

Short Curriculum Vitae

Personal Details

Name: Rasoul Malekfar

Date of Birth: 01-11-1958

Nationality: Iranian

Place of Birth: Shabestar, East Azarbayjan Province, I.R. Iran.



Address:

Atomic & Molecular Physics Group,
Physics Department,
Faculty of Basic Sciences,
Tarbiat Modares University,
Shahid Chamran & Al-E-Ahmad Highways Crossways,
Tehran P.O. Box 14115-175, I.R. Iran.

Telephone: +98 21 82888 3440

E-Mail: Malekfar@Modares.ac.ir & Rasoul_Malekfar@yahoo.com.au

Education

1976-1980

B.Sc. in Physics, Physics Department, Faculty of Sciences, Pars College, Tehran, I.R. Iran,

1983-1984

M.Sc. in Theoretical Physics, School of Physical Sciences, University of Kent at Canterbury, Canterbury, U.K.,

Title of Dissertation: Relativistic Quantum Mechanics, supervisor: Dr Lewis H. Ryder.

1984-1989

PhD. in Experimental Physics, Wheatstone Physics Laboratory, King's College, University of London, London, U.K.,

Title of Thesis: Polarized Laser Raman Spectroscopy at High Pressures and IR Reflection studies of crystals containing water molecules, Supervisors: Prof. W.F. Sherman and late Prof. G.R. Wilkinson.

Academic Experiences:

Positions	From	To	Place
Assistant Professor of Physics of Physics	1990	2008	Physics Department, Tarbiat Modares University, Tehran, I.R. Iran.
Associate Professor of Atomic & Molecular Physics	2008	2012	Physics Department, Tarbiat Modares University, Tehran, I.R. Iran.
Professor of (Atomic & Molecular) Physics	2012	Now	Physics Department, Tarbiat Modares University, Tehran, I.R. Iran.

Supervised over one hundred M.Sc. dissertations & PhD. theses.

Registered fifteen patents.

Published over two hundred journal papers and conference presentations.

Main topics of interest:

-Interaction of light with matter, - Nanostructures, - Laser ablation, - Raman and SERS spectroscopy (theoretical and experimental investigations), - Nonlinear optics, - Optical & dielectric coefficients determination of materials (theoretical and experimental investigations), - Coatings, Single photon sources.

Rasoul MALEKFAR, et al. Publications 2010-2017

2017:

Optimization of cooling devices used in laser ablation setups for carbon nanotube synthesis,
F Kazemizadeh, S Moemen Bellah¹, R Malekfar,
Journal of Laser Applications, Accepted, September, 2017.

Optical and Dielectric Properties of NiFe₂O₄ Nanoparticles under Different Synthesized
Temperature,
M Parishani, M Nadafan, Z Dehghani, R Malekfar, GHH Khorrami
Results in Physics, Available online 27 September 2017.

Third-order nonlinear optical properties of NiFe₂O₄ nanoparticles by Z-scan technique,
M Nadafan, M Parishani, Z Dehghani, JZ Anvari, R Malekfar
Optik-International Journal for Light and Electron Optics 144, 672-678, 2017.

Bottom-up diamond nanorod growth in HFCVD from nanocrystalline diamond film as a
template-free method,
H Motahari, R Malekfar
Materials Research Express 4 (7), 2017.

A new tubular hot-wire CVD for diamond coating,
H Motahari, SM Bellah, R Malekfar,
Applied Physics A 123 (6), 411, 2017.

Pulsed laser ablation synthesis of carbon nanoparticles in vacuum,
F Kazemizadeh, R Malekfar, P Parvin
Journal of Physics and Chemistry of Solids 104, 252-256, 2017.

Spectroscopic Investigation for Purity Evaluation of Detonation Nanodiamonds:
Experimental Approach in Absorbance and Scattering,
H Motahari, R Malekfar,
Journal of Cluster Science, Volume 28, Issue 4, pp 1923–1935, 2017.

ISO-MANM: An imitation based optimization tool for multilayer microwave absorbers
A Cheraghi, R Malekfar, SM Bellah, M Parishani,
Journal of Molecular Graphics and Modelling, 72, 16-24, 2017.

Measurement of third order nonlinear optical susceptibility of polyurethane containing silica
nanocomposites by Z-scan method,
Z Dehghani, M Nadafan, R Malekfar, MHM Ara
Inorganic and Nano-Metal Chemistry, Vol. 47, No. 9, 1342–1347, 2017.

Size-Dependent Optical Response of Few-layered WS₂ Nanosheets Produced by Liquid
Phase Exfoliation,
E Rahmanian, R Malekfar
The European Physical Journal: Applied Physics, 77, 3, 30401, 2017.

The Effects of Hydrolysis Levels on Structural Properties of Titania Aerogels, S Sadriyeh, R Malekfar, Journal of Non-Crystalline Solids 457, 175-179, 2017.

ISO-MANM: An Imitation Based Optimization Tool for Multilayer Microwave Absorbers

A Cheraghi, R Malekfar, SM Bellah, M Parishani

Journal of Molecular Graphics and Modelling, Volume 72, March 2017, Pages 16-24, 2017.

2016:

Synthesis and optimization of silver nanoparticles-antibody Herceptin conjugation for surface-enhanced Raman scattering (SERS).

N Jafarzadeh, MJ Rasaee, K Gilany, R Malekfar

Advances in Bioresearch 7 (6), 2016.

Microstructural and antibacterial properties of silver nanoparticle-decorated porous polyurethane surface for water purification,

M Nadafan, R Malekfar, A Izadi-Darbandi, Z Dehghani,

Desalination and Water Treatment, Volume 57 Issue 45, pp. 21286-21293, 2016.

2015:

Evaluation of electrical and optical characteristics of ZnO/CdS/CIS thin film solar cell

H Zarei, R Malekfar

Chinese Physics B 2, 058, 2015.

Synthesis and Analysis of Optical Properties of Cordierite Nanopowder Prepared by the Pechini Method

M Nadafan, R Malekfar, Z Dehghani, GH Khorrami

Procedia Materials Science 11, 331-335, 2015.

Investigation in Properties of Polyurethane Closed Cell by High Loading of SiO₂ Nanoparticles,

M Nadafan, R Malekfar, Z Dehghani,

International Journal of Nanoscience and Nanotechnology 11 (3), 185-192, 2015.

Determination of Nonlinear Optical Properties of MgO Nanoparticles Doped in Poly (Ether) Urethane,

M Nadafan, R Malekfar, Z Dehghani,

Acta Physica Polonica A 128 (1), 29-33, 2015.

Microstructural and nonlinear optical properties of SiO₂ and Al₂O₃ nanoparticles doped in polyurethane,

M Nadafan, R Malekfar, Z Dehghani

Journal of Materials Research 30 (11), 1788-1796, 2015.

High-Performance and Stable Gel-State Dye-Sensitized Solar Cells Using Anodic TiO₂ Nanotube Arrays and Polymer-Based Gel Electrolytes,

Z Seidalilir, R Malekfar, HP Wu, JW Shiu, EWG Diau,

ACS applied materials & interfaces 7 (23), 12731-12739, 2015.

Structural and optical properties of cordierite glass-ceramic doped in polyurethane matrix
M Nadafan, R Malekfar, Z Dehghani,
AIP Advances 5 (6), 067135, 2015.

Spectroscopy, Structural, and Optical Investigations of NiFe₂O₄ Ferrite,
M Parishania, A Cheraghia, R Malekfar,
International Journal of Optics and Photonics (IJOP) 9 (2), 73-78, 2015.

Compressive strain of multi-walled carbon nanotubes embedded in titania matrix doped
with silver nanoparticles,
AAS Hadi, R Malekfar, M Nadafan,
Nanoscale 2 (1), 19-24, 2015.

Optical and structural characterization of molybdenum disulphide nanoflakes prepared by
solvent-based exfoliation,
E Rahmanian, MA Sajedi, A Bayat, IE Saivar, R Malekfar,
Nanoscale 2 (2), 63-67, 2015.

Detection of pistachio aflatoxin using Raman spectroscopy and artificial neural networks
R Gol Mohammadi, MH Khoshtaghaza, R Malekfar,
Journal of Agricultural Machinery Engineering 5 (1), 1-9, 2015.

High-Performance Gel-Type Dye-Sensitized Solar Cells Using Poly (methyl methacrylate-
co-ethylacrylate)-Based Polymer Gel Electrolyte with Superior Enduring Stability,
Z Seidalilir, R Malekfar, JW Shiu, HP Wu, EWG Diau
Journal of The Electrochemical Society 162 (14), H922-H928, 2015.

2014

Common Raman Spectral Markers among Different Tissues for Cancer Detection
Z Dehghani-Bidgoli, M Baygi, M Hosein, E Kabir, R Malekfar
Iranian Journal of Medical Physics 11 (4), 308-315, 2014.

Developing an Instrument-Independent Algorithm for Raman Spectroscopy: A Case of
Cancer Detection
Z Dehghani-Bidgoli, MHM Baygi, E Kabir, R Malekfar
Technology in cancer research & treatment 13 (2), 119-127, 2014.

Characterization of CIGS Thin Films Fabricated from Nanoparticles under Selenization
Process,
H Zarei, R Malekfar,
Advanced Materials Research 829, 357-361, 2014.

A Comparative Study between Carcinoma and Sarcoma Using Raman Spectroscopy,
Z Dehghani-Bidgoli, MHM Baygi, E Kabir, R Malekfar,
Journal of Applied Spectroscopy 80 (6), 893-898, 2014.

High Loading of SiO₂ Nanoparticles to Investigate Optical and Mechanical Properties of Polyurethane Open Cell,
M Nadafan, R Malekfar, A Izadi-Darbandi, Z Dehghani,
Advanced Materials Research 829, 30-35, 2014.

Synthesis of Titanium Dioxide Shell-Core Ceramic Nano Fibers by Electrospin Method
F Ashrafi, R Malekfar, SA Babanejad, M Norouzi
Int. J. Chem. Tech. Res 6, 807, 2014.

A comparative study of dip coating and spray pyrolysis methods for synthesizing ITO nanolayers by using Ag colloidal sol,
N Rajabi, F Heshmatpour, R Malekfar, HR Bahari-Poor, S Abyar
Materials Science-Poland 32 (1), 102-106, 2014.

2013:

The Elemental Doping Effects on the Vibronic Properties of Nd: KTP Nanocrystallites
R Malekfar, A Cheraghi, G Ahmadi, H Nanakar, A Mansori, A Amerian
International Journal of Nanoscience and Nanotechnology 9 (3), 145-150, 2013.

Nonlinear optical absorption of carbon nanostructures synthesized by laser ablation of highly oriented pyrolytic graphite in organic solvents
H Ghanbari, R Sarraf-Mamoory, J Sabbagh Zadeh, A Chehrghani, R Malekfar,
International Journal of Optics and Photonics 7 (2), 113-124, 2013.

Radial breathing mode frequencies of carbon nanotubes for determination of their diameters
S Basirjafari, SE Khadem, R Malekfar
Current Applied Physics 13 (3), 599-609, 2013.

Structural, morphology and optical properties of ITO/PEDOT: PSS and ITO/Ag nanoparticles/PEDOT: PSS thin films
S Adibi, N Adibi, R Malekfar, S Davatolhagh
The European Physical Journal-Applied Physics 61 (3), 2013.

Characterization and nonlinear optical properties of PVP/TiO₂ nano-fibers doping with Ag colloid nano-particles
MHM Ara, H Naderi, A Mobasheri, MH Rajabi, R Malekfar, E Koushki
Physica E: Low-dimensional Systems and Nanostructures 48, 124-127, 2013.

Determination of the inner diameter of a double-walled carbon nanotube from its Raman spectra
S Basirjafari, S Esmailzadeh Khadem, R Malekfar
Journal of Applied Physics 113 (6), 064304, 2013.

A Comparative Study between Carcinoma and Sarcoma using Raman spectroscopy,
Z Dehghani-Bidgoli, BMH Miran, E Kabir, R Malekfar,
Journal of Applied Spectroscopy, Vol. 80, No. 6, January, 2014 (Russian Original Vol. 80, No. 6, November–December, 2013), [Журнал прикладной спектроскопии 80 (6), 901-906, 2013].

Hydrogen storage property of laser induced Pd-nanoparticle decorated multi-walled carbon nanotubes,

SZ Mortazavi, P Parvin, A Reyhani, R Malekfar, S Mirershadi
RSC Advances 3 (5), 1397-1409, 2013.

2012:

The nonlinear effects over time evolution of a three-level atom confined in a single mode optical cavity

B Parvin, R Malekfar

Journal of Modern Optics 59 (21), 1841-1855, 2012.

Validation of shell theory for modeling the radial breathing mode of a single-walled carbon nanotube (Research note),

SB Jafari, SE Khadem, R Malekfar

International Journal of Engineering-Transactions A: Basics 26 (4), 447, 2012.

Low loading of carbon nanotubes to enhance acoustical properties of poly (ether) urethane foams,

S Basirjafari, R Malekfar, S Esmailzadeh Khadem

Journal of Applied Physics 112 (10), 104312, 2012.

A new protocol for the carboxylic acid sidewall functionalization of single-walled carbon nanotubes,

HR Darabi, MJ Tehrani, K Aghapoor, F Mohsenzadeh, R Malekfar

Applied Surface Science 258 (22), 8953-8958, 2012.

A comprehensive study of sound pressure in a finite-length fluid-filled multi-walled carbon nanotube,

SB Jafari, SE Khadem, R Malekfar

Ultrasonics 52 (5), 655-662, 2012.

Two different regimes in a V-type three-level atom trapped in an optical cavity,

B Parvin, R Malekfar

Journal of Modern Optics 59 (9), 848-854, 2012.

The behavior of a system with one atom confined in a Fabry-Perot optical cavity with a nonlinear mirror,

B Parvin, R Malekfar

The European Physical Journal D-Atomic, Molecular, Optical and Plasma, 2012.

Modeling of the microstructure of carbon nanotube with two nonlocal elasticity theories,

SB Jafari, R Malekfar, SE Khadem

Journal of Applied Physics 111 (3), 034315, 2012.

2011:

Investigation of third-order nonlinear optical properties of lead sulfide nanoparticles,

MH Majles Ara, M Afsary, M Hatami, R Malekfar, P Boroojerdian, 2011.

Radial breathing mode frequency of multi-walled carbon nanotube via multiple-elastic thin shell theory,

S Basir Jafari, R Malekfar, SE Khadem,

International Journal of Nanoscience and Nanotechnology 7 (3), 137-142, 2011.

Temperature effects on the structure and morphology of Nd: YAG nanocrystallites,

R Malekfar, S Arabgari,

Current Applied Physics 11 (4), 1077-1082, 2011.

Nondestructive determination of tomato fruit quality parameters using Raman spectroscopy,

AM Nikbakht, T Tavakkoli Hashjin, R Malekfar, B Ghobadian,

Journal of Agricultural Science and Technology 13, 517-526, 2011.

Parameters effects on the surface morphology and structure of Nd: YAG nanopowders synthesized by co-precipitation method,

S Arabgari, R Malekfar, K Motamedi

Journal of Nanoparticle Research 13 (2), 597-611, 2011.

Application of Raman spectroscopy for non-destructive determination of qualitative parameters of tomato,

AM Nikbakht, HT Tavakoli, R Malekfar, B Ghobadian,

Iranian Journal of Food Science and Technology, 7 (4), 25-33, 2011.

2010:

Structural and optical characteristics of silica nanotubes using CNTs as template,

R Malekfar, MH Rajabi, MHM Ara

Nano-Micro Letters 2 (4), 268-271, 2010.

Evaluation of tomato juice quality using surface enhanced Raman spectroscopy

R Malekfar, AM Nikbakht, S Abbasian, F Sadeghi, M Mozaffari

Acta Physica Polonica A 117 (6), 971-973, 2010.

Gamma radiation dosimetry using transmission and reflection spectroscopy of $KCl \times Br 1-x$ as TL crystals,

SA Bagheri, R Malekfar

The European Physical Journal-Applied Physics 49 (3), 2010.

The shift of TiO_2 nanoparticles Raman active modes prepared in nitrogen –containing electric and discharge system,

R Malekfar, Y Sorboni, ML Andi,

Journal of Physics Molecular and Atomic 1 (2), 1-7, 2010.

Doping the nanocomposites of MWCNT- TiO_2 with ZnS nanoparticles and their characterization by micro-Raman laser scattering spectroscopy,

M Yousefpour, R Malekfar, DS Nase, IE Saivar, ...

Journal of Physics, Molecular and Atomic, 1 (1), 13-19, 2010.

Production and study of boron and nitrogen-doped carbon nanotubes by arc discharge method using dispersive Raman back-scattering spectroscopy,

SA Babanejad, R Malekfar, F Ashrafi, S Hosseini

Asian Journal of Chemistry 22 (1), 245, 2010.