



**PERSONAL INFORMATION:**

<b>Name</b>	Alaa Khudhair Hashim Al Khalaf, BSc. MSc. PhD MRSC MACS MISDS	
<b>Nationality</b>	Iraqi	
<b>Date of Birth</b>	01-07-1977	
<b>Sex</b>	Male	
<b>Marital status</b>	Married	<b>Kids: 2</b>
<b>Workplace</b>	Al-Qasim Green University, College of Environmental Sciences, Environmental Health Dep., Al-Qasim Town, Babylon Province, 51013, Iraq.	
<b>Home Address</b>	Babylon Province, Staff Residential Campus of Babylon University, House No. 28, 51002, Iraq.	

**PERSONAL PARTICULARS:**

<b>Languages</b>	Arabic & English	<b>Age: 45</b>
<b>E-mails</b>	dralaa_al-khalaf@hotmail.co.uk; dralaa_al-khalaf@environ.uoqasim.edu.iq	
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**QUALIFICATION:**

Academic Qualifications	University – College – Department	Country	Years
BSc	Babylon - Science – Chemistry	Iraq	2001
MSc	Babylon - Science – Chemistry	Iraq	2005
PhD	Cardiff - School of Chemistry	UK	2012

**EDUCATION:**

<b>Academic rank</b>	Professor, Doctor of Philosophy PhD
<b>Major field</b>	Chemistry
<b>Specialization</b>	<p><b>Physical Chemistry/ Green Chemistry:</b></p> <ol style="list-style-type: none"> <li>Green and Sustainable Advanced Nanomaterials.</li> <li>Green Chemistry: Role of Solid Catalysts on Organic Reactions.</li> <li>Fourth State of substance: Liquid Crystalline Polymers (PEN).</li> </ol>
<b>University, College</b>	<p><b>Workplace:</b> Al-Qasim Green University, College of Environmental Sciences, Environmental Health Department, Al-Qasim District 8, Babylon, Iraq. From July 2013 till now.</p> <p>2. Babylon University, College of Science, Chemistry Dep., from 2006 till July 2013.</p> <p><b>PhD Study:</b> Cardiff University, School of Chemistry, Wales-UK, From Sept 2007 until 16 May 2012.</p>
<b>Administrative assignments</b>	<ol style="list-style-type: none"> <li>Head of Environmental Health Department, from March 2022.</li> <li>Head of Environment Department from 2018 until March 2022.</li> <li>Member of the University Quality Assurance Council; Chairman the Quality Assurance and University Performance Committee in the college to follow up the standards and topics of the educational institution's work such as data to enhance the principle of transparency, evaluation of the quality of the E-learning project, questionnaires and evaluation of the quality of teaching and learning, evaluation and follow-up of academic programs for undergraduate and postgraduate studies, evaluation questionnaires of teaching method, training programs and qualifying examinations for students' research work, 2013-till now.</li> <li>Successfully completing a program of instruction in "Change Leadership and Management and Training of Trainers (TOT) Skills Workshops", awarded by World Learning Organization, held from October 9 and November 20, 2017 in Baghdad, Iraq.</li> <li>Successfully completion a training of "Building Local Training Capacity-Train the Trainer Master Program", on March 16-18, 2021, sponsored by Global Affairs Canada.</li> <li>One of the Six Iraqi leaders for chemical security (ICSL) within the administrative structure of the Higher Ministerial Committee (SMC)/ (MOHESR), supervises the development of safety and chemical, biological, radiological, and nuclear safety program in Iraqi universities, from 2017 till now.</li> </ol>

	<p>6. Vice Dean for scientific and administrative affairs at Environmental Sciences College, Al-Qasim Green University, from Oct 2013 until Sep 2016.</p> <p>7. Coordinator of Al-Qasim Green University to hold Chemistry Security and Safety Trainings (CSST) at the University that sponsored by the U.S. Dep. of State, Chemical Security Program CSP, from 2014 until now.</p> <p>8. Assistant lecturer, Babylon University, College of Science, Dep. of Chemistry, from 2006-2012. Then Lecturer from 2012 until 2015. Then Assist. Prof. from April 2015 until April 2020, then appointed as a Professor in Chemistry in September 2020.</p>
<b>Titles:</b> <b>MSc Thesis</b>	Synthesis and Study of Liquid Crystalline Behavior and Electrical Properties of New Types of Schiff's Bases Dimmers and Its Complexes.
<b>PhD Thesis</b>	Effect of Solid Catalysts on Selective Formation of Naphthalene Derivatives.
<b>No. of Published Papers</b>	> 37
<b>No. of Iraqi Patents</b>	<p><b>4 Issued Iraqi patents and 3 under evaluation</b>, where a PhD thesis was applied for a bar on access for the longest permitted period by registry of Cardiff University, UK, 2012:</p> <ol style="list-style-type: none"> <li><i>Green cover for desertification treatment</i>, Iraqi patent no. (6063) at 23-12-2019.</li> <li><i>Semiconductors and mesogenic organic magnets from liquid crystalline materials</i>, Iraqi patent no. (5069) at 18-9-2017.</li> <li><i>Designing a new system for measuring thermal properties for liquid crystalline nanomaterials</i>, Iraqi patent no. (4936) at 16-5-2017.</li> <li><i>Efficient selective di-alkylation of polycyclic aromatics to form important materials in the chemical industry</i>, Iraqi patent no. (3699) at 27-11-2013.</li> </ol>

#### EXPERIENCES:

<b>Teaching Experience</b>	<ol style="list-style-type: none"> <li>Babylon University, Babylon, Iraq, <b>2004-2007; 2012-2013</b>: Physical, inorganic, organic, and analytical chemistry to science, engineering, and agriculture colleges.</li> <li>Demonstrations in School of Chemistry, Cardiff University, Cardiff, UK, <b>2008-2012</b>.</li> <li>Al-Qasim Green University, College of Environmental Sciences, Babylon, Iraq, <b>2013 until now</b>: Green Chemistry, Environmental Chemistry, Sustainability Development, Chemistry of Water, Chemistry of Atmosphere, and Organic Chemistry.</li> </ol>
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#### SKILLS:

<b>Professional Societies</b>	<b>Member of</b> 1. Royal Society of Chemistry, UK (MRSC). 2. American Chemical Society, USA (MACS). 3. International Society for Development and Sustainability, Japan (ISDS). 4. IUPAC-Affiliate Member, 2009-2014.
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#### AREA OF RESEARCH INTEREST:

<ol style="list-style-type: none"> <li>Physical Chemistry, Green Chemistry, Catalysis, Nano-Organics.</li> <li>Chemical Safety and Security.</li> <li>Physical Organic Chemistry.</li> <li>Thermotropic and Lyotropic Liquid Crystalline materials.</li> <li>Chemistry of Water, Chemistry of Atmosphere, Chemical Pollution.</li> </ol>
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#### TRAINING PROGRAMS:

<ol style="list-style-type: none"> <li>Training program on Interministerial chemical, biological, radiological and nuclear management, sponsored by the U.S. CTR office, 15 June-12 July 2021, Iraq.</li> <li>Training on "Building Local Training Capacity-Train the Trainer Master Program", sponsored by Global Affairs Canada, March 16-18, 2021.</li> <li>Chemical Asset Tracker (CAT©) Training, sponsored by the U. S. CRDF Global and Sandia National Laboratories, February 2-4, 2020, Istanbul, Turkey.</li> <li>Chemical risk management workshop for Mosul &amp; Tikrit Universities, sponsored by the U. S. Department of State's Chemical Security Program, November 21-23, 2019 Erbil, Iraq.</li> <li>Three-way research collaboration (the UK-Iraq-Turkey) between Cardiff University and Al-Qasim Green University and Gaziosmanpasa University, as a visiting scholar from 2015 until now. <a href="https://muhendislik.gop.edu.tr/Icerik.aspx?d=trTR&amp;mk=31084&amp;m=tanitim&amp;bidr=11150&amp;bid=11562">https://muhendislik.gop.edu.tr/Icerik.aspx?d=trTR&amp;mk=31084&amp;m=tanitim&amp;bidr=11150&amp;bid=11562</a></li> <li>Iraqi Ministerial Program of Chemical Security Leaders, collaboration with U.S. Department of State and sponsored by PNNL and WL, 2017-2018.</li> </ol>
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7. Chemical Security Workshop at Brookhaven National Laboratory, New York, USA, sponsored by the U.S. Department of State, Chemical Security Program, 12-16 October 2015.
8. Iraqi Chemical Security Workshop at Sandia National Laboratories, Albuquerque, New Mexico, USA, sponsored by the U.S. Department of State, Chemical Security Program, 20-22 October 2015.
9. Training program of Chemical Security and Safety, at Al-Qasim Green University/ Environ. Sciences College, at 23 Nov into 4 December 2014.
10. Bridge Program of English Language at Cardiff University, 2007, UK.
11. One-month training course for excellent undergraduate students at Suez-Canal University, Egypt, August 2000, sponsored by Iraqi Government and Union of Arabic Universities.

#### AWARDS:

<b>Prizes and Grants</b>	<ol style="list-style-type: none"> <li>1. Principal Investigator for Many Grants of Chemical Safety and Security sponsored and approved by CSP/ USA for Al-Qasim Green University, 2015-2022.</li> <li>2. Visiting Scholar at University of Gaziosmanpasa, Tokat-Turkey, 2015-2018.</li> <li>3. Prize of "Iraqi Science Day 2014", organized by Iraqi Ministry of Higher Education and Scientific Research, Baghdad-Iraq.</li> <li>4. Prize of "Higher Education for Sciences 2013 in Chemistry", organized by Iraqi MOHESR, Baghdad-Iraq, Dec 2013.</li> <li>5. Appreciations and thankful letters from Iraqi Minister of Higher Education and Scientific Research in 2012, 2013 and 2014, on the academic and scientific achievements through PhD study at Cardiff University/ UK and through an outstanding work at Al-Qasim Green University/ Iraq.</li> <li>6. Many thankful letters from both Presidents of Babylon University and Al-Qasim Green University on the academic and scientific achievements through my work as one of staff, in 2012, 2013-2020.</li> <li>7. Iraqi sponsorship for PhD study in Chemistry at Cardiff University-UK, 2007-2012.</li> </ol>
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#### GRANTED CONFERENCES:

1. The 1<sup>st</sup> – 4<sup>th</sup> National Conference of Chemical, Biological, Radiological and Nuclear (CBRN) Safety and Security, 16-18 April 2016-2019, Baghdad-Iraq.
2. The 3<sup>rd</sup> International Conference on Global Trends in Pure and Applied Chemical Sciences, Dec 8<sup>th</sup>-9<sup>th</sup>, 2017, SRM University, Delhi-NCR Campus, Ghaziabad, India.
3. International Conference on Environmental and Occupational Health (ICEOH), 8<sup>th</sup> -9<sup>th</sup> April 2014, at Putrajaya Marriott Hotel, Malaysia.
4. 1<sup>st</sup>, 4<sup>th</sup>, and 5<sup>th</sup> International Conferences for Environmental Sciences, Babylon University, 3-5 Dec 2007, 2012, 2013, Babylon-Iraq.
5. Royal Society of Chemistry, UK (RSC) bursary for Nurnberg Congress: 3<sup>rd</sup> EuCheMS Chemistry Congress; Chemistry - the Creative Force, August 2010, Nuremburg, Germany.
6. RSC Organic Division Regional Meeting, Jan 2008, University of Oxford, UK; RSC Organic Division Regional Meeting, South, 21 Jan 2009, School of Chemistry, University of Southampton, UK; RSC Organic Division South & West Annual 1-Day Meeting, 6th Jan 2010, University of Bath, UK; Spring Conference at School of Chemistry, Cardiff University, Cardiff-Wales, April 2010, UK.
7. Grant from Iraqi Prime Minister Office for participation of oral communication, at 19<sup>th</sup> IUPAC Conference on Physical Organic Chemistry (POC), Santiago de Compostela, Spain, July 2008.
8. International Conference "Health and Environment in Iraq" organized by University of Stony Brook/USA and University of Babylon /Iraq, at Amman, Jordan, 19-22 Sep 2005.

#### PUBLICATIONS

1. Keith Smith, **Alaa K.H. Al-Khalaf**, Kıymet Berkil Akar, Benson M. Kariuki, and Gamal A. El-Hiti, Polybromination of naphthalene using bromine over a montmorillonite clay and regioselective synthesis of 2,6-dibromonaphthalene, *ARKIVOC* 2022, v, S1-S6. DOI: <https://doi.org/10.24820/ark.5550190.p011.717>
2. Baker A. Joda, Zena M. Abed Al-Kadhim, Hussian J. Ahmed, **Alaa K.H. Al-Khalaf**, A Convenient Green Method to Synthesize  $\beta$ -Carotene from Edible Carrot and Nanoparticle Formation, *Karbala International Journal of Modern Science*, 2022, 8(1), pp. 20–27. <https://kijoms.uokerbala.edu.iq/home/vol8/iss1/2>; DOI: <https://doi.org/10.33640/2405-609X.3200>
3. Mohammed Al-Jawasim and **Alaa K.H. Al-Khalaf**, Authors for Book-Chapter (Forty six in Part IV. Recent Trends and Tools): Nanotechnology and Green Nano-Synthesis for Nano-Bioremediation, Book Editor: Junaid Ahmad Malik, "Microbes and Microbial Biotechnology for Green Remediation, (2022), publishing by Elsevier Inc., Cambridge, MA 02139, USA. ISBN: 9780323904520. Elsevier Link: <https://www.elsevier.com/books/microbes-and-microbial-biotechnology-for-green-remediation/malik/978-0-323-90452-0>
4. Smith, Keith, **Alaa K.H. Al-Khalaf**, Kıymet Berkil Akar, Doaa J.K. Al-Badri, Benson M. Kariuki, and Gamal A. El-Hiti "Effects of Structured Solids on Regioselectivity of Dibromination of Naphthalene" *Catalysts*, 2021, 11(5), 540. <https://doi.org/10.3390/catal11050540>
5. Hadi, A.A., Fairouz, N.Y., Atiyah, A.J., **Al-Khalaf, A.K.H.**, Removal of Phenol Dye by CoFe 2O<sub>4</sub>-CdFe 2O<sub>4</sub>, Nanocomposites, *IOP Conference Series: Earth and Environmental Science*, 2021, 722(1), 012023. DOI: <https://doi.org/10.1088/1755-1315/722/1/012023>

6. Doaa, K. Jawad and **Alaa K.H. Al-Khalaf**, Effect of green nanomaterials on removal of water contamination by lead and cadmium, *Indian Journal of Ecology*, 2021, 48, pp. 285-289.
7. Alaa K. H. Al-Khalaf, Application of sustainable green nanomaterials for desert cultivation, *Plant Archives*, Vol. 20, Supplement 2, pp. 2600-2604, 2020.
8. **Alaa K.H. Al-Khalaf**, Mohammed H. Al-Jawasim, Hasan S. Karkoosh, and Huda A. H. Hameedi, the promising role of hydrogel in reducing the acidic effects of aspirin in human stomach, *AIP Conference Proceedings 2144*, 020010 (2019); <https://doi.org/10.1063/1.5123067>
9. **Alaa K.H. Al-Khalaf**, Green sustainable natural nanomaterials and their promising applications, *Journal of Materials Science and Nanotechnology*, vol. 3, p. 53, Proceeding of 22<sup>nd</sup> International Conference on an Advanced Nanoscience and Nanotechnology, May 16-17, 2019, Prague, Czech Republic.
10. Dhurgham AA Al-Sultany, Munaf DF Al-Aseebee, **Alaa K. H. Al-Khalaf**, Bioremediation for irrigated soil by contaminated water with toxic elements, *Int. J. Agricult. Stat. Sci.*, Vol.15, pp.97-102, 2019.
11. **Alaa K.H. Al-Khalaf**, Karar A. Obeid, Abdulazeez Obeid Mousa, Muna Aoudah Zghair, Preparation and Structural Properties of Liquid Crystalline Materials and its transition metals Complexes, *Asian Journal of Chemistry*, vol.31, pp.393-395, 2019.
12. **Alaa K.H. Al-Khalaf**, Falah H. Hussein, Authors for Book-Chapter (Four): Green and sustainable advanced nanomaterials, Book Editor(s): Shakeel Ahmed and Chaudhery Mustansar Hussain, "Green and Sustainable Advanced Materials: Volume 1: Processing and Characterization", Vol. 1, pp.93-106, (2018), published by *John Wiley & Sons, Inc.* ISBN Information: Online ISBN: 9781119407089; Print ISBN: 9781119407041.
13. Keith Smith, **Alaa K.H. Al-Khalaf**, Gamal El-Hiti, Samuel Patisson, Highly regioselective di-tert-amylation of naphthalene over reusable H-mordenite zeolite catalyst, *Green Chem.*, 2012, 14, 1103-1110.
14. **Alaa K.H. Al-Khalaf**, Preparation and study of liquid crystalline behavior for derivatives of benzidine, hydrazine, and naphthalene and their green applications, *Poster No. AB-88/PP-43, Proceeding of 3<sup>rd</sup> International Conference on Global Trends in Pure and Applied Chemical Sciences*, Dec 8<sup>th</sup> -9<sup>th</sup>, 2017, SRM University, Delhi-NCR Campus, Ghaziabad, India.
15. **Alaa K.H. Al-Khalaf**, Hussein L. Al-Jboory, The Reality of Chemical Safety and Security at Al-Qasim Green University and Future Directions, *Iraqi National Journal of Chemistry*, 2018, Special Issue, Babylon University, Proceeding of 2<sup>nd</sup> National Conference of Chemical, Biological, Radiological and Nuclear Safety and Security, 16-18 April 2017, Iraq.
16. Hussein L. Al-Jboory, **Alaa K.H. Al-Khalaf**, Training Programs for Students on Chemical Safety and Security: Al-Qasim Green University as a Case Study, *Iraqi National Journal of Chemistry*, 2018, *Special Issue*, Babylon University, Proceeding of 2<sup>nd</sup> National Conference of Chemical, Biological, Radiological and Nuclear Safety and Security, 16-18 April 2017.
17. **Alaa K.H. Al-Khalaf**, Green Chemistry and Sustainability of Chemical Safety and Security, *Iraqi National Journal of Chemistry*, 2016, 16 (2), 71-81, Babylon University, Iraq. Proceeding of 1<sup>st</sup> National Conference of Chemical, Biological, Radiological and Nuclear Safety and Security, 16-18 April 2016, Iraq.
18. Abdulazeez Obeid Mousa, Saleh Hadi Kazem, **Alaa K.H. Al-Khalaf**, Shaymaa J. Abdul-Razzaq, Preparation and Study some of the Liquid Crystalline Properties of Schiff Bases, *Special Issue, Iraqi Journal of Mechanical and Material engineering*, Pages: 39-55, *Babylon University*, Proceeding of 3<sup>th</sup> International Conference of Materials Engineering College, 20-21 May 2015.
19. Abdulazeez Obeid Mousa, **Alaa K.H. Al-Khalaf**, Muna Aoudah Zghair, Preparation and Study the Structural Properties and Magnetic Susceptibility of a Liquid Crystal, *Journal of Babylon University, Pure and Applied Sciences*, 2016, 3 (24).
20. Abdulazeez Obeid Mousa, **Alaa K.H. Al-Khalaf**, Muna Aoudah Zghair, Preparation and Study the Structural Properties for Liquid Crystalline Materials and its Complexes with Some Transition Metals, *Special Issue, Journal of Nahrain University*, Proceeding of 1<sup>st</sup> International Conference of Physics for Sustainability Development (ICPSD), 28-30 October 2014, Iraq.
21. **Alaa K.H. Al-Khalaf**, Green Chemical Applications: Highly Efficient Process on Selective Formation of Industrial Materials, *Special Issue, International Journal of Current Research and Academic Review*, Proceeding of the International Conference on Environmental and Occupational Health (ICEOH), 8<sup>th</sup> -9<sup>th</sup> April 2014, at Putrajaya, Malaysia.
22. Abdulazeez O. Mousa, **Alaa K.H. Al-Khalaf**, Shaymaa J. Abdul-Razzaq, Qaiss M. Sh. Al-Jomali, Study of Magnetic Property for Different Types of Prepared Mesogenic Organo-Semiconductors, *Special Issue, Journal of Baghdad University*, proceeding of 1<sup>st</sup> International Conference on Physics and Engineering (ICPE), 30-31 December 2013, Baghdad, Iraq; Published by *Journal of Al-Qadisiya University*, 4, 2015.
23. Jaleel K. Ahmed, **Alaa K.H. Al-Khalaf**, Green Industrial Aspects of Jaleel's Process in Providing Free Carbon-Iron Industry, *Special Issue, Journal of Babylon University*, Proceeding of 5<sup>th</sup> International Conference of Environmental Sciences, 3-5 December 2013.
24. Dakhil N. Taha, **Alaa K.H. Al-Khalaf**, Ali L. Ali, Determination of Pollution Level of Heavy Metals in some of Food Agricultural Plants, that irritated by Treatment Station for sewage water in Hilla City/ Iraq, *Special Issue, Journal of Babylon University*, Proceeding of 4<sup>th</sup> International Conference of Environmental Sciences, 3-5 December 2012.
25. **Alaa K.H. Al-Khalaf**, G. El-Hiti and K. Smith, Regioselective Bromination of Naphthalene over Solid Catalysts as an Approach to the Synthesis of Valuable Industrial Intermediates, Poster at 3<sup>rd</sup> *EuCheMS Chemistry Congress; Chemistry-the Creative Force*, August 29-2 September 2010, Germany.

26. **Alaa K.H. Al-Khalaf**, Gamal A. El-Hiti and Keith Smith, Approaches to the synthesis of valuable industrial intermediates via regioselective bromination of naphthalene over solid catalysts, Poster and workshop at *AlKindi Engineering Conference, 17 November 2008*, Baghdad, Iraq; Poster at *Cardiff Spring Conference, 5-6 May 2010*, Cardiff University, UK.
27. **Alaa K.H. Al-Khalaf** and K. Smith, Highly Efficient Catalytic Bromination of Naphthalene, Poster at *2<sup>nd</sup> International IUPAC Conference on Green Chemistry, 14-20 September 2008*, Moscow, Russia.
28. **Alaa K.H. Al-Khalaf**, Ali J. Hussein, Salih M. Haddawi and Dakhil N. Taha, Chemical Structure and property of Liquid crystalline behavior, *oral presentation at 19<sup>th</sup> IUPAC Conference on Physical Organic Chemistry at 13-18, July 2008*, Santiago de Compostela, Spain.
29. **Alaa K.H. Al-Khalaf**, Salih M. Haddawi and Oda M. Yasser, New types of liquid crystals semiconductors, *Iraqi National Journal of Chemistry*, 2006, **24**, 475-487, Babylon University, Iraq.
30. Dakhil N. Taha, **Alaa K.H. Al-Khalaf**, Ahmed Ali and Muhanad M. Kareem, Yahya F. Abeed, Determination of Mn, Fe, Zn in blood samples of workers of TV workshops in Hilla City, *Journal of Kerbala University*, 2008, **6(4)**, 20.
31. Dakhil N. Taha, Sadiq Jafar, **Alaa K.H. Al-Khalaf** and Yahya Fahim, Determination of heavy metals in plants around the fuel-stations in Hilla city, *Journal of Kerbala University*, 2008, **6 (4)**, 36-34.
32. Dakhil N. Taha, **Alaa K.H. Al-Khalaf**, Salih H. Kadhun and Yahya Fahim, Determination of heavy metals pollution by dust of computers, *Journal of Kerbala University*, 2008, **6 (4)**, 50-57.
33. Dakhil N. Taha, Ahmed Ali and **Alaa K.H. Al-Khalaf**, Determination of Lead, Nickel and Zinc in plants of North Al-Diwany, *Journal of Kerbala University*, 2008, **6 (4)**, 70-58.
34. Dakhil N. Taha **Alaa K.H. Al-Khalaf** and Isra'a A., Determination of Lead in Hilla city, *Special Issue, Proceeding of 2<sup>nd</sup> Annual Conference for Environment researches, Journal of Babylon University, Local Environment Research Centre, 2005*.
35. Salih M. Haddawi, Dakhil N. Taha and **Alaa K.H. Al-Khalaf**, Preparation and Study of Liquid Crystalline and Spectral Properties of Hydrazine derivatives (Schiff's Bases), *Special Issue, Proceeding of 3<sup>rd</sup> Annual scientific conference, 9-10 April, 2007, Journal of Kerbala University*.
36. Dakhil N. Taha and **Alaa K.H. Al-Khalaf**, Ali L. Ali, Determination of Pollution level in Copper in Worker's Blood of Cupper's Tools Industry, *Special Issue, Proceeding of International Conference "Health and Environment in Iraq" organized by University of Stony Brook, USA and University of Babylon, Iraq, at Amman, Jordan, 19-22 September 2005*.
37. Dakhil N. Taha and **Alaa K.H. Al-Khalaf**, Ali L. Ali, Determination of Pollution level in Food Salt, *Special Issue, Proceeding of 2<sup>nd</sup> Symposium of Environment at Environment Unit, Science College, Al-Qadisiya University, May 2005*.

#### REFERENCES:

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