Qais Thanon Najim Algwari

PhD. in Physics (Plasma)
Professor

google scholar

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PERSONAL	**Date of Birth**: 1970 **Address: Mosul-Iraq**

EDUCATION	**and EMPLOYMENT**

EDUCATION

PhD. 2011, (Atmospheric pressure plasma jets) School of Maths and Physics. Centre of Plasma Physics. The Queen's University of Belfast. Belfast. United Kingdoms.

M.Sc. 1997, (Plasma Physics) Dept. of Physics, College of Sciences. University of Mosul. Mosul-Iraq

B.Sc. 1992, (Physics) Ranked the first position in the class, Dept. of Physics, College of Sciences. University of Mosul, Mosul, Iraq.

Employment History:

December 2021 To Now	**Professor** College of Electronic Engineering, Ninevah University, Mosul, Iraq
April 2014 To December 2021	**Lecturer** College of Electronic Engineering, University of Mosul. Mosul, Iraq.
July 2011 to April 2014	**M. Sc Supervisor and Lab. Demonstrator** Centre of Plasma Physics. The Queen's University of Belfast. Belfast. United Kingdoms
September 2008 to July 2011 **December 2004 to July 2008**	**Associate Lecturer** College of Electronic Engineering, University of Mosul. Mosul, Iraq.
November 1997 to December 2004	**Physicist** Alkindy Company, Signal process centre.

	February 1993 to September 1995	**Physicist** Alkindy Company, Laser research centre.

SKILLS

Language – Arabic (mother language) - English

Computer Skills – C++, Microsoft Office, Comsol multiphysics

Scholarly Activities - Reviewer of literatures in Plasma and Polymer Process, Plasma Source Sciences Technology. IEEE trans. plasma sci., Physics of plasma.
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Teaching and Academic Activities

Series	Courses	Level
1	Plasma diagnostics	M.Sc.
2	Solid state and IC fabrication	M.Sc
3	Opto-electronics Semiconductor	M.Sc
4	Laser and Fiber Communications	B. Sc.
5	Physical Electronics	B.Sc.
6	C++ programming	B.Sc.
7	Computer Science	B.Sc.

Supervised on a Ph D thesis in Power Electronic
Supervised on a Ph D thesis in Dentist science.
Supervised on an M Sc thesis in Plasma physics.
Supervised on an M Sc theses in Solid state electronic eng. (solar cells)
External postgraduate examiner.

Awards and Recognition

1. The Iraqi High Education Prize on the Science for the best Paper in 2013
2. European Plasma Society Prize for the best Paper in EPS conference 2010.

University and Departmental Community Services

#	*Committee Name*	*Period*	*Position*
1	Departmental council	2004-to now	Member
2	Promotion committee.	2017 to now	Member
3	Test and exams college council	2005-2008	Member
4	Test and exams departmental council	2013-2014	Chairman

(Publications)

Temporally, spectrally and 3-d spatially resolved experimental investigations of plasma pulse propagation from an atmospheric pressure helium plasma into ambient air
(Q. Th. Algwari, D. O'Connell) (Conference prize)
37th EPS Conference on Plasma Physics, 21 - 25 June 2010 Dublin, Ireland

Plasma dynamics and development of plasma pulses in a kHz generated atmospheric pressure plasma jet.
Q. Th. Algwari, D. O'Connell
Bulletin of the American Physical Society, 63rd Annual Gaseous Electronics Conference Volume 55, Number 7, Oct. 2010 Paris, France

Optical measurements of reactive oxygen species in atmospheric pressure plasma jets
J. S. Sousa, V. Puech, Q. T. Algwari, L. J. Cox, K. Niemi, T. Gans, and D. O'Connell
20th ESCAMPIG, 13-17 July 2010, Novi, Sad, Serbia

Dynamics of atmospheric pressure plasma jets and Interaction mechanisms between multiple jet plumes
Q. Th. Algwari, D. O'Connell
20th ESCAMPIG, 13-17 July 2010, Novi, Sad, Serbia

**********2011**********

Generation of reactive oxygen species in kHz-driven atmospheric pressure plasma jets for biomedical applications
J.S. Sousa, Q. Th. Algwari, K. Niemi, V. Puech, T. Gans, D. O'Connell
NATO Advanced Research Workshop, March 15-18, 2011, Jasná, Slovakia

The role of molecular air species in atmospheric pressure plasma jets
Q. Th. Algwari, D. O'Connell
30th ICPIG 2011 Conference, 28th August to 2nd September 2011, Belfast UK

Interaction mechanisms between multiple plasma jets
Q. Th. Algwari, C. O'Neill, D. O'Connell
30th ICPIG 2011 Conference, 28th August to 2nd September 2011, Belfast UK

Reactive oxygen species in kHz-driven atmospheric pressure plasma jets
J. S. Sousa, Q. Algwari, K. Niemi, T. Gans, D. O'Connell
30th ICPIG 2011 Conference, 28th August to 2nd September 2011, Belfast UK

Interactions of non-thermal atmospheric pressure plasmas with plasmid DNA
A. Gibson, D. O'Connell, L. Cox, Q. Algwari
30th ICPIG 2011 Conference, 28th August to 2nd September 2011, Belfast UK

Kilohertz-Driven Atmospheric Pressure Plasma Jet for the Decontamination of Bacterial Biofilms
M. Y. Alkawareek, S. P. Gorman, D. O'Connell, Q. Th. Algwari, B. F. Gilmore
30th ICPIG 2011 Conference, 28th August to 2nd September 2011, Belfast UK

The role of molecular air species in kHz driven atmospheric pressure plasma jets
Q. Th. Algwari, D. O'Connell
Bulletin of the American Physical Society, 64th Annual Gaseous Electronics Conference Volume 56, Number 15, Nov. 2011, USA

Atmospheric pressure plasma jets as sources of reactive oxygen species for biomedical applications
J. Sousa, Q. Algwari, L. Cox, L. Graham, J. Waskoenig, K. Niemi, D. O'Connell, and T. Gans
6th International Workshop on Microplasmas, Paris, France 2011

Eradication of Bacterial Biofilms Using Atmospheric Pressure Non-Thermal Plasmas
M. Alkawareek, B. Gilmore; S. Gorman; Q. Th. Algwari; W. Graham; D.O'Connell.
American Physical Society, 64th Annual Gaseous Electronics Conference, November 14-18, 2011

Plasma jet interaction with a dielectric surface
Q. Th. Algwari, D. O'Connell
IEEE Transactions on Plasma Science, Volume: 39, Issue: 11 Page(s): 2368 – 2369 (2011)

Cold atmospheric pressure plasma jets as sources of singlet delta oxygen for biomedical applications
J. S. Sousa, K. Niemi, L. J. Cox, Q. Th. Algwari, T. Gans, and D. O'Connell
Journal of Applied Physics. Volume 109, page 123302 (2011)

Electron dynamics and plasma jet formation in a helium atmospheric pressure dielectric barrier discharge jet
Applied Physics Letter. Volume 99, page 121501 (2011)
Q. Th. Algwari, D. O'Connell

**********2012**********

Application of atmospheric pressure nonthermal plasma for the in vitro eradication of bacterial biofilms.
M. Alkawareek, Q. Th. Algwari ,S. Gorman, W. Graham, D. O'Connell, Deborah, B. Gilmore

FEMS Immunology & Medical Microbiology Vol 65 Issue 2, page 381, 2012

Eradication of Pseudomonas aeruginosa Biofilms by Atmospheric Pressure Non-Thermal Plasma
M. Alkawareek, Q. Th. Algwari , G. Laverty, S. Gorman, W. Graham, D. O'Connell, Deborah, B. Gilmore
PLoS One., Vol 7, Issue 8, e44289, 2012

Cold atmospheric pressure plasma jets as sources of reactive oxygen species for biomedical applications
J.S. Sousa, Q. Th. Algwari, L.J. Cox, L.M. Graham, J. Waskoenig, K. Niemi, D. O'Connell , T. Gans
ESCAMPIG XXI, July 10-14 2012, Viana do Castelo, Portugal

**********2013**********

Reaction kinetics of a kHz-driven atmospheric pressure plasma jet operated in ambient humid air

T. MurakamiP, Q. Th. Algwari, K. NiemiPP, T. GansPP, D. O'ConnellP, and W. G. Graham
31st ICPIG, July 14-19, 2013, Granada, Spain

**********2014**********

Plasmid DNA Damage Following Exposure to Atmospheric Pressure Nonthermal Plasma: Kinetics and Influence of Oxygen Admixture

Mahmoud Y. Alkawareekb Nid'a H. Alshraiedeh Sarah Higginbotham,a Padrig B. Flynn, Qais T. Algwari Sean P. Gorman, William G. Graham, and Brendan F. Gilmorea
Plasma Medicine 4(1-4): 211-219 (2014)

**********2019**********
Numerical Simulation of the Trichel-Pulse in SF6 at Atmospheric Pressure
Dawood N. Saleh , Qais Th. Algwari, and Farook Kh. Amoor
IEEE TRANSACTIONS ON PLASMA SCIENCE, VOL. 47, NO. 1, JANUARY 2019

**********2020**********
23 Modeling the dependence of the negative corona current density on applied voltage rise time
Dawood N. Saleh , Qais Th. Algwari, and Farook Kh. Amoor
Phys. Plasmas 27, 073501 (2020
**********2021**********
24 The influence of the interface layer between the electron transport layer and absorber on the performance of perovskite solar cells
Dena N Qasim Agha and Qais Th Algwari 2021 IOP Conf. Ser.: Mater. Sci. Eng. 1152 012033
25. Study of defects in CH3NH3PbI3-based perovskite solar cells
Hajar Kh , Ahmed M A Sabaawi and Qais Th Algwari 2021 IOP Conf. Ser.: Mater. Sci. Eng. 1152 012032
26 Numerical Modeling of Partial Discharge in a Void Cavity Within High-Voltage Cable Insulation
Qais Th. Algwari, and Dawood N. Saleh ,
IEEE TRANSACTIONS ON PLASMA SCIENCE, VOL. 49, NO. 5, May 2021
**********2022**********
25. The influence of the conduction band engineering on the perovskite solar cell performance
DNQ Agha, QT Algwari
Results in Optics 9, 100291 4 2022
26. Plasma Properties of a Low-Pressure Hollow Cathode DC Discharge
MH Ahmed, M. A., Algwari, Q. T. , Younus
Iraqi Journal of Science 63 (6), 2532–2539 2 2022
27. The performance of Perovskite solar cells with silicon carbide as an interfacial layer.
DN Qasim Agha, QT Algwari
College of Basic Education Researches Journal 18 (2) 2022
28. Study the effect of defects on the quantum efficiency of perovskite solar cells.
HK Ibrahim, AM Sabaawi, QT Algwari
College of Basic Education Researches Journal 18 (2) 2022

**********2023**********

29. Partial Discharge Features in a String of Air Bubbles Floating in Transformer Oil
DN Saleh, QT Algwari
IEEE Transactions on Plasma Science 2023
30. EFFECT OF THE EXCITED VOLTAGE RISE TIME ON THE CORONA DISCHARGE CHARACTERISTICS
ALH Hussein, QT Algwari
Journal of Education and Science 32 (1), 12-21 2023