofloxacin complex at λ_{ex}=365 nm in acetonitrile was obtained. The photophysical properties of the red emissive Eu^{3+} complex doped in sol-gel matrix have been elucidated, the europium was used as optical sensor for the assessment of ciprofloxacin in the pharmaceutical tablets and serum samples at pH 8.0 and λ_{ex} = 365 nm with a concentration range of 5.0×10^{-9} - 1.0×10^{-6} mol L^{-1} for ciprofloxacin, correlation coefficient of 0.99 and detection limit of 1.65×10^{-9} mol L^{-1}.

Keywords: Ciprofloxacin; Europium (III); Enhancing; Luminescence; Optical sensor ; Sol-Gel.

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