

CURRICULUM VITAE

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Funded Research Projects:

- **His Majesty Trust Funds:**
- **Simultaneous determination of glucose, fructose, sucrose and maltose in Omani natural honeys using novel microfluidic paper-based assays and smartphone readout**

Haider A.J. Al Lawati*, Fakhr Eldin O.Suliman, Salma M. Z. AlKindy, Mortada Iranifam, (HM/SCI/CHEM/20/01), 2020-2023 (R.O 62,000)

- **Novel microfluidics devices for the determination of the total phenolic content in Omani honey and fruits samples**

Haider A.J. Al Lawati*, Fakhr Eldin O.Suliman, Mohammed Zourob, (HM/SCI/CHEM/16/01), 2016-2019 (RO. 72,500)

- **Developing Microfluidic Systems for Routine Analysis of Pharmaceutical samples**

Haider A.J. Al Lawati*, Fakhr Eldin O.Suliman, Salma M. Z. AlKindy, Ali M. Al-Lawati, Stephen J. Haswell, Imad Eldin M. Nour, (HM/SCI/CHEM/09/01), 2009-2013 (RO. 90,000)

- **The Research Council Funds:**
- **Rapid liquid chromatography-mass spectrometry methods for monitoring synthetic adulterants in herbal medicines and dietary supplements**

Haider A.J. Al Lawati*, Fakhr Eldin O.Suliman, Salma M. Z. AlKindy, (RC/SCI/CHEM/14/03) 2014-2017. (168,950 O. R).

- **Capillary HPLC systems for pharmaceutical and biological analysis using microfluidic chip chemiluminescence detector**

Haider A.J. Al Lawati*, Fakhr Eldin O.Suliman, Salma M. Z. AlKindy, Ali M. Al-Lawati, (RC/SCI/CHEM/12/01):, The Research Council, 2012-2015 (RO. 143,600)

- **Hospital wastewater treatment using modified carbonaceous sorbents from Omani date palm leaflets**

El-Said El-Shafey*, **Haider A. J. Al Lawati**, Saleh Al-Busafi, Raheel Shah, 2013-2018 (142,000 OR).

- **Petroleum Development Oman Grants:**
 - **Feasibility study for using Surfactants as EOR option for Lekhweir Oil Fiel in Oman (Phase II)**
Mohamed Aoudia*, Haider A. J. Al Lawati, 2011-2012, (69,738.846 RO)
- **SQU- UAE Grant:**
 - **Harnessing solar energy and green chemical approach for the degradation of endocrine disruptor chemicals present in ground and wastewater**
Selvaraj Rengaraj*, Haider Al Lawati, Mohammed Al Meetani*, Abbas A. Khallel, 2016 - 2019 (30000 O.R)
- **Sultan Qaboos University Internal Grants:**
 - **Towards μ -total analytical system μ TAS (lab on a chip) for determination of phenols and amines in water using coumarin-6- sulfonyl chloride(C_6SCl) as a fluorogenic label**
Haider A.J. Al Lawati*, Fakhr Eldin O.Suliman, University Internal Grant (IG/SCI/CHEM/09/04), 2009-2012 (RO. 10,600)
 - **Effect of chip geometry on chemiluminescence signal intensity**
Haider A.J. Al Lawati*, Fakhr Eldin O.Suliman (IG/SCI/CHEM/16/06), 2016-2018(R.O 2000)
 - **Chiral separation of neurotransmitter drugs using microchip electrophoresis with contactless conductivity detector**
Fakhr Eldin O Suliman*, Haider A. J. Al Lawati, 2013 - 2015 (7950 OR).
 - **Treatment of hospital wastewater using sorbents from modified by-products of Omani date palm**
El-Said El-Shafey*, Haider A.J. Al Lawati, (IG/SCI/CHEM/10/04), 2010-2013(7,395 RO)

Awards:

1. First GCC award of excellence in Chemistry, 7th December 2015:

This award is the most prestigious award in GCC. The awards cover areas such as science, medicine, industry, literature, politics and diplomacy, economics, youth and sports, security, and philanthropy which are of crucial importance to the progress and welfare of the GCC states, the Arab world and humanity at large.

- 2. National Research Award in the research area Culture, Basic and Social Sciences, 2018, TRC-Oman (Category I)**
- 3. National Research Award in the research area Culture, Basic and Social Sciences, 2018, TRC-Oman ((Category II)**
- 4. National Research Award in the research area Culture, Basic and Social Sciences, 2016, TRC-Oman ((Category I)**

5. **Distinguished Reseracher Award from SQU, 2019**
6. **Best innovation, Oman first innovation exhabition, 2011.**

Published Book:

- **Nanomaterials for Healthcare, Energy and Environment**, Editors: Aamir Hussain Bhat, Imran Khan, Mohammad Jawaid, Fakhreldin O. Suliman, Haider Al-Lawati, Salma Muhamed Al-Kindy, 2019, (Publisher: Springer) (<https://link.springer.com/book/10.1007/978-981-13-9833-9>)

Selected Refereed Journal Papers:

(Full list can be found in Google scholar)

<http://scholar.google.com/citations?user=ZRRwLTQAAAAJ&hl=en>

Corresponding Author *

1. Javad Hassanzadeh, **Haider A. J. Al Lawati***, Iman Al Lawati, Metal–Organic Framework Loaded by Rhodamine B As a Novel Chemiluminescence System for the Paper-Based Analytical Devices and Its Application for Total Phenolic Content Determination in Food Samples, *Anal. Chem.*, **2019**, 91, 16, 10631
2. Mortaza Iranifam, **Haider A. J. Al Lawati***, Monitoring the antioxidant capacity in honey and fruit juices using a microfluidic device with a NaHCO₃-H₂O₂-Co²⁺ chemiluminescence reaction, *Food Chemistry*, **2019**, 297, 124930
3. Baqia Al Mughairy, **Haider A. J. Al Lawati***, FakhrEldin O.Suliman, Investigating the impact of metal ions and 3D printed droplet microfluidics chip geometry on the luminol potassium periodate chemiluminescence system for estimating total phenolic content in olive oil, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, **2019**, 221, 117182
4. Baqia Al Mughaiy, **Haider A. J. Al-Lawati***, FakhrEldin O.Suliman, Characterization and application of nanocolloidal Mn(IV) in a chemiluminescence system for estimating the total phenolic content in pomegranate juices using a nanodroplet microfluidics platform, *Sensors and Actuators B: Chemical*, **2018**, 277, 517
5. **Haider A. J. Al Lawati***, Baqia Al Mughairy, Iman Al Lawati, FakhrEldin O. Suliman, Enhancing the chemiluminescence intensity of a KMnO₄ formaldehyde system for estimating the total phenolic content in honey samples using a novel nanodroplet mixing approach in a microfluidics platform, *Luminescence*. **2018**, 33, 863
6. Afsal Mohammed Kadavilpparampu, **Haider A. J. Al Lawati***, Fakhr Eldin O. Suliman, Chemiluminescence selectivity enhancement in the on-chip Ru(bpy)₃²⁺ system: The potential role of buffer type and pH in the determination of hydrochlorothiazide in combined formulations and human plasma, *Luminescence*, 2017, 32, 1494.

7. Afsal Mohammed Kadavilpparampu, **Haider A. J. Al Lawati***, Fakhr Eldin O Suliman, Microfluidic photoinduced chemical oxidation for Ru (bpy) 3^{3+} chemiluminescence—A comprehensive experimental comparison with on-chip direct chemical oxidation, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 2017, 183, 247
8. **Haider A. J. Al Lawati***, Idris Al Busaidi, Afsal M. Kadavilpparampu, FakhrEldin O. Suliman, Determination of Common Adulterants in Herbal Medicine and Food Samples using Core-shell Column Coupled to Tandem Mass Spectrometry, *Journal of Chromatographic Science*, 2017, 55, 232
9. Buthaina Al Haddabi, **Haider A. J. Al Lawati***, FakhrEldin O. Suliman, A comprehensive evaluation of three microfluidic chemiluminescence methods for the determination of the total phenolic contents in fruit juices, *Food Chemistry*, 2017, 214, 670
10. Buthaina Al Haddabi, **Haider A. J. Al Lawati***, FakhrEldin O. Suliman, An enhanced cerium(IV)–rhodamine 6G chemiluminescence system using guest–host interactions in a lab-on-a-chip platform for estimating the total phenolic content in food samples, *Talanta*, 2016, 150, 399
11. Afsal Mohammed Kadavilpparampu, **Haider A. J. Al Lawati***, FakhrEldin O. Suliman, Salma M. Z. Al Kindy, Determination of the pseudoephedrine content in pharmaceutical formulations and in biological fluids using a microbore HPLC system interfaced to a microfluidic chemiluminescence detector, *Luminescence*, 2015, 30, 1242
12. **Haider A. J. Al Lawati***, Buthaina Al Haddabi, FakhrEldin O. Suliman, A novel microfluidic device for estimating the total phenolic /antioxidant level in honey samples using a formaldehyde/potassium permanganate chemiluminescence system. *Analytical Methods*, 2014, 6, 7243
13. **Haider A. J. Al Lawati***, Afsal Mohammed Kadavilpparampu, FakhrEldin O. Suliman, Combination of capillary micellar liquid chromatography with on-chip microfluidic chemiluminescence detection for direct analysis of buspirone in human plasma, *Talanta*, 2014, 27, 230.
14. **Haider A. J. Al Lawati***, Mira M. Al-Nadabi, Gouri B. Varma, Fakhr Eldin O. Suliman, Hasnaa Al-Abri, A lab-on-a-chip device for analysis of amlodipine in biological fluids using peroxyoxalate chemiluminescence system, *Luminescence*, 2014, 29, 1148
15. **Haider A. J. Al Lawati***, Zeiyana M Al Dahmani, Gouri B. Varma, FakhrEldin O. Suliman, Photoinduced oxidation of tris (2,2'- bipyridyl)ruthenium(II)-perxodisulphate chemiluminescence system for the analysis of mebeverine HCl in pharmaceutical formulations and biological fluids using a two-chip setup, *Luminescence*, 2014, 29, 275
16. **Haider A. J. Al Lawati***, Eiman Al Gharibi, Salma M. Z. Al Kindy and Fakhr Eldin O. Suliman, Ali M. Al-Lawati, Parallel micro-device for high throughput analysis of levofloxacin using tris (2, 2'-bipyridyl) ruthenium(II) (Ru (bipy) $_{32+}$) and peroxydisulphate chemiluminescence system, *Journal of AOAC international*, 2014, 97, 1056

17. **Haider AJ Al Lawati***, Mira M Al-Nadabi, Gouri B Varma, Fakhr Eldin O Suliman, A lab on a chip device for the determination of tranexamic acid using a peroxyoxalate chemiluminescence system, *Analytical Methods*, 2013, 5, 6205.
18. Bassam Alfeel*, Ma'moun Al-Rawashdeh, Ali Bumajdad, **Haider Al Lawati**, Mohamed Abdelgawad, Zouhair Baccar, Issam Ben Salem, Faysal Benaskar, A review of nanotechnology development in the Arab World, *Nanotechnology Reviews*, 2013, 2, 359.
19. **Haider A. J. Al Lawati*** Flow-based analysis using microfluidics-chemiluminescence systems, *Luminescence*, 2013, 28, 618 (Review Article).
20. **Haider A. J. Al Lawati***, Gouri B Varma and Fakhr Eldin O. Suliman, High-throughput method for the analysis of venlafaxine in pharmaceutical formulations and biological fluids, using a tris(2,2'-bipyridyl) ruthenium(II)-peroxydisulphate chemiluminescence system in a two-chip device, *Luminescence*, 2013, 28, 44
21. **Haider A. J. Al Lawati***, Mahmood Al-Azwani, Gouri B. Varma, Fakhr Eldin O. Suliman and Salma M. Z. Al Kindy, Towards an ideal method for analysis of lisinopril in pharmaceutical formulations using a tris (2,2'-bipyridyl)-ruthenium(II) - peroxydisulphate chemiluminescence system in a two chip device, *Analytical Methods*, 2012, 4, 773.
22. **Haider A. J. Al Lawati***, Mahmood Al-Azwani, Gouri B Varma, Fakhr Eldin O. Suliman, and Khaled A. Shalabi, Analysis of phenylephrine hydrochloride in pharmaceutical formulations and biological fluids using (2,2'-bipyridyl) ruthenium(II) - peroxydisulphate chemiluminescence system in a two-chip microdevice, *Analytical Methods*, 2011, 3, 2585
23. **Haider A. J. Al Lawati***, Zeiyana M Al Dahmani, Fakhr Eldin O. Suliman, Salma M. Z. Al Kindy and Ali M. Al-Lawati, Analysis of fexofenadine in pharmaceutical formulations using tris (1,10-phenanthroline) - ruthenium(II) peroxydisulphate chemiluminescence system in a multi-chip device, *Luminescence*, 2011, 26, 762
24. **Haider A. J. Al Lawati***, Eiman Al Gharibi, Salma M. Z. Al Kindy, Fakhr Eldin O. Suliman, and Ali M. Al-Lawati, High throughput for the analysis of cetirizine hydrochloride in pharmaceutical formulations and in biological fluids using a tris (2,2'-bipyridyl) ruthenium(II) - peroxydisulphate chemiluminescence system in a two-chip device, *Talanta*, 2011, 85, 906
25. **Haider A.J. Al Lawati***, Fakhr Eldin O. Sulimana, Salma M. Z. AlKindy, Ali M. Al-Lawati, Gouri B.Varmaa, Imad Eldin M. Nour, Enhancement of on chip chemiluminescence signal intensity of tris(1,10-phenanthroline)-ruthenium(II) peroxydisulphate system for analysis of chlorpheniramine maleate in pharmaceutical formulations, *Talanta*, 2010, 82, 1999.

Review journal papers for the following journals:

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| • Sensors and actuators B:
Chemicals | • Current Pharmaceutical
Analysis |
| • Food Analytical method | • IET Nanobiotechnology |
| | • Food chemistry |

- Journal of Food Science & technology
- Journal of Taibah University Medical Sciences
- Photochemical and photobiological science
- RSC Advances-RSC
- Chemical Engineering & Technology
- The Analyst
- Lab on a Chip
- Chemical Engineering & Technology
- Analytical Methods
- Analytical Letters
- Green Processing and Synthesis
- Luminescence
- Journal of AOAC International
- Luminescence

Invited Speakers:

- “Lab on a paper” a promising approach for teaching chemistry in schools, 5th Kuwait Conference of Chemistry, Kuwait, 12 -14 March 2018.
- Future directions in miniaturized chemical-analysis systems, Guest speaker at Al Sharqia University Research Day, 5th March 2019
- Microfluidics chemiluminescence technique for analysis of pharmaceutical, biological and food samples, Haider A. J. Al Lawati*, Nano Micro Technology Conference, Morocco 26-28th October 2014.
- Achieving "green" separation and sensitive detection through micellar-microbore systems with microfluidic - chemiluminescence detector, Haider Al Lawati*, Afsal Mohammed Kadavilpparampu, FakhrEldin Suliman, April 25, Analytix 2014, Dalian, China
- Flow-based analysis using microfluidics-chemiluminescence systems, Haider A. J. Al Lawati*, Fakhr Eldin O. Suliman, Salma M. Z. Al Kindy and Ali M. Al Lawati, Jordan., November 2012.
- A novel approach for analysis of drugs in biological fluids, The First International Chemistry Conference, Oman, 10-12 October 2015.
- Capillary HPLC systems for pharmaceutical and biological analysis using microfluidic chip chemiluminescence detector, The Annual Research Forum 2015, The Research Council, Oman, 26-27 October 2015

Other Scholar activities:

- Chair of the Organizing Committee of Chemistry-SQU conference: Green and Sustainable Chemistry (November 2017)
- Established first research laboratory in microfluidics in the region (May 2009).
- Established first Liquid Chromatography Tandem Mass spectrometry (LC-MS/MS) facility in the Department of Chemistry (January 2015)
- Coordinator of first registered research group in the college of Science “Luminescence techniques and miniaturization of analytical systems”. The group was established on 16th January 2018.

- Deputy Chairman in Research Grant Committee TRC from May 2015. This committee is the technical committee that evaluate and recommend research proposals submitted to TRC for funding.
- An official member of the technical delegate representing The Sultanate in the conference of commissioners on "Minamata Convention on Mercury", Kumamoto, Japan- 7 to 11 October, 2013.
- Honored to be a sole reviewer for the Oman chamber of commerce and industry (OCCI) Award for Innovation for Chemistry related innovation in 2017.