



CURRICULUM VITAE

Ahmed Ibrahim Osman Ahmed

Personal Information

Name Ahmed Ibrahim Osman Ahmed
Current Position..... PhD Student- Academic assistant
School and University..... Queen's University Belfast, UK.
Place of Birth..... Egypt-Red-Sea-Safaga
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Job Title

I am PhD student at Queen's University, Belfast, UK. And before that, Academic Teaching Assistant staff in Chemistry department, Faculty of Science, South Valley University-Qena Egypt.

To teaching and assisting in the delivery of academic education courses for undergraduates, the courses include:

- 1- Inorganic chemistry
- 2- Physical chemistry
- 3- Analytical chemistry
- 4- Catalysis chemistry
- 5- General chemistry

Academic Qualifications

- 1- **Bachelor's Certificate**..... B.Sc. in Chemistry with an overall grade "Very Good" Chemistry Department, Faculty of Science, South Valley University, Qena, 2006.
- 2- **TOEFL iBT** 64 = TOEFL PBT 507-510.
- 3- **IELTS** Total Score (6)
- 4- **ICDL** International Computer Driving License (2007).
- 5- **Diploma in physical Chemistry** at 2009 in South Valley University, Egypt.
- 6- **Master in Chemistry in 2009** "Synthesis of dimethyl ether from methanol over pure and modified homemade γ - alumina". I have finished my master thesis in Jan. 2013 and from that date I am working as a academic teaching assistant staff in Faculty of Science, South Valley University, Qena, Egypt.
- 7- **PhD student** at School of Chemistry and Chemical Engineering, Queen university- Belfast, UK from August 2013 till now.

List of publications

- 1- Effect of the Precursor on the performance of Alumina for the Dehydration of Methanol to Dimethyl Ether.

A.I. Osman, J.K. Abou-Dahrieh, D.W. Rooney, S.A. Halawy, M.A. Mohamed and A. Abdelkader

Appl. Catal. B, Environmental, 127(2012) 307-15.

- 2- A bimetallic catalyst on a dual component support for low temperature total methane oxidation

Ahmed I. Osman, Jehad K. Abu-Dahrieh, Fathima Laffir, Teresa Curtin, Jillian M. Thompson, David W. Rooney

Appl. Catal. B, Environmental, Jan.(2016) DOI: <http://dx.doi.org/doi:10.1016/j.apcatb.2016.01.017>

- 3- *Production of Dimethyl Ether from Methanol over Boehmite Loaded with x% Silver as Nanocomposite Catalysts.* S.A. Halawy, M.A. Mohamed, and A.E. Osman.

- 2nd Kuwait Conference of Chemistry & 16th Arab Chemists Conference Kuwait, April 14-17 (2012), OP-12, p.70.

Conference attended

- 1- The 38th Annual International Conference for the Association of Egyptian American Scholars (AEAS) with an oral presentation for this topic "Catalytic production of Dimethyl ether, as a new clean fuel, from methanol over modified γ -Al₂O₃ catalysts" at 2011 in Egypt.
- 2- The Applied catalysis and reaction engineering international conference in 19th April 2012 in Warwick University in Coventry, UK as oral presentation.
- 3- Green growth 2 May 2012 as audience in Senate room, Lanyon building, Queen's University Belfast, UK.
- 4- Young Life Scientist Ireland 2014 (YLSI) Symposium at Trinity College Dublin, 1st of March 2014 with an oral presentation, the title was New and Clean Fuel "Catalytic Production of Dimethyl Ether From Bio-Methanol as A Renewable Fuel Over Modified Alumina"

- 5- ICCBE 2015: International Conference on Chemical and Biochemical Engineering on April, 27-28, 2015 at Paris, France with an oral presentation, the title was Production of Renewable, Clean and Bio-fuel (DME) from Biomethanol over Copper Modified Alumina Catalyst.
- 6- 66th Irish Universities Chemistry Research Colloquium 19-20 June 2014 in Galway Ireland by poster presentation.
- 7- ICCBE 2015: 17th International Conference on Chemical and Bio-process Engineering June, 4-5 2015 at New York, USA, with oral presentation “Catalytic combustion of methane over Co/Mo and Co/Mn catalysts at low temperature”.
- 8- Joliot-Curie Conference 2015, on 16-17 September at Cambridge University with poster presentation.
- 9- UK Catalysis Conference 2016 (UKCC 2016) with an oral presentation “**The role of the Pd(0)/PdO redox cycle and balance of support acidity and oxygen mobility in achieving lower temperature methane oxidation**” on 6th – 8th January 2016.

Members

- 1- Assocaited member in RSC, membership number is 529591.
- 2- Member in IChemI Membership no:99955442
- 3- STEM Ambassador (Science, Technology, Engineering and Maths) in United Kingdom.
- 4- I was one of the team who break the record for the largest ever science lesson by 1339 pupils across Northern Ireland at 25 February 2015.

Prizes

- 1- I won the student vote for **Best Poster** at the poster competition of Queen’s University Belfast with more than 60 poster involved in the competition.
- 2- I won the **Best Chemist** in Qena-Egypt 2013 with the application of the production of the renewable bio-fuel from agricultural waste
- 3- **Fame lab 2015 Competition**, I was one of the finalists in this competition from large number of competitors all over Northern Ireland.
- 4- **Dragons’ Den Competition**, I am one of the finalists in this competition which was held in 29th April 2015.
- 5- **Invent 2015 Competition**; I passed the first stage in this competition.
- 6- I was nominated for the **Entrepreneurial Student** at QUB 2014-2015.
- 7- **I am a Scientist Competition** and reach the final stage in this competition.
- 8- **Organizing an international Conference** about Energy at QUB this May, 2015, with different speakers covering various aspects of energy research from UK, Sweden, Egypt and Ireland
- 9- I was one of the team who broke the **Guinness World Records** for the largest ever science lesson.
- 10- I got already my **Degree Plus** from QUB University.
- 11- I won the **Best Business Idea** for an international student 2015.

References

1. Prof. David Rooney

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Abstract of my current research

I am working in the area of production of (New) and (Environment Friend) Energy Sources from renewable sources such as bio-methanol over catalysts. My research has been looking at ways to produce the bio-fuel, from agricultural waste or from natural gas, cheaper and easier than currently available. We want it to be widely available to a global community and not limited to those that can afford it.

I am working on the production and use of Bio-fuels from green resources such as bio-gas. My research specifically investigates environmentally friendly catalysis to produce clean energy sources and the associated reduction of air pollution.

The specific area of research, which this summary relates to, was aimed at finding a simple, robust and cost effective way to produce the bio-fuel (**Dimethyl ether (DME)**) from agricultural wastes. It was targeted towards developing countries which can't afford the price of other conversion technologies. In order to produce DME, methanol and acidic catalysts are needed. Methanol is currently produced as a by-product in sugar fermentation and refining and is quite common in Egypt which is my home country. Furthermore Egypt has the largest aluminum company in the Middle East producing Aluminum Solid Waste (ASW). In my previous research we developed a patent on converting ASW to alumina catalysts. This opened up the possibility to take waste methanol and waste aluminum to produce the bio-fuel DME, cheaply and robustly. Within QUB I was able to take this research much further and develop greater insights into how these catalysts could be further improved. In addition QUB allowed me to explore the opportunities for commercialization of the technology and develop my communication skills. The impact which this research can have in Egypt and beyond is significant as this bio-renewable fuel will aid in solving several energy and the pollution problems. Moreover, I have taken these research skills to develop catalysts for the more challenging methane partial oxidation reactions. For the development and dissemination of the DME process I have presented at the Fame lab 2015 and INVENT 2015 competitions and reached the final in the Fame lab.

To contact me

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