



Laser-Irradiation of Gold Nanoparticles Inside Living Cells: Photochemical Versus Photothermal Effects

Thesis

Submitted to Faculty of Science-Ain Shams University in partial fulfillment for Degree of Ph.D in Biophysics

By

Dina Salah Eldin Mohamed Abdelrhman

M.Sc. in biophysics 2007

Supervised by

Prof. Dr.El-Sayed Mahmoud El-Sayed

Professor of Biophysics, Faculty of Science, Ain Shams University.

Prof. Dr. Mona Salah El-din Hassan Talaat

Professor of Biophysics, Faculty of Science, Ain Shams University.

Dr. Mahmoud Mohamed Said Abd- El Hamid

Assistant Professor of Biochemistry, Faculty of Science, Ain Shams University.

Prof. Dr. Mathias Brust

Professor of Chemistry, Department of Chemistry, University of Liverpool.

Dr. Martin Volk

Senior lecture of chemistry, Surface Science Research Center, University of Liverpool.

Department of Physics

Faculty of Science

Ain Shams University

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CERTIFICATION OF APPROVAL

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Dina Salah Eldin Mohamed Abdelrhman

This thesis for Ph.D. degree has been approved by

Supervisors

Signature

Prof. Dr. El-Sayed Mahmoud El-Sayed

Professor of Biophysics, Faculty of Science,
Ain Shams University.

.....

Prof. Dr. Mona Salah El-din Hassan Talaat

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Ain Shams University.

.....

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.....

Dr. Martin Volk

Senior lecture of Chemistry, Surface Science
Research Center, University of Liverpool.

.....

Physics Department, Faculty of Science, Ain Shams University,
Cairo. Egypt
2016

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Name: Dina Salah Eldin Mohamed Abdelrhman

Degree: Ph.D

Department: Physics- Biophysics Group

Faculty: Science

University: Ain Shams

Graduation Date: 2001- Ain Shams University

Registration Date: 1/9/2009

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*My God Thank you for all that you have given
Happiness and terror, love and death,
Agony and pleasure, pulse and breathe
Knowledge, hope, despair, and ecstasy.*

*My supervisors are the sculptors of my life
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Your love and strong solicitude embody
All your expertise and dedication
Supervisors flow like mountain streams
High up through ice and snow,
And bring their learning down to earth
Kindness is not tendered on demand
You gave with love, not merely out of duty
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Owing all the passion of your will
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Thank you for opening a door for me
Thank you for all that you have done
How much love resides therein
All one's gifts are never gone
Not seen, perhaps, but stored within
Thank you all that you have done
Hard times are now turned into times of pride*

This is dedicated to

Prof. Dr. El-Sayed Mahmoud El-Sayed

Professor of Biophysics, Faculty of Science, Ain
Shams University.

Prof. Dr. Mona Salah El-din Hassan Talaat

Professor of Biophysics, Faculty of Science, Ain
Shams University.

Dr. Mahmoud Mohamed Said Abd- El Hamid

Assistant professor of Biochemistry, Faculty of
Science. Ain Shams University.

Prof. Dr. Mathias Brust

Professor of Chemistry, Department of Chemistry,
University of Liverpool.

Dr. Martin Volk

Senior lecture of Chemistry, Surface Science
Research Center, University of Liverpool.

**From the highest of highs to the lowest
there could ever be
Feel so lucky that I have all these people
around me teach me everything I know**

**This is dedicated to my beloved mother,
brothers, sister, children and unseen
souls but live inside me; for their
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**Best wishes
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