

Mohsen Bekheet Shaalan

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EDUCATION

June 2006 **UNIVERSITY OF MANSOURA** Mansoura, EG

Candidate for Ph. D., in Experimental Nuclear Physics

- Thesis titled “Study of the excitation functions for some cyclotron produced radionuclides”
- Using MGC-20 variable energy isochronous cyclotron for proton activation reactions
- Nuclear reaction activation techniques and its utilities

June 2002 **UNIVERSITY OF MANSOURA** Mansoura, EG

Candidate for M. Sc., in Experimental Nuclear Physics

- Thesis titled “Fast neutron activation for some medium mass elements”
- Using the Neutron Generator for fast neutron activation reactions
- Nuclear reaction activation techniques and its utilities

May 1993 **UNIVERSITY OF AIN-SHAMS** Cairo, EG

Bachelor degree in science, physics & chemistry

- Ideal Student in faculty,
- Courses in both physical and chemical disciplines with theoretical and experimental backgrounds.

Address:

Kingdom of Saudi Arabia
Central Region, Buraydah City
Al-Fayzia Distr., ZIP: 52383-8049
Prince Sultan Str., Home #: 4001
Mobile:+966543680294, Tel: +96663817079

Date & Place of Birth: 27, Oct., 1969. Cairo, EGYPT.

Citizenship: Egyptian.

RESEARCH EXPERIENCE

2003-Present **PROJECT NAME: NUCLEAR RADIATION DETECTOR** **Inshas, EG**

Nuclear Radiation Detectors Maintenance and Development

- I'm the responsible for technical transfer issues in this project,
- I'm a member of this group which installed in the Egyptian Atomic Energy Authority EAEA (Cyclotron Project) with the support of IAEA .
- The project helps in maintenance all the nuclear radiation detectors used in project No. 1 and others used for research work at the EAEA departments
- The project provides standard bulk gamma ^{40}K sources and accurate calibration for HPGe detectors supporting different type of required shielding.
- Vacuum treatment for HPGe detector and resolution correction was considered.

2000-2007: **PROJECT NO.1 (NUCLEAR RADIATION DETECTION),** **All Egypt cities.**

Nuclear Radiation Detection Project for Products and Raw Materials

- I have a license from the Egyptian ministry of health as a radiation protection expert for all radiation open and close sources, all radiation instruments operating with low and high tension voltages,
- Supervising facilities that uses radiation sources or machines producing radiations, comply with applying international radiation protection regulations,
- I was a responsible for fire and emergency accidents in the nuclear research center for Inshas cyclotron facility,

- Securing and protecting the Egyptian borders from entering any contaminated material
- Quality control and measuring the U, Ra, Th and K background and others radioactive material all over the Egyptian markets and factories are measured under my supervision at the Experimental Nuclear Physics Department, Nuclear Research Center, Cairo, Egypt.
- The technique of gamma spectroscopy with low level B.G. as well as the field detection systems using mobile HPGe techniques are used.
- Many point of research for bulk sample analysis, matrix effects, field detectors and low level radiation B.G detection were done.
- All the measurement and certificate are done under the supervision of Egyptian Atomic Energy Authority

2007-present ALMAJMAAH UNIVERSITY

Al-Zulfi, K.S.A.

Head of Physics Department,

- Carry out research in nuclear physics subjects based on experimental and theoretical aspects.

SKILLS AND ACTIVITIES

- Teaching nuclear physics and other physics disciplines quantum and atomic and molecular physics courses.
- Good command in computer skills and using programs in my research activities,
- I am licensed as Radiation protection Expert,
- Good Command in English language (read, write, listening and oral), a little French,
- Courses plans to prepare state institutions to the requirements of total quality management and quality assurance and internal audits and corrective of the Center for Leadership Development for Government,
- Courses in the repair and maintenance and development of Gamma radiation detectors of high pure Germanium semiconductor,
- Courses in the prevention of ionizing radiation and the safe use and transfer of radioactive materials and radioactive sources open and closed,
- Courses in the gamma spectrum analysis using nuclear techniques,
- Training course at the institute of nuclear physics, Krakow, Poland. Under supervision of Prof. J. Styczen in Manufacturing and Developing High Pure Germanium Detectors.
- Teaching Experience: Teaching for the preparatory and first year grade at the department of physics and mathematical engineering, Faculty of Engineering, Ain-Shams University, Cairo, Egypt, through the studying year 2006/2007.

COMPUTER USE SKILLS

Do you use computer regularly?	Yes (x)	No ()
If Yes, please name the software(s) and explain the nature & purpose for using such software(s):		
Microsoft Windows	System Operation	
Microsoft Office	Editing, calculation, and presentation	
Winzip	Extract files	
Origin & Table Curve & Visio, MPRS	Drawing and fitting	
APTEC & Geine-2000 & Ganaas	Data Acquisition Program and Analysis	
PCA-III & Maestro-II	Data Acquisition Program and Analysis	
AutoCAD 2000	Machinery Design	
Mathcad	Simple Calculation Program	
MatLab	Simulation	
Empire-II	Nuclear Reaction Cross Section Model Code	
Alice-91 & Alice-IPPE	Nuclear Reaction Cross Section Model Code	
MCNP/MCNPX & Geant4	Monte Carlo Simulation	

EMPLOYMENT HISTORY

College of Education, Al-Zulfi, Majmaah University, (SAUDI ARABIA) (2007- up to now).

Nuclear Research Center, Egyptian Atomic Energy Authority, (EGYPT).

- Assistant Professor (Applied Nuclear Physics) (2006- present),

- Lecturer in Nuclear Physics (2002),
- Administrator (1996).

PUBLICATIONS

1. Measurement of $^{90,91}\text{Zr}(n,p)$, $^{90}\text{Zr}(n,\alpha)$, and $^{93}\text{Nb}(n, \alpha)$ Reaction Cross Sections From 13.49 to 14.82 MeV Neutrons
M. B. Challan, Z. A. Saleh, and M. N. H. Comsan
In the Fifth Conference and Workshop on Cyclotrons and Applications (CCW'03), Cairo, Egypt, 2003.
2. S 2- Determination of the Mean Neutron Energy Using the Zr/Nb, and the Co Method
M. B. Challan, Z. A. Saleh, and M. N. H. Comsan
In the Fourth Conference Nuclear and Particle Physics (NUPPAC'03), Al-Fayoum, Egypt, 2003.
3. Measurement and Analysis of Cross Sections for (p,x) Reactions on Natural Molybdenum
M. B. Challan, M. A. Abou-Zeid and M. N. H. Comsan
In the Fifth Conference Nuclear and Particle Physics (NUPPAC'05), Cairo, Egypt, 2005.
4. Thin Target Yields and Empire-II Predictions on the Accelerator Production of Technitium-99m
M. B. Challan, M. A. Abou-Zeid** and M. N. H. Comsan
Egyptian Journal of Nuclear and Radiation Physics, vol. 2, no. 1, 2007.
5. Excitation Functions of Radionuclides Produced by Proton Induced Reactions on Gadolinium Targets
Mohsen B. Challan, G. S. Moawad, M. A. Abou-Zeid, and M. N. Comsan
In the Fifth Conference Nuclear and Particle Physics (NUPPAC'07), 17-21, Nov., Luxor, Egypt, 2007.
6. Effect of Air Pollution upon Human Health in Occupational, and Environmental Areas
Mohsen B. Challan, S. Diab, N. S. Khalil, and U. A. Seddik, Arabic Journal for Nuclear Science and Applications, (2009).
7. Affordable Systematics for (n, p) Reaction Cross Sections at 14.5 Neutron Energy,
M. F. F. Hassan, Mohsen B. Challan, Submitted to Arabic Journal for Nuclear Science and Applications, (2010).
8. Systematic Measurement Of (n, ^3He) Transfer Reactions Cross Sections at 14.6 MeV
Mohsen B. Challan and M. F. F. Hassan, (Submitted for Publishing)
9. The Gamma-Ray Efficiency of a HPGe Detector as a Function of Energy and Geometry
Mohsen B. Challan, (Submitted for Publishing)

