

Curriculum Vitae



1. Personal Information	
Name	Dr. Mohammed Awwad Al-Dabbas Winner of ALECSO's Young Innovators Award in renewable energy Inventor of the environmental off grid portable fridge https://www.youtube.com/watch?v=4UkGRz1tdRg
Nationality	Jordanian
Contact Information	madabbas@yahoo.com 0795580449

2. Academic Qualifications				
	University	Year	Country	Major
B.A	University of Jordan	Jan.2002	Jordan	General Mechanical Engineering
M.A	University of Jordan	Jun. 1992	Jordan	General Mechanical Engineering
Ph.D	University of Jordan	Sept. 1990	Jordan	General Mechanical Engineering

3. Research and Teaching Interests

Teaching Interests:

I teach the following courses in Mutah University

- Solar cooling
- Oil shale technology
- Wind energy
- Energy Conversion
- Solar Energy
- Power Plant
- Heating, Ventilation, and Air-Conditioning
- Refrigeration
- Turbo-machinery
- Fluid Mechanics (2)
- Fluid Mechanics (1)
- Engineering Mechanics
- Engineering Mechanics 2
- Strength of Materials
- Strength of Materials Lab.
- Heat transfer 1
- Heat transfer 2
- Heat Transfer Lab.
- Fluid Lab
- Advanced Fluid Mechanics
- Internal Combustion Engines Lab
- Numerical analysis
- Car automotive
- Statistic and probability
- Engineering analysis

Research
• Environment Protection
• Solar Energy and Wind Energy
• Air Conditioning and Refrigeration
• CFD Using Phonics
• System Modeling
• Fluid Mechanics
• Combustion Engine
• Finite Difference and Finite Element
• Numerical Analysis Solutions
• Manufacture Process
• Energy Conservation
• Heat transfer
• Solar cooling
• Environment Protection
• Solar Energy and Wind Energy
• Air Conditioning and Refrigeration
• CFD Using Phonics
• System Modeling
• Fluid Mechanics
• Combustion Engine
• Finite Difference and Finite Element
• Numerical Analysis Solutions
• Manufacture Process
• Energy Conservation
• Heat transfer
• Solar cooling

Scientific Responsibilities
1. Inventions to serve the Arab World
2. Participation in shows creativity and innovation patents
3. Member of the National Committee of the pops
4. Member of the National Committee of the solar cooling
5. Participating in student festivals
6. launch a national campaign to use solar cells to generate electricity
7. bring international companies to invest for the use of solar cells to generate electricity
8. volunteer with the completion of the training the students to establish a pioneering company Foundation
9. Committee member cooperation with the US Agency for Economic Development
10. Vocational Rehabilitation Industries renewable energy
11. Find the young inventors and encourage them

Experience Record:

1. Associate Professor, Mutah University since February 2005
2. Head of Technical Studies & Research of oil shale in New & Renewable energy Department (solar energy, wind energy, geothermal energy, biomass and oil shale) in Ministry of Energy mineral Resources since 1992-until January 2005. My work concentrated on the following point:
 - Follow up the updated technologies of New & Renewable Energy utilization.
 - Promote and contact with the foreign companies which concentrate its work on developing the technology of utilization of New & Renewable Energy.
 - Carrying out a local research on utilization of oil shale and writing reports about these points.
 - Supervising local research on Jordanian oil shale combustion through cooperation between MEMR and University of Jordan (Graduate, and Undergraduate students)
 - Evaluate the technical & economical studies of oil shale utilization which submitted from foreign companies.
 - Collect the overseas of oil shale resources (its capacity, characteristics)
 - Evaluate the environmental impact of solid fuel combustion and its pollution especially gaseous concentration, hazardous waste generated, ash...etc.
3. I am governmental member ship in the development of national plan for implementation of the Stockholm conventional on persistent organic pollutions team (POPs) since May 2004 and I am still working in the team.-I am the representative of Ministry of Energy in POPs team.

The main objective of (POPs) project for the Ministry of Energy are:

- determining treatment methods for pops substances and safe disposal procedures .
 - finding a production process can be improved in order to minimize or eliminate the production of pops substance
 - the importance of the environmental effect related to various types of pops substance.
 - establishing data base on necessary information on chemical toxicological character is tics of POPs substance.
4. International regulations and conventions since I'm a member of team which work on regulation of energy conservation and its environmental law.
 - Working as Teaching & Research Assistant (TA) at the University of Jordan for a period of eight Semesters from 1997 to 2002. The Subjects assisted in our teaching are: Thermodynamics II, static, Dynamic, Strength of Material (1), Strength of Material (2), Finite Element, Power Plants.
 - Working as Teaching & Research Assistant (TA) at the University of Jordan form 1990 to 1992. The Subjects assisted in our teaching are: Thermodynamics II, Mechanical Engineering Lab (Thermodynamics)

- Executive secretary of the organizing committee of the first Jordanian Mechanical Engineering Conference since May 1994, and this conference was held in Amman in the period of 25-28 June 1995.
- A supervising representative of MEMR on Undergraduate Final Year Project of Fluidized Combustion in Jordanian Oil Shale in cooperation with Dr. M. Hammad as supervisor (Mech. Eng. Dept.) from University of Jordan during 1994. This project includes design , build, construct and testing the validity of the constructed fluidized combustor. This project will determine the basis and standard of design criteria of oil shale combustor.
- Assistant supervisor representative of MEMR on a current project for graduate student (Master thesis) with the representative of the University of Jordan- Dr. M. Hamdan (Mech. Eng. Dept). This project includes design and building a pilot CFB and study the temperature distribution, gaseous emission, combustor efficiency, and environment impact.
- Assistant supervisor representative of MEMR on a current project for graduate student (Master thesis)in Environmental Department. This project includes the evaluation of the environmental impact of oil shale in Sultani area.

4.Publication

A. Books

B. Articles

No	Title	Publisher	Journal /Vol. & No./ Pages
1	The Performance of the First Jordan Badia's Solar Powered Refrigerator	هذا البحث تم تنفيذه بناء على براءة ثلاجة [الاختراع وصناعة ثلج شمسية المطلية بالمواد النانويه عن طريق استغلال [تأثير التبريد التبخيري مع ملاحظة عدم سرد التفاصيل الجزئية للاختراع في البحث	Applied Solar Energy ISSN: 0003-701X (print version) Journal no. 11949 July 2012, Volume 48, Issue 3 , pp 175-179 Allerton Press, Inc. Springer
2	The Performance of NANO Adsorption Solar cooling generator unit Papers were indexed by IEEE Xplore digital Library. https://www.uop.edu.jo/it-dreps2013/10.pdf	هذا البحث تم تنفيذه بناء على براءة الاختراع خليط من طلاء ومواد [نانوية لتحسين أداء أنظمة التبريد الشمسي الإمتصاصية [أو الإدمصاصية مع ملاحظة عدم سرد التفاصيل الجزئية للاختراع في البحث	Published /IT-DREPS Conference & Exhibition May 29-31, 2013 Amman, Jordan http://ieeexplore.ieee.org/xpl/abstractAuthors.jsp?reload=true&arnumber=6588150&punumber%3D6578008%26sortType%3Dasc_p_Sequence%26filter%3DAND(p_IS_Number%3A6588122)%26pageNumber%3D2
3	The performance of Ammonia/calcium chloride absorption solar powered ice maker	هذا البحث تم تنفيذه بناء على براءة الاختراع خليط من طلاء ومواد [It has been nominated for publication in the Elsevier/ <i>Sustainable Cities</i>

		<p><u>ناتوية لتحسين أداء أنظمة</u> <u>التبريد الشمسي</u> <u>الإمتصاصية</u> <u>الإدمصاصية</u> <u>مع ملاحظة عدم سرد</u> <u>التفاصيل الجزئية</u> <u>للاختراع في البحث</u></p>	<p>and Society http://ees.elsevier.com/scs/default.asp</p>
4	<p>The Performance of the First Pilot Thermoacoustic Refrigerator www.davidpublishing.com/Download/?id=14842</p>	<p>أول بحث في للتلاجة الصوت حرارية</p>	<p>published in Journal of Energy and Power Engineering November 7 (2013) David Publicatio</p>
5	<p>Solar powered Sintering of Jordanian Silica Sand _ Papers were indexed by IEEE Xplore digital Library. https://www.uop.edu.jo/it-dreps2013/9.pdf</p>	<p>أول بحث في الوطن العربي لصهر الرمال الصحراوية باستخدام الطاقة الشمسية للحصول على مادة الكوارتز لدرجة حرارة بلغت 1600 درجة مئوية</p>	<p>published IT-DREPS Conference & Exhibition May 29-31, 2013 Amman, Jordan http://ieeexplore.ieee.org/xpl/abstractKeywords.jsp?reload=true&arnumber=6588149&pageNumber%3D133344</p>
6	<p>Design and Construction of a Passive Solar Power Clothing Dryer دراي كليلين على الطاقة الشمسية ^{a,*} Ali Alahmer, ^bMohammed Al-Dabbas</p>	<p>published in April 2014 Indexed In: ISI Thomson</p>	<p>Maxwell Science Publication/ Research Journal of applied science, engineering and technology http://maxwellsci.com/print/rjaset/v7-2785-2792.pdf</p>
7	<p>A Performance Analysis of Solar Chimney Thermal Power Systems http://www.doiserbia.nb.rs/img/doi/0354-9836/2011/0354-98361100017A.pdf</p>	<p>Vol. 15, No. 1, 2011. Thomson (impact factor 0.51)</p>	<p>THERMAL SCIENCE An international journal published by Society of Thermal Engineers of Serbia</p>

8	<p>The First Pilot Demonstration Solar Updraft Power Plant in Jordan</p> <p>http://www.tandfonline.com/doi/abs/10.1080/1478646X.2011.589516#.VHhwOTGUeAU</p>	<p>أول برج شمسي في الوطن العربي</p>	<p>International Journal of sustainable of energy Taylor & Frances 2011</p>
9	<p>Energy Extracted from Underground Rock Area by Using a Horizontal Closed Loop System in Muthah University/Jordan</p> <p>http://www.sciencedirect.com/science/article/pii/S0196890412001550</p>	<p>Published in Energy Conversion and Management/ Elsevier</p> <p>Volume 65, Pages 1-828 (January 2013)</p> <p>Global Conference on Renewable energy and Energy Efficiency for Desert Regions 2011 "GCREEDER 2011"</p>	<p>Impact Factor: 4.38</p> <p>Impact Factor: 2012: 2.775 © Thomson Reuters Journal Citation Reports 2013</p> <p>5-Year Impact Factor: 3.075</p>
10	<p>The December 2010 Household energy survey in Jordan</p>	<p>Published in June 2012</p> <p>Journal of Engineering – Assiut University</p>	<p>مجلة العلوم الهندسية - اسيوط</p>
11	<p>The Perfomance of Hybrid Photovoltaic Thermal (PV/T) Solar Collector. A Jordanian Case</p>	<p>published in the Winter (December 2014) issue</p> <p>http://www.tandfonline.com/toc/ucgn21/current#.UZSaurUp_Is</p>	<p>Taylor & Frances</p> <p>Energy Engineering Journal</p>
12	<p>Modeling And Simulation Study To Predict The Cement Portland Cyclone Separator Performance</p>	<p>Published 2014</p> <p>http://www.engg.uae.ac.ae/ejer/issues/v19/pdf_is_s1_19/2.pdf</p>	<p><i>Emirates Journal for Engineering Research, 19 (1), 19-25 (2014)</i></p>
13	<p>Mohammed Awwad Al-Dabbas, Mohammed Ahmad Hamdan, Y. Khraish</p> <p>The Temperature Distribution and</p>	<p>Published in 2011</p>	<p>International Journal of Advanced Science and Engineering Technology</p>

	Environmental Impact of Jordanian Shale Oil Combustion in Coutant Combustor Type	http://www.ijaset.com/(S(mtzulsvxxsst4r3rb1c50z0))/ShowManuscript.aspx?id=9	On line: ISSN 2225-9686; Print ISSN 2225-9678 Vol.1, No.1 (2011) www.ijaset.com
14	The PCDD/PCDF dioxin Releases in the Climate of Environment of Jordan in the Period (2000-2008)	الملوثات العضوية الثابتة http://link.springer.com/article/10.1007%2Fs11630-010-0182-6	Published in Journal of Thermal Science Vol. 19, No. 2, March 2010.
15	The Simulation of performance of seasonal heat storage Coupled to solar-assisted heat pump in Jordan	http://link.springer.com/article/10.3103%2Fs0003701X09020042	ISSN: 0003-701X (print version) Journal no. 11949 Allerton Press, Inc. Springer Volume 45 no.2, 2009 Applied Solar Energy
16	Design of domestic oil shale furnace system	published in Volume 38, number 3, May 2010	مجلة العلوم الهندسية -أسيوط Journal of Engineering - Assiut University
17	Solar Air Condition system	published in Volume 38, number 3, April 2010	مجلة العلوم الهندسية -المنصورة Journal of Engineering - Mansoura University

18	The Reduction of Gas Emissions From The Exhaust Of Jordanian Diesel Cars Vehicles	published April 2010	مجلة العلوم الهندسية -المنصورة Journal of Engineering – Mansoura University
19	The economical, environmental and technological evaluation of using Geothermal Energy	http://libra.msra.cn/Publication/13752883/the-economical-environmental-and-technological-evaluation-of-using-geothermal-energy	<i>European Journal of Scientific Research</i> Issn : 1450-216X / 1450-202X <i>Vol 38 No 4,</i> pp 626-642, December 2009
20	The Analysis of the Characteristics of the Solar Radiation Climate of the Daily Global Radiation And Diffuse Radiation in Amman, Jordan	Vol.5 No.2 (July – December 2010). http://www.sert.nu.ac.th/IIRE/V5N2(3).pdf	International Institute For Renewable Energy IIRE International Journal of Renewable Energy (impact factor 0.20)
21	The simulation of using hydrogen fuel in gasoline internal combustion engine	Volume 10. Number 1. May 2009 (Spring)	<i>The Pacific Journal of Science and Technology</i>
22	Achievement of Geothermal Energy using ground heat exchanger in Ma'en http://link.springer.com/article/10.1007%2Fs12206-011-	Published 2011 Energy & Environment/	Multimedia (UK) 2011

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23	<p>Heating by <i>catalytic</i> gas infrared rays</p> <p>http://www.tandfonline.com/doi/abs/10.1080/01998595.2011.10412166#.VHiDLzGUeAU</p>	published in 2011	<p>Taylor & Frances</p> <p>Energy Engineering Journal</p>
24	<p>Optimum Salt-gradient Solar Pond in Jordan</p> <p>http://link.springer.com/article/10.3103%2FS0003701X11010038</p>	Distributed Generation And Alternative Energy Journal	SUMMER 2011 Vol. 26, No. 3
25	<p>Simulation of the Existing Solar Pond Model in Jordan</p> <p>www.ijaset.com/(S(mtzulsvxxssht4r3rb1c50z0))/.../IJASET00007M.pdf</p>	published	<p>International Journal of Advanced Science and Engineering Technology</p> <p>On line: ISSN 2225-9686; Print ISSN 2225-9678</p> <p>Vol.1, No.1 (2011)</p> <p>www.ijaset.com</p>

5. Patents

Title: The production of ice without using electricity

I have registered 4 patent in the field production of ice without using electricity. I have registered 4 patent in the field production of ice without using electricity.

1. A solar refrigerator and ice maker by harnessing the evaporative cooling effect
2. A mixture of paint and nano-materials for enhancing the performance of absorption and adsorption solar cooling systems
3. Ice production from The magnetic energy , kinetic energy & evaporative cooling effect entity
4. Oil shale fridge

Prize

I was achieved 4 prizes during last 2 year

1. - **Winner of ALECSO's Young Innovators Award:**
Creativity and innovation Arab scientists in Renewable Energy Award (the abundance of scientific and high-yield production of creative and innovative)
2. Zain Award for creativity and innovation
3. Third prize for the best energy research in solar cooling
4. Gold Award in the Industrial sector

List of TV interview about my inventions

العالمية سكاي نيوز عربية قناة

<https://www.youtube.com/watch?v=JXAssjuy-ZI>

ثلاجة الدباس للبادية لقاء مع راديو سوا

<http://www.youtube.com/watch?v=jlXaYXKOnF4>

ثلاجه الدباس للباديه لقاء مع القناه السعوديه

<http://www.youtube.com/watch?v=l183PI6CGRQ>

اختراع اردني لحل مشكلة الطاقة

http://www.youtube.com/watch?v=EB_Cwp7CS_Q

يوم جديد - لقاء الدكتور محمد الدباس مع سمر غرايبة

<http://www.youtube.com/watch?v=KTkOenvpPrs>

برنامج إنجازات مع عاكف اللوباني - الحلقة 3 / 2014-06-20

<http://www.youtube.com/watch?v=Y8m9xmyLrC0>

برنامج ريسايكل اخراج هشام غيث حلقة (20) ج(1)

<http://www.youtube.com/watch?v=vSsN-wu> 24

برنامج ريسايكل اخراج هشام غيث حلقة (20) ج(2)

<http://www.youtube.com/watch?v=fRDvZy1HBes>

برنامج ريسايكل اخراج هشام غيث حلقة (20) ج(3)

<http://www.youtube.com/watch?v=FOnCZnKcfe4>