



Curriculum Vitae for Dr. Walid Tawfik Younes Mohamed

PERSONAL DATA			
Name		Walid Tawfik Younes Mohamed	
Date & Place of Birth		6 th July 1969, Cairo.	
Marital		Married	
Home Address		45, Borhan St., Helwan, Cairo, Egypt.	
Present Office Address		Department of Physics and Astronomy King Saud University PO Box 2455 Riyadh 11451, Saudi Arabia Tel.: +966-14676611 Fax: +966-14673656 Mob. +966-557977808 walid_tawfik@hotmail.com https://www.researchgate.net/profile/Prof_Walid_Tawfik2 sa.linkedin.com/in/walidstawfik/	
Permanent Office address		National institute of laser enhanced sciences, NILES, Cairo University, Giza, Egypt.	
Nationality		Egyptian	
Sex		Male	
Number of Children		3 Children (12 years old, 9 years old, 5 years old).	
Passport number		A10112271	
Present Job		Associate Professor, Department of Physics of Physics and Astronomy King Saud University, Saudi Arabia.	

Scientific Directions

- [Research interests.](#)
- [Current and future research plans.](#)
- [Academic Qualification.](#)
- [Skills.](#)
- [Referees & references.](#)
- [Activities.](#)
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RESEARCH INTERESTS:

- 1) Ultrafast laser spectroscopy and its applications.
 - 2) Attosecond streaking and transient absorption spectroscopy of ultrafast electron motion.
 - 3) Few cycle generation via Supercontinuum in a Gas-Filled Hollow-Core Fiber.
 - 4) Nanoparticles fabrication via ultrafast lasers.
 - 5) Development of ultrashort UV and deep-UV light sources.
 - 6) Laser plasma channels of ionic molecules.
 - 7) Development of new laser-driven, brilliant X-ray sources.
 - 8) Precision spectroscopy of simple atomic systems; laser cooling of atoms; optical frequency synthesizer (frequency comb); XUV frequency combs.
 - 9) Laser-driven electron acceleration and radiation generation.
 - 10) Laser-Induced Breakdown Spectroscopy (**LIBS**) applications in both analytical atomic spectroscopy and plasma spectroscopy.
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CURRENT AND FUTURE RESEARCH PLANS:

My research plans are devoted to time-resolved spectroscopy using lasers for time regimes from nanosecond to attosecond pulsed lasers to reveal the laser interaction with matter dynamics including ultrafast nonlinear phenomena and how the interactions can be exploited for improved material characterization.

- 1- For the nanosecond regime Laser-Induced Breakdown Spectroscopy (LIBS) is used in the field of analytical spectroscopy and plasma characterization. LIBS is aimed to be applied for a variety of materials and applications. For industrial applications composites like $\text{Al}_2\text{O}_3/\text{TiC}$ was used, soil analysis was used in environmental applications, while polymers like (Polyethylene $(\text{C}_2\text{H}_4)_n\text{H}_2$) and bacterial identification were used for biomedical applications. Both effect of purging gases and depth profile in polymers were studied. For femtosecond regime, fs-LIBS is planned to be used for nanoparticles synthesis and online diagnostics.
- 2- Ultrafast phenomena due to interaction femtosecond-attosecond pulses with matter were planned to be investigated. My efforts in that field started in 2010, when I had joined prof. Dong Eon Kim group at POSTECH (Pohang University of Science and Technology) south Korea. I had worked on fs self-channeling of gas jets using 30 fs 800. Starting with white light generation due to supercontinuum in a hollow-fiber waveguide with high throughput up to 60% using 900- μJ pulses and 28-fs laser pulses with a 55-nm bandwidth centered at 800 nm and a 3-kHz repetition rate. Also, we had observed a few cycles generation and stabilization using chirped mirrors. High harmonics have been observed and planned to be enhanced due interaction of 3.8 fs pulse with neon. This was as a joint project with Professor Ferenc Krausz group at the Max Planck Institute to build an attosecond system. These days, I plan to build a femtosecond x-ray laser source for pump-probe experiment. The isolated 80 attosecond pulse is planned to be observed in near future for the current KSU-attosecond beam line.

In collaboration prof. Takayoshi Kobayashi Lab (University of Electro-Communications, Tokyo, Japan), I have been tried to develop a new experimental method using ultrafast of 8 fs NOPA system to describe the mechanism of the sequential two-photon excitation process and reveal novel information about the excited-state dynamics of the ring-opening reaction of photochromic molecule. These days we are trying to submit two publications about the obtained results.

- 3- Principle investigator PI for a project of 2 millions Saudi riyals (533,000 US\$) at KSU. The project focus on characterization of ultrafast white laser light generated via supercontinuum in a hollow-fiber waveguide and fs-LIBS nanoparticles synthesis
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ACADEMIC QUALIFICATIONS

Ph.D. Laser Physics, Cairo University, Egypt (the experiment part and data collection done at TU, Munich, Germany) 2000.

M.Sc Laser Physics, Cairo University, Egypt 1996.

B.Sc. Physics, Cairo University, Egypt 1992.

Skills

1-Languages

English Excellent **German** Intermediate level, **Arabic**(Mother tongue language), **French** (Basic), **Korean** (Basic)

2- PROFESSIONAL EXPERIENCE:

- (2011-now) Associate Professor, Department of Physics of Physics and Astronomy King Saud University (KSU) , Saudi Arabia.
- (2010-2011) Research associate (Associate Prof.) Department of Physics,Pohang University of Science and Technology POSTECH , Pohang, south Korea. This is a joint project with prof. Ferenc Krausz group at Max Planck Institute of Quantum Optics (MPQ) Munich, Germany.
- (2008 –till now)-Associate prof. –sabbatical leave - at the department of Environmental, Photo Chemical and Agriculture Laser applications, NILES, Cairo University, Cairo, Egypt.
- (2003- 2009)- Assistant Prof. - academic staff member at the department of Physics, Faculty of Education for girls, Qurayate, Algouf university, Kingdom of Saudi Arabia.
- (2000-2003)-Lecturer- at the department of Environmental, Photo Chemical and Agriculture Laser applications, NILES, Cairo University, Cairo, Egypt.
 - Agriculture Laser applications, NILES, Cairo University, Cairo, Egypt.
- (1999-2000)-Assistant Lecturer- at the department of Environmental Photo Chemical and Agriculture Laser applications, NILES, Cairo University, Cairo, Egypt.
- (1996-1999)-Physics Specialist- at NILES.

4- Scientific collaborations

- (2015) June-August, visiting professor at professor Rick Trebino group for ultrafast lasers, School of physics, Georgia Institute of Technology, University, Atlanta, Georgia USA. , I have jointed prof. Rick Trebino group to do FROG for 4 fs laser during summer.
- (2014) July-August, Visiting Scientist at Takayoshi Kobayashi Lab. (University of Electro-Communications, Tokyo, Japan) to study photochromic molecule using developed ultrafast NOPA system.
- (2014) April, short visiting scientist at prof. Nouredine Melikechi (Delaware State University, Dover, DE 19901, USA) to start collaborations in LIBS biomedical applications.
- (2012) visiting scientist at Max-Planck-Institut fuer Quantenoptik (Garching, Germany), for two months during summer, for preparing the KSU attosecond beamline in coloration with prof. ferenc krausz.

5- Teaching Experience:

- Atomic & molecular spectroscopy
 - Laser physics and its applications
 - Laser Spectroscopy
 - Solid state physics I & II
 - Computer science
 - C++ programming
 - Physical Optics
 - Optics I & II
 - Automatic Analysis Methods
 - Physics of Semiconductors
 - Electronics and Circuits
 - Electricity and Magnetism
 - Modern Physics
 - General physics
 - Thermodynamics
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Referees & references:

1- Prof. Dr. Rick Trebino

Georgia Research Alliance-Eminent Scholar.

Chair of Ultrafast Optical Physics.

School of Physics, 837 State Street

Atlanta, Georgia 30332-0430 USA

rick.trebino@physics.gatech.edu

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office: 404 894 1690

fax: 866 855 4518

Field of research

Ultrafast lasers and characterization of ultrafast pulses and nonlinear phenomenon.

2- Prof. Dr. Mostafa A. El-Sayed

Julius Brown Chair and Regents' Professor

Director, Laser Dynamics Laboratory

School of Chemistry and Biochemistry

901 Atlantic Drive NW

Atlanta, GA 30332-0400 USA

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melsayed@gatech.edu

Field of research

Ultrafast spectroscopy, photo- chemistry, femtosecond laser photo- dynamics and nanoparticles generation and characterization using ultrafast lasers.

3- Prof. Dr. Mohamad Sabsabi

Research Officer

National Research Council Canada

Industrial Materials Institute

75 de Mortagne Blvd., Boucherville

(Québec) J4B6Y4

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Numéro télécopieur : 450-641-5106

EMohamad.Sabsabi@cnrc-nrc.gc.ca

Field of research

Material analysis using Laser-Induced Breakdown Spectroscopy. Application of the LIBS technique to the metals, mining, pharmaceutical and environmental sectors.

2- Prof. Jagdish P Singh

Institute for Clean Energy Technology

(Formerly: Diagnostic Instrumentation and Analysis Laboratory)

Mississippi State University , USA

205 Research Boulevard

Starkville, MS 39759

Phone: (662)325-7375

Fax: (662)325-8465

E-mail : singh@icet.msstate.edu , jagdishpsingh@gmail.com

Webpage; <http://www.dial.msstate.edu/~singh/>

Field of research

Optical Fiber Sensors, Lasers, Electronics, Laser Spectroscopy (LIBS), Molecular Dynamics, Laser Diagnostics for Combustion, Laser Ultrasonic and Hazardous Waste Management.

6- Prof. Aslam Farooq Wazirzada

Department of Physics and Astronomy

King Saud University.

PO Box 2455, Riyadh 11451, Saudi Arabia

Building No:4, Office No: 2A25

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Tel: +966-532175405 & +96614843299

E.mail: wafarooq@hotmail.com ,

Webpag: <http://fac.ksu.edu.sa/awazirzada/biocv/cv>

Field of research

Optical properties of semiconductors, Organic-inorganic photosensor , applications of Laser-Induced Breakdown Spectroscopy technique.

4- Prof. Dr. Eon Dong Kim

Professor, Physics Department

Director, Center for Attosecond Science and Technology(CASTECH)

Asian Director, Max Planck Center for Attosecond Science (MPC-AS)

POSTECH

Pohang, Kyungbuk 790-784

Republic of Korea

tel: +82 54 279 2089

Fax:+82 54 279 5564

E-mail : kimd@postech.ac.kr

Field of research

Ultrafast laser spectroscopy, HHG for Attosecond pulse generation, Nanoscience in Fabrication of Silicon nanowires, Attosecond spectroscopy and Few cycles generation and stabilization.

5- Asst. Prof. Ashraf M. Eldakrory

University of Alberta

Faculty of Engineering

Edmonton, AB T6G 2V4.

Canada.

Tel:+117807075626

Email: eldakrou@ualberta.ca

Reference Relationship: scientific collaboration in femtosecond laser spectroscopy

Field of research

Femtosecond laser spectroscopy, Laser tissue interaction and laser plasma deposition of thin films on nylon-6 .

6- Associate Prof. Khaled Elsayed

College of Engineering
University of Dammam,
Dammam, 31441
Saudi Arabia

Email: khaleda4@yahoo.com

Kaelsayed@ud.edu.sa

Mob. +966563404020

Field of research

Laser Spectroscopy and its applications, Laser interaction with nanoparticles

7- Associate Prof. Ibrahim Yahia

Associate Professor - Department of Physics,
Faculty of Science, King Khalid University,
.O. Box 9004, Abha, Saudi Arabia.

Mobile: +966–548208818

+966–593604010

E-mail: dr_isyahia@yahoo.com

ihussein@kku.edu.sa

Reference Relationship: scientific collaboration in laser enhance sensitization of nanostructured solar cells.

Field of research

Nano-Science and Semiconductor Labs.

8- Asst. Prof. Mahmoud Abdel-Fattah

National institute of laser enhanced sciences,
NILES, Cairo University, Giza,
Egypt.

Mob. +1757816-0129

Email: mhma2007@gmail.com

Field of research

High power lasers and its industrial applications.

9- Dr. Muhammad Elbandrawy

Senior Staff Laser Equipment Engineer
at SunPower Corporation

412 skylark ct Danville CA 94506

Tel.: 9255494404

E-mail: mohamed.elbandrawy@sunpowercorp.com

elbandrawy@gmail.com

Field of research

High power lasers and its industrial applications.

10 - Prof. Dr. Dr. Tharwat El-sherbini

Professor of Laser Physics

Faculty of Science, Physics Department

Laser Physics Lab.

Cairo University, Cairo, Egypt.

Tel.: 0020102501511

E-mail: thelsherbini@yahoo.com

Field of research

Theoretical modeling and experimental of laser spectroscopy and laser plasma deposition thin films.

11 - Prof. Dr. Y. E. E. Gamal

Professor of Laser Physics

NILES, Cairo University, Cairo, Egypt.

drygamal@gmail.com

Tel.:0020101074012

Tel.: 00966507538199

Field of research

Theoretical modeling and simulation of Laser-Induced Breakdown Spectroscopy and its application , especially in gases using shot laser pulses.

12- Prof. Dr. E. W. Schlag

TU, Muenchen, Germany

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85748 Garching,

Phone:+49 89 289 13384

Fax:+49 89 289 13389

E-mail: schlag@ch.tum.de Or : schlag@mytum.de

Web: <http://www.phys.chemie.tu-muenchen.de/staff/schlag/>

Field of research

Multiphoton ionization mass spectrometry, High resolution sub-Doppler molecular spectroscopy and dynamics, ZEKE spectroscopy which include spectroscopy and kinetics of molecular ions and dynamics of photoexcited states and van der Waal's molecules.

13- Prof. Mahmoud Abdel-Aty

Department of Mathematics, Faculty of science,

Bahrain university, Bahrain

Tel.: 0097339839285

E-mail: abdelatyquantum@gmail.com

Web: <http://www.abdelaty.tk>

Field of research

Quantum optics and quantum information, including theoretical modeling of ultra-cold atoms (Mazer), quantum new states, semiclassical laser theory, quantum entanglement, and Trapped ions interacting with a laser field.

14 - Prof. Dr. Lotfia El-Nadi

Professor of laser Physics

Faculty of Science, Physics Department, Laser Physics

Lab. Cairo University, Cairo, Egypt.

E-mail: lotfianadi@gmail.com

Field of research

Lasers, Laser spectroscopy, Laser medical applications, Laser plasma physics, Laser Filamentation effect.

15- Associated Professor Dr. Abdel-Aleam H Mohamed

Physics Department, Faculty of Science,

Taibah University,

Almadinah Almunawwarah, P.O Box :30002

Saudi Arabia.

Mobile: +966–503754734

E-mail: abdelaleamm@yahoo.com

Field of research

Plasma spectroscopy, cold plasma generation, Laser spectroscopy, plasma jet medical applications.

16- Assistant Professor Muhammad Atif

Department of Physics and Astronomy

King Saud University.

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ACTIVITES

1- List of Supervised Doctoral and Master Theses

<u>Name</u>	<u>Date Record/award</u>	<u>Title</u>	<u>Degree</u>
<u>1- Marwa Ahmed Mohamed Ismail</u>	<u>2001</u> <u>2004</u>	<u>Study of Laser Induced Breakdown Spectroscopy (LIBS) limit of detection of some common elements in two different metallic matrices</u>	<u>M.Sc</u>
<u>2- Asmaa Elhassan Ramadan Mohamed</u>	<u>2001</u> <u>2004</u>	<u>Study the effect of static electric field on Laser induced plasma signal</u>	<u>M.Sc</u>
<u>3- Mohamed soliman</u>	<u>2001</u> <u>2006</u>	<u>Quantitative elemental analysis of agricultural drainage water using laser induced breakdown spectroscopy.</u>	<u>PhD</u>
<u>4- Abeer Asker</u>	<u>2001</u> <u>2006</u>	<u>Qualitative and quantitative analysis of heavy elements contaminated sediments using LIBS</u>	<u>M.Sc</u>

Professional Associations

- Senior member, Institute of Electrical and Electronics Engineering (IEEE), USA. ID#: 939832
- Senior member, The Optical Society of America (OSA), USA.# 92638495
- Member, SPIE (Photonics Society) USA.
- European Society of Photobiology, Italy.
- The Egyptian Materials Research Society, Egypt.

2- Participation In Scientific Meetings And Conferences

*visiting professor at prof. Rick Trebino group for ultrafast lasers (School of physics, Georgia Institute of Technology University, Atlanta, Georgia, USA) during the summer of 2015 from June to end of August to work with FROG of ultrafast 4 femtosecond laser characterization.

*** ISMS (International Symposium on Molecular Spectroscopy) 70TH MEETING - JUNE 22-26, 2015 - CHAMPAIGN-URBANA, ILLINOIS.**

*** SPIE conf. USA., Baltimore Convention Center Baltimore, Maryland, United States 5-9 May 2014.**

***Invited speaker, The International Middle East Plasma Science (IMEPS) conference will be held in Antalya, Turkey April 23 – 25 (2014).**

[*The Honet'13 High Capacity Optical Networks and Enabling Technologies](#), Magosa, Cyprus, December 11-13, 2013.

[*ELECTRONICS, COMMUNICATIONS AND PHOTONICS CONFERENCE. SAUDI INTERNATIONAL. 2013.](#) (SIECPC 2013), 27-30 April 2013, Riyadh, Saudi Arabia.

* [KAUST-UCSB-NSF Workshop on Solid-State Lighting, 2012](#), King Abdullah University of Science & Technology (KAUST), Thuwal, Saudi Arabia, Hall 1 and 2, Museum and Conference Center 13-14, February 2012.

*[The Honet'11 High Capacity Optical Networks and Enabling Technologies](#), Riyadh, Kingdom of Saudi Arabia, December 19-21, 2011.

*[The Atto3 conference Sapporo, Hokaido university, Japan 6-9 July 2011](#). Two posters "Toward high-order harmonic generation from ions by a femtosecond terawatt laser in plasma waveguide produced by clustered gas jet" and "Attosecond light facility constructed in CASTECH"

*The 4th Asian Workshop on Generation and Applications of Coherent XUV and X-ray Radiation will be held on Jan. 20-21, 2011 at POSTECH, Pohang, Korea.

* The GRDC Symposium 2010 "Green Science and Engineering for Health and Environment" Maria Hall at the Catholic University of Korea in Seoul, Korea 15-16 Nov. 2010.

*First international Conference on Modern Trends in Physics Research MTPR-04, Cairo, Egypt 4-9 April **2004**

*Second Euro-Mediterranean Symposium on Laser Induced Breakdown Spectroscopy, Hersonissos, Crete, Greece, **September 30th – October 3rd, 2003.**

**The 4th Euro-Mediterranean Conference on Laser & photobiology applications in Medicine and Environment 13-16 Feb. 2001 hold at NILES, Cairo University, Egypt.

***Training course on laser diagnostics of combustion processes organized by NILES, Cairo University in cooperation with ICS- UNIDO, Trieste , Italy, Cairo, Egypt, 18Nov.- 22 Nov. 2000.

***Training course on industrial laser application organized by NILES, Cairo University in cooperation with ICS- UNIDO, Trieste, Italy, Cairo, Egypt,

27

May- 8 June 2000.

**Workshop on laser applications organized by NILES, Cairo University, Egypt, 4-8 Feb.2000.

***Training Course on Laser Science and its applied Technologies organized by NILES Cairo University in cooperation with ICS-UNIDO, Trieste -Italy, Cairo 9-21 November 1998.

* Winter college on Quantum optics: novel Radiation Sources - Trieste -Italy - 3-21 march 1997.

*4th workshop on Plasma and Laser Physics, Sonesta Hotel, Naser City, Cairo Egypt.26-29 Feb. **1997**," Self Focusing and associated Phenomenon induced by high intensity Q-Switched

Nd: YAG Laser Beam in Water", **W. Tawfik**, A. Abd El-Fattah, Yosr E.E. Gamal and L. El-Nadi.

*** Participant with paper or poster.**

**** Member of the organizing Committee.**

***** Local Organizer.**

3- **PEER-REVIEW ACTIVITIES**

- 1- Journal of [Spectroscopy Letters](#).
 - 2- Journal reviewer for journal of [Sensor Letters \(American Scientific Publishers\)](#).
 - 3- Journal reviewer for the [Journal of Physical Chemistry](#).
 - 4- [Science journal of environmental engineering research](#).
 - 5- [ITB Journal](#) , Bandung, Indonesia.
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PUBLICATIONS

I - BOOKS:

1. **Walid Tawfik Mohamed** and Jungkwuen An, and Dong Eon Kim, 2012,” Generation of Few Cycle Femtosecond Pulses via Supercontinuum in a Gas-Filled Hollow-Core Fiber” published as a chapter in book “Optical Fibers/ Book 4 InTech , Croatia, [ISBN979-953-307-653-8](#).
2. **Walid Tawfik Y. Mohamed** and Mahmoud Abdel-Aty (Editor), 2007, " Recent advances in laser induced breakdown spectroscopy as elemental analytical technique for environmental applications and space exploration" book titled " Aspects of Optical Sciences and Quantum Information", Research Signpost 37/661 (2), Fort P.O., Trivandrum-695 023, Kerala, India, [ISBN: 81-308-0147-7](#).

II - PAPERS:

- [1] Walid Tawfik, “High-power table-top white-light few-cycle laser generator”, [Ukr. J. Phys. Opt. 2015, 16, 3, 111-119](#).
- [2] Walid Tawfik, “A method for controlling the bandwidth of high-energy, few optical-cycle laser pulses tunable from the visible to the near infrared” [Ukr. J. Phys. Opt. 2015, 16, 3, 130-138](#).
- [3] Walid Tawfik, “Precise measurement of ultrafast laser pulses using spectral phase interferometry for direct electric-field reconstruction” [Journal of Nonlinear Optical Physics & Materials 24.04 \(2015\): 1550040](#)

- [4] Walid Tawfik, "Tuning the pulse duration of high intensity ultrafast laser pulses," in press.
- [5] Walid Tawfik, "Optimizing the throughput efficiency of neon-filled hollow-core fiber for high intensity ultrafast laser pulses," in press.
- [6] W. A. Farooq , **Walid Tawfik**, Saad Bin Qasimc, A. S. Aldwayyana , M. Atif, "Application of Laser Induced Breakdown Spectroscopy in early detection of red palm weevil: (*Rhynchophorus ferrugineus*) infestation in date palm" [Plasma Sci. Technol. 2015, 17 \(8\): 850-863.](#)
- [7] Arek Jarota, **Walid Tawfik**, Kobayashi Takayoshi "Investigation of the Ultrafast Dynamics of a Diarylethene -Based Photochromic Switch" [submitted for publication.](#)
- [8] Walid Tawfik, W.A. Farooq, F.N. Al-Mutairi and Z.A. Alahmed "Monitoring of Inorganic Elements in Desert Soil Using Laser-induced Breakdown Spectroscopy" Lasers in Engineering (Old City Publishing); [2015, Vol. 0 Issue 1, p1-12.](#)
- [9] **Walid Tawfik**, Leda g. Bousiakou, Rabia Qindeel, W.A.Farooq, Norah H. Alonizan, Amal J. Fatani "Trace analysis of heavy metals in groundwater samples using laser induced breakdown spectroscopy (LIBS)" [optoelectronics and adv. materials – R. comm. , 9, 1-2, \(2015\), 185 - 192.](#)
- [10] W. A. Farooq , **Walid Tawfik**, Saad Bin Qasimc, A. S. Aldwayyana , M. Atif, Kaleem Ahmad , M. S. Al-Salhi,"Qualitative analysis of dental nano-composite restorative material using Laser Induced Breakdown Spectroscopy and EDS analysis", IEEE CONFERENCE PUBLICATIONS 12/2014; [DOI: 10.1109/HONET.2014.7029391](#)
- [11] W A Farooq, M Atif, **W Tawfik**, M S Alsalhi1, Z A Alahmed, M Sarfraz, and J P Singh "Study of Bacterial Samples Using Laser Induced Breakdown Spectroscopy" [Plasma Science and Technology, 16, 12, \(2014\).](#)
- [12] Kaleem Ahmad, **Walid Tawfik**, Wazirzada A. Farooq and Jagdish P. Singh "Analysis of alumina-based titanium carbide composites by laser-induced breakdown spectroscopy" [Appl. Phys. A, 116,2, \(2014\) 1-8.](#)
- [13] **Walid Tawfik** and Sausan Sawaf " Approaching the ppb detection limits for copper in water using laser induced breakdown spectroscopy ", Proc. SPIE 9101, Next-Generation Spectroscopic Technologies VII, 91010L (May 21, 2014); [doi:10.1117/12.2053957](#)
- [14] W. A. Farooq, Amanullah Fatehmulla, F. Yakuphanoglu, I. S. Yahia, Syed Mansoor Ali, M. Atif, M. Aslam, and **Walid Tawfik**," Photovoltaic Characteristics of Solar Cells

Based on Nanostructured Titanium Dioxide Sensitized with Fluorescein Sodium Salt” [Theoretical and Experimental Chemistry, 50, 2, \(2014\) 121-126.](#)

- [15] W. A. Farooq, **W. Tawfik**, Z. A. Alahmed, K. Ahmad, and J. P. Singh “Role of purging gases in the analysis of polycarbonate with laser-induced breakdown spectroscopy”, [Journal of Russian Laser Research, 35, 3, \(2014\) 252-262.](#)
- [16] Rabia Qindeel, **WALID TAWFIK**, “Measurement of plasma characteristics of the optically generated copper plasma by laser spectroscopy technique”, [optoelectronics and adv. materials – R. comm. , 8, 7, \(2014\), 741-746.](#)
- [17] S. SAWAF, **WALID TAWFIK**, “Analysis of heavy elements in water with high sensitivity using laser induced breakdown spectroscopy”, [optoelectronics and adv. materials – R. comm. , 8, 5-6, \(2014\), 414 – 417.](#)
- [18] **Walid Tawfik**, W Aslam Farooq, and Z. A. Alahmed, “Damage Profile of HDPE Polymer using Laser-Induced Plasma”, [J. Opt. Soc. Korea 18, 50-54 \(2014\).](#)
- [19] W. A. Farooq, S. M. Ali¹, Walid Tawfik, Amanullah Fatehmullaa, M. Aslama, A. S. Al Dwayyan, and M. S. AlSalhi” Influence of Laser Irradiation on the Optical Properties of Nanosized Powder of Metal Oxide” [Russian Journal of Physical Chemistry A, 88, 13, 2446–2450 \(2014\).](#)
- [20] W. A. Farooqa, K. G. Rasool, Walid Tawfik and A. S. Aldawood, A S Aldwayyan “Application of Laser Induced Breakdown Spectroscopy in early detection of red palm weevil: (Rhynchophorus ferrugineus) infestation in date palm” 8th International Conference on Laser Induced Breakdown Spectroscopy” [proceeding of 8th International Conf. on LIBS, Beijing, China, from the Sept. 8th to 12th, \(2014\).](#)
- [21] Wazirzada Aslam Farooqa , Walid Tawfik Mohamed, Saad Bin Qasim, and M. Atif, Kaleem Imam and Aldwayyan, A.S. “Qualitative analysis of Dental Nanocomposite Restorative material using Laser Induced breakdown Spectroscopy and SEM EDS analysis.”, IEEEExploer, High Capacity Optical Networks and Enabling Technologies (HONET-ICT), 2014, 15-17 Dec. [Charlotte, North Carolina, USA.](#)
- [22] Al-Inad, T.M. , **Tawfik, Walid** , Farooq, W.A. and Aldwayyan, A.S. “LIP characteristics of nanostructured ZnO thin films”, IEEEExploer, High Capacity Optical Networks and Enabling Technologies (HONET-CNS), 2013, 11-13 Dec. [2013, Magosa, Cyprus.](#)

- [23] W Aslam Farooq, **Walid Tawfik**, Fahad N. AL-Mutairi, and Zeyad A. Alahmed "Qualitative Analysis and Plasma Characteristics of Soil from a Desert Area using LIBS Technique" [J. Opt. Soc. Korea 17, 548-558 \(2013\)](#).
- [24] W.A. Farooq, Walid Tawfik , A. Fatehmulla , S. M. Ali , M. Aslam "Laser irradiation effect on ZnO nanoparticles" [IEEEExplore, CAOL*2013 International Conference on Advanced Optoelectronics & Lasers, 09-13 September, \(2013\), Sudak, Ukraine.](#)
- [25] **Walid Tawfik**, W Aslam Farooq, Zeyad A. Alahmed, M Sarfraz and Fahrettin Yakuphanoglu "Characterization and Analysis of Nanostructured CdO Thin Film using LIBS Technique" [IEEEExplore, Electronics, Communications and Photonics Conference \(SIEPC\), 2013 Saudi International.](#)
- [26] Guanglong Chen , Xiaotao Geng , **Tawfik Walid Mohamed** , Hongxia Xu , Yiming Mi, Jaehoon Kim , Dong Eon Kim," Ar plasma waveguide produced by a low-intensity femtosecond laser" [Optics Communications 285 \(2012\) 2627–2631.](#)
- [27] **Walid Tawfik Mohamed**, Guanglong Chen, Jaehoon Kim, Geng Xiao Tao1, Jungkwen Ahn and Dong Eon Kim "Controlling the length of plasma waveguide up to 5 mm, produced by femtosecond laser pulses in atomic clustered gas" , [Optics Express 2011, 19\(17\)15919-15928.](#)
- [28] **Walid Tawfik Y. Mohamed**, 2008, " Improved LIBS limit of detection of Be, Mg, Si, Mn, Fe and Cu in aluminum alloy samples using a portable Echelle spectrometer with ICCD camera", [Journal of Optics & Laser Technology, Vol. 40, pp.30-38. \(one of the best hot 25 papers ranked by science direct\)](#)
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