

An-Najah National University
Chemical Engineering Department

C.V of

Dr. Husni ODEH

Supervisor of new campus of University

2008

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Main achievements of Dr. Husni Odeh

Environment and health

1. *Controlling of the gaseous, solid and liquid hazardous wastes and conversion some of them into economical articles such as:*
 - *Protein from sunflower seed refusal*
 - *Caffeine from waste tea*
 - *Biodiesel from virgin and waste oil*
 - *Conversion of animal tallow*
 - *Developing of new type of gas absorber*
2. *Development of natural medicinal formulas, which are found effective against some environmental diseases.*
3. *Extraction of natural ingredients from citrus fruits (under process). This project is sponsored by the Union of Arab Universities aimed to heal cancer patients.*

Dr. Husni ODEH environmental/health research and his findings

Due to the pharmaceutical chemical engineering background of the investigator, he linked his environmental researches with health researches. The main results can be summarized up as the following:

Control of gaseous pollutions:

1- Characterizing all types of gas absorption tray towers. This is done by conduction experiments on all types of tray- absorbers and by determining their mass transfer parameters and measuring their efficiencies at different fluid flow conditions.

Some of absorbed gases and vapors are H₂S, SO₂, CO₂, CO, Ethanthiol, ethanol, methanol, acetone and ethyl acetate.

2- Modification of the column to operate at very low liquid flow rate (tenth the usual minimum flow rate) to absorb the valuable vapors in a minimal liquid quantities.

3- Developing new type of jet absorber with simple construction and very low manufacturing costs.

4- Determination of the solvent loss in chemical Industry. The reasons of solvent loss and the fate of lost solvents was proved experimentally.

Liquid hazardous waste:

1- Investigation of the used cooking oils produced in food cooking centers. Studies indicate the contributions of such oils to cancer.

Conversion this oil to economical and valuable article called biodiesel. The conversion process is achieved with minimal ratio of oil/methanol (= 1/1.3). The reaction time is reduced to 20min. This work was supported by united state Agency for international development.

2- Application the biodiesel production by-product (glycerine): It is purified and used in different national articles such as soaps, dry clean liquid soaps, shaving creams and medicated creams.

Solid wastes

1- Conversion animal fats into beneficial products. The animal fats are dumped into dumping sites nearby slaughter houses. This purified tallow is converted into different beneficial products served Palestinian economy.

These products are different types of soaps, shaving soaps, waxes, decorative shapes and ...etc.

Developing a new natural product to protect leather (shoes, belts, chairs, and some plastic components) this is under testing.

2- Isolation some chemical compounds from citrus wastes: limonoide glycoside compounds are isolated from citrus waste, It's proved that, they have cancer prohibition effect.

Environment and health and new formulation from medical plants

1- Development of a natural formulation against cancer. This has been taken in by more than one hundred patients. Positive results are observed on 40% of them. Most of Palestinian national media and some Arab media are written and spoken about this events.

2- Development of natural formulation against skin and respiratory system diseases, all of them are linked with bad environmental conditions. So eczema, acne, asthma, inflamed injuries, hair falling and allergy are healed in most of treated cases.

Curriculum Vita

Dr. Husni Odeh

**Associate professor of Chemical Engineering
Manager of Engineering Faculty laboratories and Workshops
An-Najah National University
Nablus, Palestine**

Education: Dr. Husni Mustafa Odeh holds a B.Sc. M.Sc. and Ph.D. in Chemical Engineering from Budapest Technical University in 1988. He is "Pharmaceutical" chemical engineer. His Ph.D. work was in the field of absorption of gases and vapors by absorption towers in a chemical Industries.

International Experience:

In 1988, Dr. Odeh started as an assistant professor at Food Technology Department in Corvinus University in Budapest.

He was also the Chief of Research and Development Laboratories in Richter Gedeon Chemical Works (pharmaceutical company).

He leaded "solvent –vapors absorption" project sponsored by Richter Gedeon Chemical Works in the laboratories of Budapest Technical University. (1988-1992)

Dr. Odeh also worked as a consultant and process engineer in Chemitechnik Pharma engineering ltd. (1992-1998).

He took part in the latest regional environmental workshops:

"Impacts of chemical wastes in Arabic word, National Office of research and development, with Arab Scientific research councils, Tripoli, Libya, (April. 2004), (In Arabic) .

"In international hazardous waste management workshop, Amman, Jordan, 28/11/-10/12/2004 sponsored by Switzerland".

Palestinian Experience:

Dr. Odeh joined the Chemical Engineering Department of An-Najah National University in 1998.

He is the manager of Engineering faculty laboratories and workshops (2001-2008)

Currently he is a supervisor of new campus of university (2008-)

He is the chief of General safety committee of An-najah University.

Dr. Odeh has published more than thirty refereed papers. Ten of them were published in novel and outstanding journals such as Trans IchemE. Others were published in proceedings of international conferences.

Teaching and Research Activities:

Since 1998 he has been lecturing in the fields of Environmental Engineering, Environmental Applications, Unit Operations, Thermodynamics, Petroleum Engineering and Engineering Economy at Chemical Engineering Department.

Dr. Odeh is also active in the field of Health and Environmental Awareness.

He was a lecturer during the "Campaign for public awareness" in the field of solid waste management conducted in Jenin district By Maalem Engineering Ltd, June, 2003.

He has published the following articles in the field of public health awareness, each of them about fifty pages (written in Arabic for Arab patients):

1- in the field of "Nutrition and Cancer

" <http://sehha.com/diseases/cancer/index.htm>

2- "What you should know about Hodgkin's Disease"

<http://sehha.com/diseases/cancer/index.htm>,

Presentation in common media

Scientific programs at

(Television TV, radio, news papers and magazines)

Television:

Palestinian television, Ramallah, 28/6/2004, program "good morning Palestine 9-11, live with TV. reporter: Shreen Alkhalidi,

Palestinian television, Ramallah, 7/6/2005, program "good morning Palestine 9-11, live with TV. reporter: Shreen Alkhalidi,

Palestinian television, Ramallah, 13/12/2005, program "good morning Palestine 9-11, live with TV. reporter: Njud Eriqat,

Palestinian television, Ramallah, 4/4/2006, program "good morning Palestine 9-11, live with TV. Reporter: Njud Eriqat,

"Nablus' regional TV has showed his bibliography in its famous program called "creative scientists"

Daily Newspapers and internet:" health, treatment with natural national products.

1-"Palestinian discovers anti-cancer medicine from plants (in Arabic) " At 6/6/2004 Saturday.

2-Site: <http://www.aljazeera.net/health/2004/6/6-6-2.htm>

3-Alquds/Thursday/17/6/2004, "Researcher in Annajah university succeeds to develop a drug contribute to treat cancer"

4-Alwatanvoice, Friday, June, 25, Science and medicine: A lecturer in annajah produced a drug to treat cancer

<http://www.alwatanvoice.com/arabic/modules.php?name=News&filearticle&sid=6679>

5- Palestinian news Agency, 25/6/2004, Lecturer in Annajah university prepared formulation to treat cancer

http://www.wafa.pna.net/body.asp?field=tech_news&id=8489

6 -introduction to researcher

http://www.arabiancreativity.com/dr_odeh.htm

7- Assarq-alqatariah. About the horizons of scientific research, obstacles and problems, January(under process) by Zain Asqalani

Arab Magazines

Zahrat AL khaleej "Palestinian researcher discovered a formulae to treat cancer" 21/5/2005, Volume No. 1365, page 68-70

International Relations:

Coordinator for creating educational relations between An-najah National university and Corvinus University of Budapest in the field of Engineering, Food sciences, Social Sciences and international relations.

Coordinator of relationships through Hungarian Embassy for educational relations between our University and Hungarian universities.

Publications of Dr. Husni MUSTAFA Odeh

In the field of environmental engineering and separation processes

(International Chemical Engineering Journals)

1. Békássyné-Molnár E.; **Mustafa H.**; Moniuk, W.; Pohorecki R.: Simulation of carbon dioxide absorption into sodium hydroxide solution in a Nutter-valve plate column. Hung.J. Ind. Chem. 18., 67-79 (1990).
2. Békássyné-Molnár E.; **Mustafa H.**: Clear liquid height on sieve plates in the froth, mixed and spray regimes. Trans. I. Chem. E. 69, Part A. 14-20 (1991).
3. Békássyné-Molnár E.; **Mustafa H.**: Influence of surface tension on pressure drop of sieve plates, Trans. I. Chem. E. 69, Part A., p.287-294 (1991).
4. **Mustafa H.**; Békássyné-Molnár E.: Influence of weeping on mass transfer rate of different plates, Trans I Chem E., 73, Part A, 392-397. (1995).
5. **Mustafa H.**; Békássyné-Molnár E.: Hydrodynamic characteristics of Nutter-valve plates, new correlations. Trans. I. Chem. E., 75, Part A, 620-624. (1997).
6. **Mustafa H.**; Békássyné-Molnár E.; and Elhamouz A.: Hydrodynamics and mass transfer of textile vibrating – valve trays. Trans. I. Chem. E., 77, Part A, 627-632. (1999).
7. **Mustafa H.**; Development of new type of gas absorber, Industrial, applications. Trans. I. Chem. E., 81, Part B, 1-7. (2003).

Patent

- Békássyné-Molnár E.; Takács I.; Szabó B.; Korda B.; **Mustafa H.**; Borus A.; and Fábry Gy.,1998, Patent: P930221, regist. Number 214403, Budapest, Hungary. (in Hungarian)

Conferences

1. **Mustafa H.;** Békássyné-Molnár E.: Design formulas for sieve plates in the different foaming regimes. 4th Conf Mech. and Chem. Eng., Vol. p.57-68. **Budapest**, (1990). (In Hungarian)
2. **Mustafa H.;** Korda B.; Békássyné-Molnár E.; Laurent A.; Charpentier J.C.: Aires interfaciales de différents plateaux a deversoirs utilisés en absorption gaz-liquide, 3me Congres de Génie des Procédés, Vol.13.p.245-250. **Compiègne**, France, (1991). (In French)
3. **Mustafa H.;** Békássyné-Molnár E.: “The effect of weeping on industrial plates with downcomers”. Műszaki Kémiai Napok'92. Konferencia, **Veszprém** (1992). (In Hungarian)
4. Korda B.; **Mustafa H.;** Békássyné-Molnár E.: “Determinations of mass transfer coefficients on different constructions of plates by using acetone-air/water system”. Műszaki Kémiai Napok'92 Konferencia, **Veszprém**, Hungary, (1992). (In Hungarian)
5. **Mustafa H.;** Békássyné-Molnár E.; Korda B.: Mass transfer on different valve plates in hydrodynamic weeping regime, CHEMPOR '93 Int. Chem .Eng. Conference, P. 437-444 .**Porto** Portugal (1993). (In English)
6. Korda B.; **Mustafa H.;** Békássyné-Molnár E.; Zhuravleva T.Yu.; Reutsky V.A.; Sazhin B.S.: Centration profiles, efficiencies and mass transfer coefficients in valve plate absorber. CHISA'90 Int.Congr. of Chem. Eng., G3.3., **Prague**, Czech (1990). (In English)
7. **Mustafa H.;** Kovács B.; Békássyné-Molnár E.: Influence of weeping on the mass transfer of different types of plates, CHISA '93 Int. Congress of Chem. Eng. P.125. **Prague**, (1993). (In English)
8. **13.Mustafa H.;** Békássyné-Molnár E.; Takács I.: “Investigation of mass transfer on different types of valve plates at weeping regime”.. Műszaki Kémiai Napok '93, P.24. **Veszprém**, Hungary,(1993). (In Hungarian)
9. **Mustafa H.;** Elhamouz A.: Development of new absorber, possible application to local industry. Jordan International Engineering conference III, **Amman**, Vol. II, 919-931. (1999). (In English)
10. **Mustafa H.:** Investigation of the performance of jet absorber, Industrial applications, First International Chemical Engineering conference, University of Jordan 2001, Amman-Jordan, 177-187, (2001). (In English)
11. **Mustafa H.** Solvent loss, Impacts of chemical wastes in Arabic word, National Office of research and development, with Arab Scientific research councils, Tripoli, Libya, (April. 2004), (In Arabic) .
12. **Mustafa H.;** Abdelrahim Abusafa, Conversion of animal fats into beneficial products, Jordan International Chemical Engineering conference V, (JICEAC0), Amman-Jordan, (in CD, number JICEAC05 –BChE-1-20) , (2005). (In English)
13. **Mustafa H:** Biodiesel Production from Used frying Oil, Jordan International Chemical Engineering conference V, (JICEAC0), Amman-Jordan, (in CD, number JICEAC05 –BChE-1-19) , (2005).

Supervised under graduation Projects at An-najah National University by Dr. Husni ODEH

"Extraction of Biologically active compounds from citrus Seeds"

Jumanah Afeef ,Tawfeq Odeh, 1999/2000

"Extraction of Biologically active compounds from citrus waste "

Mohammed Hamdan, Mustafa A. Lubbadah, Bilal Al Rozi, 2000/2001

"Isolation and application of biologically active anti-cancer compounds",

Elham Yasin, 2001/2002

"Purification of used cooking oils" (in Arabic), Nahwah Shamasneh and

Suhad Bustami, 2002/2003

"Biodiesel production from used cooking oil", Bilal Ashyb and Mohamed Al-

Manasrah, 2004

"Conversion and application of Animal fats", Amjad Al-Daqqah, Ahmad

Yousef,Motasem Al-Joneideh, 2005

"Applications of Glycerine (Biodiesel by-product)", Deema Rabaya'a,

Fida'a Badersawi, 2005/2006

" Biodiesel production from waste olive oil " , Ahlam Dmedy, Ala

Dawabsheh, Muna Daraghmeh, 2006 / 2007.

"Extraction of Anticancer Natural ingredients", Majd Quqa, Niveen

Barahmeh, Maysoon Irman, 2007/2008

International Environmental Projects:

"Production of Biodiesel from used cooking oil in Palestine",

Husni ODEH, sponsored by United State Agency for International Development, 2004-2005 by the coordination of Palestinian High Education ministry.

Absorption of low concentration vapor, Husni Odeh, (in Hungarian), 1988-1992, Budapest technical University, sponsored by Richter Gedeon of Chemical Works.

Anticancer Natural ingredients, Husni ODEH and Mohammed Al-Nouri, sponsored by the Union of Arab Universities, Amman, Jordan, Dec. 2007.

Committees

I has been a chief of dozens of committees that take decisions for purchase offers.

Chief of General Safety committee.

Member of Engineering faculty development committee

Member dozens of social and administrative committees.

Information for contact

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