

## Curriculum Vitae



### Personal Details:

Name: **Professor: Abdul Wahab ALLAF**

Date of birth: 7th January 1961

Nationality: Syrian

Marital status: (Married with 5 daughters)

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### Family Details:

- 1- Mrs Layla Eaza, House wife, 10/12/1963, Aleppo-Syria
- 2- First daughter. Miss Thana Allaf, Chemist, graduated from Damascus, University, born in 29/9/1988, England.
- 3- Second daughter. Miss Lena Allaf, Pharmacist, graduated from Damascus, University, born in 20/8/1990, England.
- 4- Third daughter. Miss Boshra Allaf, Dentist, graduated from Damascus, University, born in 4/3/1992, England.
- 5- Fourth daughter, Miss Hadeel Allaf, doing Architect at Damascus University, born in 31/5/1997, Damascus
- 6- Fifth daughter, Miss Hala Allaf, doing Prosthodontics at Damascus University, born in 31/5/1997, Damascus
- 7- **The last two daughters are twin.**

## University

**1-BSC** in Physics and Chemistry (level good) at the University of Aleppo, Syria from October 1980-October 1984.

**2-MSC** in *Molecular Spectroscopy* (Supervisor Prof. H. W. Kroto, Nobel Laureate in Chemistry 1996), at the University of Sussex, School of Life Sciences, Falmer, Brighton, BN1 9QJ, England, (1987).

The title of the MSC thesis was "*Spectroscopic Studies of Short Lived Molecules*".

The work involved gas phase reaction studies of thiazyl halides, NSX where X=F, Cl, Br and I using photoelectron and IR spectroscopy techniques for detection.

**3-Ph.D** in *Fullerenes Chemistry Materials* (Supervisor Prof. H. W. Kroto, Nobel Laureate in Chemistry 1996), at the University of Sussex, School of Life Sciences, Falmer, Brighton, BN1 9QJ, England, (1992).

The title of the PhD thesis was "*Reaction Studies of the Fullerenes*".

The work in the thesis was involved the design and construction of a pulsed molecular beam system for probing refractory material clusters (particularly carbon) using laser vaporization / ionization time-of-flight mass spectrometry. This apparatus was used to study the effect of reactive species on the carbon nucleation process as well as the spectroscopy of electronically excited carbon clusters in the supersonic expansion. The other components of the thesis work were involved theoretical studies on the stability and structures of fullerenes.

## Prizes, Awards, Scientific Administration, responsibilities and Positions after PhD

1- Professor Abdusalam Prize (Nobel Laureate in Physics 1979), for the best young chemist in Syria (1995).

2- Head of Physical Chemistry Division at Atomic Energy Commission of Syria from 1998-1999

3- Head of Chemical Synthesis Division at Atomic Energy Commission of Syria, starting from 2000 to Present

4- Research Fellow in the School of Chemistry, Physics and Environmental Science at University of Sussex, England (summer 1999).

5- Head of Chemical Safety Committee at Atomic Energy Commission of Syria, AECS.

6-Member of the Syrian National Chemical Safety Committee (Ministry of Environment and local affair) and national member of chemical trading committee for non medical materials, (Ministry of Health)

7- **Principal Researcher** at Atomic Energy Commission of Syria in the Chemistry Department, from 1998 to June, 2004. (**Assistant professor**)

8- Interviewing all the new staff (technicians and assistant researchers) who wants to start working in the Chemistry Department at Atomic Energy Commission of Syria).

9- Evaluating of Syrian researcher promotions at AECS.

10- Second Professor Abdusalam prize (Nobel Laureate in Physics 1979) for the best young chemist in Syria in 2001.

11- **Research Director** from July, 2004 (**professor**) at the Atomic Energy Commission, department of chemistry which has been approved and endorsed by the **president of Syria** (ref. 216 dated 27/6/2004).

12 – Quality Management System, **QMI Lead Auditor, (ISO 9001:2000)**, ref. **1040390** approved by: Canadian Standard Association, **QMI**, International Auditor and Training Certification Association, **IATCA and RAB**.

13- **Scopus** honor award for the best contribution to science in Syria, 2008

14- Member of the Syrian National Committee (Ministry of Environment and local affair) for dangerous solid and municipal waste

15- Head of Chemistry Scientific Committee at National Commission for the Syrian Science Olympiad.

16- Professorship faculty member at Arab International University (Private) since 2004.

17- Top 10 Syrian researchers in the indexing of Syrian international researcher: The top 100, Report produced by Syria National Erasmus+ Office in cooperation with Syria Erasmus+ Higher Education Reform Experts (HEREs), 2015.

18- Scientific Consultant at Qasyoun and Sham Universities at Pharmacy and Dental Faculties.

## **Experience**

**1- Research** (Feb. 1984 – present) Atomic Energy Commission,  
Department of Chemistry,  
P. O. Box 6091, Damascus, SYRIA.

## **2-Teaching and Laboratory** (2005-present)

- Two courses: (practical and theoretical) in **Organic Chemistry and General Chemistry** for students at the Arab International University, AIU-Damascus (Private University) at the faculty of Pharmacy. The teaching courses are in English language for the following three text books:

1- Chemistry: the Central Science by **Theodore L. Brown, H. Eugene LeMay and Bruce E. Bursten, 2007**

2-Organic Chemistry by **John C. McMurry, 2008**, 7<sup>th</sup> edition

3- General Chemistry, the essential concepts, by **Raymond Chang, 5<sup>th</sup> edition 2008**

- Teaching Chemistry at Damascus University, medicinal faculties
- External and internal examiner`s for Master and Ph.D. degrees at all Syrian Universities and Applied Science Technology College students

### **3-Book and Research articles reviewing**

- 1- Referee for some scientific Journals in Syria, Saudi Arabia, Gulf , Europe and International Journals
- 2- Reviewing a translated book into Arabic entitled: Nanotechnology: A Gentle Introduction to the Next big idea, By Mark Ratner and Daniel Ratner Arab Organization for Translation, first edition, Beirut, March 2011, Lebanon
- 3- Arabic Translation with Dr. Ibrahim Othman: Nano world: An introduction to Nanoscience and Technology, C. N. R. Rao, 2010, publication by Atomic Energy Commission of Syria, 2011
- 4- Two Arabic translation books to the International Chemistry Olympiad Problems: Comprehensive Handbook, 1968-2014, Published by National Commission for the Syrian Science Olympiad, 2015
- 5- Chemistry book for medicinal faculties in Syria, 2015, published by Damascus University.
- 6- Reviewing a translated book into Arabic entitled 2016: Advances in Nanocomposite Technology, edited by Abbas Hashem, Published by In Tech: Janeza Trdine 9, 51000 Rijeka, Croatia, 2011

### **Research Activity**

**My research work is focused for the time being in the following subjects:**

1. Gas-phase low-resolution IR spectra of short-lived small molecules
2. Synthesis, optical, physical and chemical properties of C<sub>60</sub> doped thin films.
3. Laser induced-photoionization and fluorescence of small molecules in the gas phase.
4. Spectroscopic isotopic shifts determination of small species
5. Carbon materials: (fullerenes and carbon nanotubes) synthesis and applications.
6. Chemical synthesis of starting materials for radiopharmaceuticals kits applications.
7. Carbon-Polymers composites and photo-polymerization materials
8. Determination of antioxidants in natural products (medicinal plants and fresh fruits)
9. Optical limiting actions of polymers, doped fullerenes and organic compounds
10. Nanopolymer composites and applications

### **Memberships of professional sciences societies:**

Member Royal Society of Chemistry, U.K since 1987. **MRSC, (ref. 309897)**

Member of the Syrian Chemical Society (**MSCS**)

## Publications

### International Refereed Journal

1. Spectroscopic studies of thiazyl bromide, NSBr **A. W. Allaf , G . Y . Matti, R. J. Suffolk and J. D. Watts**, *J. of Elec. Spec. and Rela . Phen*, **48**, 411, (1989).
2. The production and photoelectron spectrum of thiazyl iodide, NSI **A. W. Allaf, G. Y. Matti, R. J. Suffolk and J. D. Watts**, *Chem. Phys. Letts*, **155**, 32, (1989).
3. The IR spectra of fullerene-60 and -70 **J. P. Hare, T. J. Dennis, H. W. Kroto, R. Taylor, A. W. Allaf, S. P. Balm and D, R. M. Walton**, *J. Chem. Soc., Chemical Communications*, **issue 6** , 412, (1991).
4. Potential- energy function for large carbon clusters **S. P. Balm, A. W. allaf, H. W. Kroto and J. N. Murrell**, *J. Chem. Soc., Faraday Trans*, **87**, 803, (1991).
5. C<sub>60</sub>: Buckminsterfullerene **H. W. Kroto, A. W. Allaf and S.P. Balm**, *Chem. Rev.*, **91**, 1213, (1991).
6. Effect of trace elements on carbon microparticle formation **A. W. Allaf, S. P. Balm, R. A. Hallett, K. G. Mckay and H. W. Kroto**, *Proc. Indian Acad. Sci. (Chem. Sci.)*, **103**, 517, (1991).
7. Hydrogenation of carbon clusters **A. W. Allaf, R. A. Hallett, S. P. Balm and H. W. Kroto**, *Inter. J. of Modern Phys. B*, **6**, 3595, (1992).
8. Optical emission from carbon cluster in a supersonic expansion **S. P. Balm, R. A. Hallett, A. W. Allaf, A. J. Stace and H. W. Kroto**, *Inter. J. of Modern Phys. B*, **6**, 3757, (1992).
9. On the synthesis of carbodiimide, HN=C=NH **A. W. Allaf and R. J. Suffolk**, *J. of Chem. Res.(s)*, 269, (1993).
10. Gas Phase IR spectrum of thiazyl cyanide, NSCN **A. W. Allaf and R. J. Suffolk**, *J. of Chem. Res.(s)*, 186, (1994).
11. Reaction studies of carbon clusters **R. P. Hallett, K. G. McKay, S. P. Balm, A. W. Allaf, H. W. Kroto, and A. J. Stace**, *Z. der Physik D.*, **34**, 65 (1995).
12. Photoelectron spectrum of thiazyl cyanide, NSCN **A. W. Allaf, R. J. Jonston and R. J. Suffolk**, *Chem. Phys. Letts*, **233**, 33 (1995).
13. Thionitrosyl cyanide (NCNS), **M. T. Nguyen, A. W. Allaf, R. Flammang and Y. V. Haverbeke**, *Theochem: J. of Mol. Structure*, **418**, 209, (1997).
14. Gas phase infrared spectra of phosphorus (III) oxyhalides: experimental and theoretical study of OPF and OPCI, **A. W. Allaf and I. Boustani**, *Vib Spectro.*, **16**, 69, (1998).
15. The Gas- phases on-line production of phosphoryl halides, POX<sub>3</sub> and their identification by infrared spectroscopy, **A. W. Allaf**, *Spectrochimica Acta: Part A*, **54**, 921, (1998).

16. Gas phase infrared spectra of phosphorus (III) oxyhalides: experimental and theoretical study of OPBr and OPI, **I. Boustani, and A. W. Allaf**, *Vib. Spectro*, **16**, 157 (1998).
17. Gas phase infrared spectrum of phosphorus (III) oxycyanide: OPCN experimental and theoretical investigations, **A. W. Allaf, M. Kassem, M. Al-ibrahim and I. Boustani**, *J. Mol. Structure.*, **478**, 193 (1999).
18. Gas Phase Generation and Infrared Spectroscopy of Unstable NS-SCN Molecule, **Z. Ajji, D. Y. Naima, Mohamad N. Odeh and Abdul W. Allaf**, *Spectrochimica Acta Part A*, **55**, 1753 (1999).
19. Fullerene-60 Thin Films for Electronic Applications, **Ali Al-Mohamad and Abdul W. Allaf**, *Synth. Metal.*, **104**, 39, (1999).
20. The Gas Phase On Line Generation of Antimony Oxide Trihalides,  $O=Sb-X_3$  Where  $X= F$  and  $Cl$  and Their Identifications By Infrared Spectroscopy, **Abdul W. Allaf and Z. Ajji**, *Spectrochimica Acta Part A*, **56**, 1971 (2000).
21. The Gas Phase Production of Vanadium Oxytrihalides,  $VOX_3$  and their Identifications by Infrared Spectroscopy. **Mohammed D. Zidan and Abdul W. Allaf**, *Spectrochimica Acta Part A*, **56**, 2693 (2000).
22. Determination of D/H Ratio of Some Locations in Syria Natural Water, **A. Harfoush, Abdul W. Allaf, and M. Al-ibrahim**, *Water quality research J. Canada*, **36**, 151, (2001).
23. Effective Reduction of Fluorine Content in Syrian Commercial Phosphoric Acid Using Ailicagel Under Three Different Conditions, **R. Baidoun, J. Abu-Hillal and Abdul W. Allaf**, *AFINIDAD*, **493**, 197 (2001)
24. Gas Phase Generation and Infrared Spectroscopy of Metastable OP-SCN Molecule, **D. Y. Naima, Mohamad N. Odeh, M. A. Namou and Abdul W. Allaf**, *Spectrochimica Acta Part A*, **58**, 1083, (2002).
25. The Gas Phase On-line Production of Phosphorus Thiotrihalides,  $SPX_3$  and their Identifications by Infrared Spectroscopy. **Mohammed D. Zidan and Abdul W. Allaf**, *Spectrochimica Acta Part A*, **58**, 1577, (2002).
26. Theoretical and Experimental Investigations of Vanadium (III) Oxychloride,  $OVCl$ , **Abdul W. Allaf**, *J. Chemical Research*, **554**, (2003).
27. Gas-Phase Infrared Spectrum of Vanadium (III) Oxyfluoride,  $OVF$ : Theoretical and Experimental Investigations, **Abdul W. Allaf**, *J. Chem. Res.*, **800**, (2003).
28. Optical Limiting Action of N-(1-Pyrene)maleimide and 2-(4-biphenyl)-6- phenylbenzoxazol, **Abdul W. Allaf and M. D. Zidan** *Laser Physics*, **14**, 1529, (2004)
29. Optical Limiting of new Fullerenes Derivatives, **Abdul W. Allaf and M. D. Zidan**, *Optics and Lasers in Engineering*, **43**, 57, (2005).
30. Gas Phase Infrared Spectrum and ab initio Calculations of Phosphorus (III) thiocyanide,  $SPCN$ , **Abdul W. Allaf and M. N. Odeh**, *Spectrochimica Acta Part A*, **62**, 282, (2005).

31. Gas-phase on line generation and infrared spectroscopic investigations of polyphosphazenes, (NPX<sub>2</sub>)<sub>3</sub> where X=F, Cl and Br. **Abdul W. Allaf**, *Spectrochimica Acta Part A*, **61**, 1499, (2005).
32. Optical limiting action of new fullerene derivatives in solid host, **M. D. Zidan and A. W. Allaf**, ICONO/LAT 2005 Conference, **St. Petersburg, Russia**, May 11-15, (2005)
33. Optical Limiting Action in Poly(dimethylacetylenedicarboxylate), **Ali Al-Zier, A Allahham and Abdul W. Allaf**, *Current Science*, **95**, 75-78, (2008)
34. Structure and Vibrational Properties of Oxohalides of Vanadium, **Vincent Guiot , Irene Suarez Martinez , Philipp Wagner, Jonathan Goss , Abdul W. Allaf and Christopher Paul Ewels** , *Inorganic Chemistry*, **48** (8), pp 3660–3666.(2009).
35. Optical limiting behavior of acid blue29 under a low power CW He– Ne laser Irradiation, **M. D. Zidan, A. A. Mani, Abdul W. Allaf, Z. Ajji and A. Allahham** , *Acta Physica Polonica A*, **115**, 886, (2009)
36. Optical Limiting Action in Poly(ethylacetylenedicarboxylate), **Abdul W. Allaf Mohammed D. Zidan, Zaki Ajji, Ali Al-Zier, Dalal Naima and Ahmad Allahham** *Revue Roumaine de Chimie*, **55** (3), 199, (2010)
37. Optical limiting behavior of Sudan III dye doped polymer, **M. D. Zidan, Abdul W Allaf, Z. Ajji and A. Allahham** , *Optics & Laser Technology*, **42**, 531, (2010)
38. Optical limiting behavior of C<sub>60</sub> doped EthylenePropyleneDiene Polymethylene Polymer, **M. D. Zidan, Z. Ajji, Abdul W Allaf & A. Allahham**, *Optics & Laser Technology*, **42**, 600, (2010)
- 39 Determination of integral antioxidants capacity in Syrian hawthorn fruits and flowers using photochemiluminescence assay **Ghadir Zayzafoon, Adnan Odeh, Mazen Ibrahim, and Abdul Wahab Allaf**, *Herba Polonica*, **56**, 47, (2010).
40. Silver doped multiwalled carbon nanotubes: synthesis, purifications and identification, **Muthanna Ahmad, Elias Hanna BAKRAJI, M. Alibrahim, Imad ZIDAN and Abdul W. ALLAF**, in preparation for publications, (2011).
41. Optical Limiting Action with C<sub>60</sub> in Poly(dimethylacetylenedicarboxylate), **Mohammed D. Zidan , M B Alsous , Abdul W. Allaf, Ali Al-Zier and A Allahham**, *Optics & Laser Technology*, **43**, 1343-1346, (2011).
42. Investigation of Optical Limiting Properties of Acid Blue29 in Various Solvents, **M. D. Zidan, Z. Ajji, Abdul W Allaf and A. Allahham** , *Optics & Laser Technology*, **43**, 1347-1350, (2011).
- 43 Measurements of essential oil extract and antioxidants in Syrian Myrtus communis L. leaves using photochemiluminescence assay, **Ghadir Zayzafoon, Adnan Odeh, Yahia Mahzia and Abdul Wahab Allaf**, *Herba Polonica*, **57**,5, (2011).

44. PIXE investigation of in vitro release of chloramphenicol across polyvinyl alcohol/acrylamide hydrogel **M. S. Rihawy, A. Alzier and A. W. Allaf.**, *Nuclear Instruments and Methods in Physics Research B*, **269**, 1892-1898, (2011).
45. Optical Limiting Action with C<sub>60</sub> in Poly(ethylacetylenecarboxylate), **Mohammed D. Zidan, M B Alsous, Abdul W. Allaf, A Allahham, Ali Al-Zier** *Optics & Laser Technology*, **44**, 2282, (2012).
46. Determination of essential oil composition by GC-MS and integral antioxidant capacity using photochemiluminescence assay of two *Thymus* leaves: *Th.syriacus* Boiss. and *Th.cilicicus* from different Syrian locations, **Ghadir Zayzafoon, Adnan Odeh, and Abdul Wahab Allaf**, *Herba Polonica*, **58**,70-84, (2012).
47. Thermoanalytical study of barley seeds infected with *Pyrenophora graminea*, **M. I. E. Arabi, A. W. Allaf and M. Jawhar**, *Journal of Plant Biology Research*, **1**, 119, (2012).
48. FTIR spectroscopic efficiency of Eugenol methylether additive as free radical scavenger agent to sunflower cooking oil at high temperature and different concentrations, **Ali Al-Zier, Hussam Allaham, Kholoud Latifi and Abdul W. Allaf**, *Revue Roumaine de Chimie*, **59**, 9-14, (2014).
49. Investigation of nonlinearity and diffraction ring patterns of carbon nanotubes, **Mohammed D. Zidan , Abdul W. Allaf, M B Alsous and A Allahham**, *Optics & Laser Technol*, **58**, 128-134, (2014).
50. Investigation of optical nonlinearity of C<sub>60</sub> doped acetylenedicarboxylic acid polymer **Mohammed D. Zidan, Abdul W. Allaf, A Allahham, Ali Al-Zier** *Optics & Laser Technology*, **68**, 60-66, (2015).
51. Z-scan measurements of the third order optical nonlinearity of C<sub>60</sub> doped poly(ethylacetylenecarboxylate) under CW regime, **Mohammed D. Zidan, M. B. Alsous, Abdul W. Allaf, A Allahham, Ali Al-Zier, H. Rihawi**, *Optik*, **127**, 2566-2569, (2016).
52. Z-scan measurements of single walled carbon nanotube doped acetylenedicarboxylic acid polymer under CW laser. **M. D. Zidan, A. W. Allaf, A Allahham, A. Al-Zier** *Optics & Laser Technology*, **80**, 72-76, (2016).
53. Isolation, Structural Characterization and Antiproliferative activity of phyco red seaweed *laurencia papillosa* on MCF-7 human breast cancer cells, **Hossam murad, Ahmed Ghannam, Adnan Odeh and Abdul Wahab Allaf**, *International Journal of Biological Macromolecules*, ref. **BIOMAC7060**, *accepted, in press.*,(2017).
- 54 Chitosan Loaded with Silver Nanoparticles,CS-AgNPs using *Thymus Syriacus*, Wild mint and Rosemary Essential Oils Extracts As Reducing and Capping Agents, **Fadi AL-Shnani, Thanaa Al-Haddad, Francois Karabet and Abdul Wahab Allaf**, *J Phys Org Chem.*:e3680. <https://doi.org/10.1002/poc.3680>, (2017)
- 55 Nonlinear optical properties of tetracarbonyl-chromium triphenyl phosphine Complex, **Mohammed D. Zidan, M. B. Alsous, Abdul W. Allaf, A Allahham, Ali Al-Zier**,



*Chinese Physics B*, vol. 26, no. 4, 044205, (2017).

56. Determination of chemical components fractions and integral antioxidants capacity of Syrian Aniseed and Fennel fruits extract using GC-MS analyses and photochemiluminescence assay, **Adnan Odeh and Abdul Wahab Allaf**, *Chemical papers Journal*, submitted for publication, (2017).

57. The bioactivity of soluble Sulfated agarocolloid from the red seaweed *Hypnea musciformis*, **Marie Jazzara, Ahmed Ghannam, Abdulmunim AlJapawe, Shadi Soukaria, Adnan Odeh, Abdul Wahab Allaf and Hossam murad**, *Bioactive Carbohydrates and Dietary Fibre*, submitted for publication, (2017).

58. Effect of Gamma Radiation, Total Antioxidant Capacity and Sterols Contents in Syrian extra virgin Kaissy variety olive oil, **Mahfoz Al-Bachir, Yahia Koudsi, Thanaa Al-Haddad and Abdul Wahab Allaf**, *Journal of materials and Environmental Sciences*, submitted for publication, (2017).

59. Cotton flowering behavior, fiber traits and geneexpression under water stress, **Dana Jawdat, Abdul Wahab Allaf, Nowrez Taher, Ali Al-Zier, Nour Morsel, Zaki Ajji, and Bassam Al –Safadi**, *Industrial Crops and Products*, submitted for publication, (2017)

60. Two Dimensional FTIR spectroscopic analysis of crystallization in cross-linked poly(ether ether ketone), **Abdul G. Al Lafi, Ali Alzier, Abdul W. Allaf**, *Applied polymer*, submitted, (2017).

### **Internal Scientific Research Publications:**

1. A Report on Scientific Laboratory Study: Thermal Properties of Fullerenes, the Effect of Organic Solvents on the Purity and Decomposition Temperature of C<sub>60</sub>. **A.W. Allaf and Z. Harriri**, AECS-C/RSS 113, March (1995).

2. **Part 1:** Scientific Research Final Report: AECS, **A. W. Allaf**, Spectroscopic and the On-line Production of OPX<sub>3</sub> in the Gas phase, where X= F, Cl and Br AECS-C- FRSR 137, May (1997). **Part 2:** The Production and Gas Phase Infrared Spectra of Phosphorus (III) oxyhalides, O=P-X where X= F, Cl, Br and I, AECS-C- FRSR 137 , May (1997).

3. Scientific Research Final Report: AECS, **A. W. Allaf, M. Alibrahim and A. Harfoush** A Comprehensive study : Spatial and Temporal Evolution of Heavy water Ratio in Various Syrian Natural Water AECS-C- FRSR 152, December (1997).

4. Scientific Research Final Report:: Part I AECS, **Ali Al-mohamad A. W. Allaf**, A Preliminary Study on The Optical and Electrical Properties of C<sub>60</sub> Thin Films and their Applications .AECS-C-S/ FRSR 151 , December (1997).

5. Scientific Research Final Report:: AECS, **M. Alibrahim, A. W. Allaf, and M. Kassem**, Gas Phase Spectroscopic studies of Unstable Molecules Using FTIR Technique, AECS-C- FRSR 155 , December (1997).

6. Scientific Research Final Report:: AECS, **Z. Ajji, A. W. Allaf**, Gas Phase Spectroscopic studies of Heavy Elements Compound (Group V) Using FTIR Technique, AECS-C- FRSR 179 , December (1997).

7. Scientific Research Final Report:: AECS, **M. D. Zidan, A. W. Allaf**, Laser Induced Fluorescence of I<sub>2</sub> Molecules, AECS-PH/RRE 65, September (1999).

8. Scientific Research Final Report: AECS, **A.W. Allaf**, Gas Phase Generation and IR Spectroscopy of Unstable NSSCN and OPSCN Molecules, AECS-C/FRSR 198, Nov (1999).
9. Scientific Research Final Report:: AECS, **A. W. Allaf and R. Baidoun**, Developing a method for the reduction of Florid Content in Syria Commercial Phosphoric acid to a very Concentration, AECS-C/RSS 305, February (2000).
10. Scientific Research Final Report:: AECS, **A. W. Allaf**, The Gas Phase On-line Production of Polyphosphazine (NPX<sub>2</sub>)<sub>3</sub> and their Identifications by Infrared Spectroscopy, AECS-C/FRSR 227, December, (2000).
11. Scientific Research Final Report:: AECS, **A. W. Allaf and M. D. Zidan**, Determination of Isotopic Shift for Some Compounds Having Stable Isotopic Composition Using FTIR Technique, AECS-C/FRSR 257, December, (2001).
12. Scientific Laboratory Study Report: AECS, Synthesis of N,N,-bis-(1-carboxy-2-mercapto) ethylene diamine, **A.W. Allaf, M.A. Nakawa, A. Shaban**, AECS-C/RSS 393, August, (2001).
13. A Report on Scientific Laboratory Study: Synthesis of 2,4,6-trimethyl-3-bromo-acetanilidiodiiminodio acetic acid, **A. W. Allaf, M. A. Nakawah and A. Shaban** AECS-C/RSS 409, November, (2001).
14. A Report on Scientific Laboratory Study: Synthesis of M-Idobenzyl Guanidine, **A. W. Allaf, M. A. Nakawah, M. Al-Asaad and A. Shaban**, AECS-C/RSS 405, November, (2001).
15. A Report on Scientific Laboratory Study: preparation of active carbon from Syrian petroleum coke, **A. W. Allaf and D. Naima**, AECS-C/RSS 406, November, (2001).
16. A Report on Scientific Laboratory Study: Purification of Syrian petroleum coke, **A. W. Allaf**, AECS-C/RSS 511, May, (2003).
17. Scientific Research Final Report: AECS, **M. D. Zidan and A. W. Allaf**, Optical limiting of Aromatic Organic Compounds, AECS-C/FRSR 287, August, (2003).
18. A Report on Scientific Laboratory Study: Synthesis of N,N,-bis-(1-carboxy-2- mercapto) ethylenediamine dihydrochlorid **A. W. Allaf, M. A. Nakawah**, , AECS-C/RSS 588, November, (2004 )
19. Scientific Research Final Report: AECS, **A. W. Allaf**, Molecular Quantum Calculations of Small species, AECS-C/FRSR 328, March, (2005).
20. Scientific Research Final Report: AECS, **Mahmoud Al-Ktaifani , Adnan Nakawa, Zouheir Tabbaa and A. W. Allaf** , Synthesis and characterizations of Cu(I) complex of 2-methoxy isobutyl isonitrile [Cu(MIBI)<sub>4</sub>]BF<sub>4</sub>, AECS-C/RSS, 676, June,(2006).
21. Scientific Research Final Report: AECS, **A. W. Allaf**, The Gas Phase On-line Production of OVSCN, OVCN, SPSCN and SPCN: theoretical and experimental investigations, AECS-C/FRSR 346 January, (2006).

22. Scientific Research Final Report: AECS, **Mahmoud Al-Ktaifani , Adnan Nakawa, A. Nahmo, A.W. Allaf**, Synthesis of benzooyl-mercaptoacetylglycylglycylglycine,  $C_6H_5COSCH_2CO(NHCH_2CO)OH$  (Bz-Mag3), AECS-C/RSS, 701, Nov.,(2006).
23. A Report on Scientific Laboratory Study: Preparation of (Polymer-Metal) composite for optical limiting action, **A. W. Allaf, Ali Al-Zair and A. Allahham**, AECS-C/RSS, 734, June.,(2007).
24. Scientific Research Final Report: AECS, Determination of antioxidant component in some plant extract and fresh fruits, **Ghadir Zayzafoon, A. W. Allaf and Adnan Odeh**, AECS-CH/FRSR, 426, March,(2009).
25. A Report on Scientific Laboratory Study: Preparation of conjugated poly(ethylacetylenecarboxylate) as optical limiter of laser radiation, **A. W. Allaf, Ali Al-Zair and D Alnaima**, AECS-C/RSS, 801, March.,(2009).
26. Scientific Research Final Report: Optical limiting study of  $C_{60}$  doped conjugated organic compounds, **M. D. Zidan, A. W. Allaf and Z. Ajji** AECS-PH/FRSR, 456, March, (2010).
- 27 A Report on Scientific Laboratory Study: Effect of ultraviolet on the  $C_{60}$  dissolved in organic solvents (photo-polymerization of fullerenes) **A. W. Allaf, Ali Al-Zair and D. Alnaima**, AECS-C/RSS, 881, June.,(2010).
- 28 A Report on Scientific Laboratory Study: Investigation of in-vitro release of chloramphenicol across alcohol/acrylamide hydrogel using ion beam analysis, FTIR and UV analytical techniques: **S. Rihawy, A. W. Allaf, Ali and Al-Zair**, AECS-C/RSS, 927, May.,(2011).
29. A Report on Scientific Laboratory Study: Preparation of carbon nanotubes using arc discharge in gas and liquid nitrogen media: **A. W. Allaf, M. Ahmad and E. H. Bakraji**, AECS-C/RSS, 939, June, (2011).
- 30.Scientific Research Final Report: Optical limiting study of  $C_{60}$  doped poly(dimethylandicarboxylate) / poly(ethylacetylenecarboxylate) polymer, **M. D. Zidan, and A. W. Allaf** AECS-PH/FRSR, 521, October, (2011).
31. A Report on Scientific Laboratory Study: Determination of free radical scavenger agent efficiency in Syrian consumed sunflower oil using FT-IR spectroscopy, **A. W. Allaf and Ali Al-Zair** AECS-C/RSS, 1023, June, (2013).
32. A Report on Scientific Laboratory Study: Determination of integral antioxidants capacity in Aniseed and Fennel Seeds using photochemiluminescence assay and GC-MS, **A. W. Allaf and Adnan Odeh**, AECS-C/RSS, 1069, July, (2014).
33. A report on External executed project: Treatment of Hydrogen Fluoride Acid stored at LAB Factory in Deir Ali, **I. Othman, S. Al-Masri, Z. Ajji, A. W. Allaf, L. Al-Attar, K. Kharfan**, AECS-C/RSS, 1091, December, (2014).
34. Scientific Research Final Report: Optical limiting action study in carbon nanotubes in solution and solid state, **M. D. Zidan, A. W. Allaf , A Allahham and Ali Al-Zair**, AECS-PH/FRSR, 647, March, (2016).

## International Seminars

1. **A.W. Allaf**, Spectroscopic Studies of Thiazyl Halides and Their Phosphorus Analogues, *Southern Universities Spectroscopy Conference*, **University of Southampton, UK**, March, 1989.
2. **A.W. Allaf**, Gas Phase Spectroscopic Studies of Short-Lived Molecules, **University of Wuppertal, Germany**, 18<sup>th</sup> June, 1996.
3. **A.W. Allaf**, Laser Generation of Carbon Clusters and their Reactions, **University of Wuppertal, Germany**, 25<sup>th</sup> June 1996.
4. **A. W. Allaf**, Weekly seminar at the Department of Chemistry about my various activities.
5. **A.W. Allaf**, LAMP seminar, Gas Phase Infrared Spectroscopy of Small Short Lived Molecules, **ICTP Miramare-Trieste, Italy**, 16/2/1999.

## Conferences, Meetings, Workshops and Scientific Visits

1. Southern Universities Spectroscopy Conference, **University of Reading, UK**, March 1987.
2. Southern Universities Spectroscopy conference, **University of Sussex, UK**, March 1988.
3. Carbon and Related Materials, **University of Nottingham, UK**, Feb.1988.
4. Southern Universities Spectroscopy Conference, **University of Southampton, UK**, March 1989.
5. Eleventh Colloquium on High Resolution Molecular Spectroscopy, **University of Giessen, Germany**, September, 18-22, 1989.
6. Faraday Discussion Meeting Group (Symposium No.25), Large Gas Phase Clusters, **University of Warwick, UK**, 12-14 December 1989.
7. Southern Universities Spectroscopy conference, **University of Oxford, UK**, March 1990.
8. First Conference on Lasers in Chemistry, **ICTP Miramare- Trieste, Italy**, 11-15 June, 1990.
9. Southern Universities Spectroscopy conference, **University of Bristol, UK**, March 1991.
10. Southern Universities Spectroscopy conference, **Imperial Collage London, UK**, March, 1992
11. Clusters and Fullerenes, **ICTP Miramare-Taieste, Italy**, 12-19 June 1992.
12. Second Conference on Laser in Chemistry, **ICTP Miramare-Trieste, Italy**, 15-19 June 1993.
13. **Fullerenes 93**, The First International Interdisciplinary Colloquium on the Science and Technology of fullerenes, **Santa Barbara, California, USA**, 27 June-1st July 1993.
14. Winter College on Spectroscopy and Application, **the Abdus Salam Center, International Center for Theoretical Physics, Trieste, Italy**, 8-26 February 1999.
15. Scientific visit to **PINSTECH**, 26 March - 3 April, 2000, Islamabad, Pakistan,
16. Scientific visit to **CCCM**, 1-16 July 2000, Hyderabad, India.
17. Fifth Arab Conference on the Peaceful uses of Atomic Energy, 13-17 Nov., 2000, Beirut-Lebanon.
18. Joint ICTP-INFM School and Workshop on “**Spectroscopic Investigations of The Collective Dynamics in Disordered System** 17 -28 June, 2002, Trieste, Italy.
19. Sixth Arab Conference on the Peaceful uses of Atomic Energy, 14-18 Dec. 2002, Cairo, Egypt

20. Fourth International Conference on **Inorganic Materials**, 19-21 September, 2004, University of Antwerp, Belgium.
21. Scientific visit to Analytik Jena, Germany focusing on photochemistry, 19– 26 Nov, 2004.
22. Conference on nanotechnology in carbon and related materials, *Nanotec05*, 31st Aug.-3rd Sep. 2005, University of Sussex at Brighton, UK
- 23 Scientific visits to Sussex University at Brighton, UK (20/8- 4/9), 2005
24. Scientific visit to Chinese Academy of Science to attend the meeting on the Science at the Nanoscale (14-25) August 2006, Beijing, China
25. Conference on Scientific Research Outlook & Technology in the Development in the Arab World, Dec., 11-14, 2006, Damascus, Syria
- 26 Scientific visit to Nantes University, Nanoscience, centre, (26/1-2/2/2008) France.
27. Attending the 17<sup>th</sup> International conference on Composite materials, ICCM-17, 27-31 July 2009, Edinburgh, UK
28. Attending the "First International Seminar on Nano-materials in Energy & Environment in Syria", 21- 23/9/2010, Damascus University, Department of Physics, Syria
29. Head Mentor for the Syrian team, 43<sup>th</sup> International Chemistry Olympiad, 9-18 July, 2011, Ankara, Turkey
30. Head Mentor for the Syrian team, 44<sup>th</sup> International Chemistry Olympiad, 21-30 July, 2012, Washington DC, the University of Maryland, USA
31. Head Mentor for the Syrian team, 45<sup>th</sup> International Chemistry Olympiad, 15-24 July, 2013, Moscow State University, Russia
32. Head Mentor for the Syrian team, 46<sup>th</sup> International Chemistry Olympiad, 20-29 July, 2014, Hanoi, Vietnam
33. Head Mentor for the Syrian team, 47<sup>th</sup> International Chemistry Olympiad, 20-29 July, 2015, Baku,, Azerbaijan
34. Head Mentor for the Syrian team, 48<sup>th</sup> International Chemistry Olympiad, 23 July-1 August, 2016, Tbilisi,, Georgia
35. Head Mentor for the Syrian team, 49<sup>th</sup> International Chemistry Olympiad, 6-15 July, 2017, Nakhon Pathom,, Thailand