Name Mousa Mohammad Ahmad Imran
Position Professor
Department of Physics
Faculty of Science, Al-Balqa Applied University
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Education

Dates	**Doctor of Philosophy**, Physics, Rajasthan University, Jaipur, INDIA • Phase transformation and thermal properties of semiconducting glasses, Under the supervision of Professor N. S. Saxena
Dates	**Master of Science**, Physics, Aligarh Muslim University, Aligarh, INDIA • G.Project: Mode Locking of Laser Oscillation • First Division
Dates	**Bachelor of Science**, Physics, Aligarh Muslim University, Aligarh, INDIA • First Division (**Honor)**

Research Experience

1998-present

A. Experimental Nuclear Materials Physics

My research interests focus on investigation of structural, chemical and physical properties of semiconducting chalcogenide glasses to obtain the proper structure-property relationship to assess the applicability of such materials in devices technology.

- Gamma irradiation of bulk and thin films of such materials has been conducted to accelerate their structural relaxation process and obtaining a thermally stable structure. Besides, Slow neutron and high energy ion irradiation have been carried out and any structural changes were monitored by positron annihilation techniques.
- Different properties (thermal, optical and electrical) of the above mentioned materials were studied using various techniques such as DSC, TPS, UV-VIS spectrophotometer, gain phase analyzer coupled with closed cycle cryostat, keithley electrometer.
- Low dimensional / surface physics: Preparation of thin films and

	nanometric(Nanowires) range materials and characterization using different techniques such as EDX-SEM, XPS, STM, AFM, MFM, VSM etc.
2002- present	B. **Radiation Physics** My research, in this field, focuses on measurement of natural radioactive content of some environmental samples and dose calculation using HPGE and other techniques

Teaching Experience

Nov. 2012-present	• **Professor**, Nov. 2012-present, **Al-Balqa Applied University- Jordan**
Sept. 2013-Sept. 2014	• **Professor** , Sept. 2013-Sept. 2014, **Inaya Medical College, Riyadh- Saudi Arabia**
Nov. 2008-Nov. 2012	• **Associate Professor**, Nov. 2008-Nov. 2012, **Al-Balqa Applied University- Jordan**
Sept. 2009-Sept. 2010	• **Associate Professor**, Sept. 2009-Sept. 2010, **German Jordanian University- Jordan** (Sabbatical Leave)
Sept. 2010-Sept. 2011	• **Associate Professor**, Sept. 2010-Sept. 2011, **German Jordanian University- Jordan** (Part time)
Aug. 2003-Nov. 2008	• **Assistant Professor**, Aug. 2003-Nov. 2008, **Al-Balqa Applied University–Jordan**
Feb. 2002-Aug. 2003	• **Lecturer**, Feb. 2002-Aug. 2003, **Al-Balqa Applied University–Jordan**
Oct. 1994-Sept. 1996 Sept. 1997-Aug. 1998	• **Physics Instructor**, Oct. 1994-.Sept 1995 and Sept. 1997- Aug. 1998, **Higher Institute of Technology / Omar Al-Mukhtar University- Libya**
Sept. 1996-Sept. 1997	• **Ministry of Education**, Sept. 1996- Sept. 1997, **Jordan**

Awards and Special Achievements:

Jan,1999-Mar, 2001	• DST grant, Department of Physics, University of Rajasthan
Jun., 2006-Sept. 2006	• Research fellowship Funded by the World Bank and Higher Educational Development Program of Jordan to Materials Science Program, Washington State University, Pullman, WA, USA,

Academic Memberships:

- Life member of Thermo-Physical Society of India
- Member of Jordan Physical Society

Recent Publications

1 Effect of Sn content on some optical properties of $Se_{90}Pb_{10-x}$ thin films

Optical Materials 100(2020)109672 ELSEVIER

. Ebraheem O. Hawarat, **Mousa M.A. Imran**, N. Chandel, Omar A. Lafi, Hassan K. Bashar Lahlou, N. Mehta

2 Comprehensive studies of temperature and frequency dependent dielectric and a.c. conducting parameters in third generation multi-component glasses.

RSC Advances 8(23)(2018) 25468-25479. The Royal Society of Chemistry

N. Chandel**, Mousa M. A. Imran**, Neeraj Mehta

3 Effect of laser irradiation on micro-hardness, compactness and Raman spectrum of glassy $Se_{76}Te_{20}Sn_2Cd_2$ alloy.

Journal of Materials Research and Technology 7(1)(2018) 39-44 ELSEVIER

Amit Kumar**, Mousa M.A.Imran,** Arvind Sharma**,** Neeraj Mehta

Conferences/ Workshops/ Seminars:

Dec., 15-17, 2010

- The Third International Symposium on Nuclear Energy, ISNE-10, (**Organizing Committee**) December, 15-17, 2010, Amman, Jordan.

Jul. 11, 2010	• Optics 11, An international conference on light 2010, (**International Advisory Committee**) Calicut-India.
Oct., 26-28, 2009	• The 2nd International Symposium on Nuclear Energy (ISNE-09) (**Scientific and Organizing Committees**) October, 26-28, 2009 Amman, Jordan.
Nov. 10-23, 2008	• Nanostructured Advanced Materials and Technology, Amman, Jordan, Nov. 10-23, 2008. (**Organizing Committee**)
May 5th, 2006	• The first National workshop on synchrotron users (SESAME) held at Jordan University, Jordan, May 10/5/2006
May 5th, 2007	• The second National workshop on synchrotron users (SESAME) held at Jordan University, Jordan, May 10/5/2007.
Jul. 18-23, 2004	• Sixth International Conference on Diffusion in Materials, Krakow, Poland, July 18-23,2004
Jun. 2000	• International Conference on Advanced Materials (ICAM), 2000, Meruit, India.
Sept. 2000	• International Conference on the Thermophysical Properties of Materials, 2000, Guwahati, India.
Oct. 1999	• National Conference on Semi-conducting Materials and Recent Technology (SMART). Organized by the semiconducting society of India, 1999, Pantnagar, India.

Supervised Doctoral & Master Theses:

Ph.D. Students

2007	1. Ph.D. thesis/ Co-Supervisor "Thermal and electrical studies of $Se_{90}In_{10-x}Sn_x$(x=2, 4, 6 and 8) chalcogenide glasses". Omer A. Lafi. University of Jordan (awarded 2007).
2010	2. Ph.D. thesis/ Co-Supervisor " Optical and electrical properties of $Se_{90}In_{10-x}Sn_x$ (x=2, 4, 6 and 8) chalcogenide glasses". Adel Shaheen. University of Jordan (awarded 2010).
2012	3. Ph.D. thesis/ Co-supervisor " Structural relaxation in Se-Te-Sn chalcogenide glass" Sharif Abu Al-Rub. University of Jordan (awarded 2012).

2012	4. Ph.D. thesis/ Co-supervisor " Physical Ageing in Se-Cd-Zn chalcogenide glasses" Rateb Al-Rjoub. University of Jordan (awarded 2012).
	M.Sc. Students
2009	5. M.Sc thesis/ Supervisor " Electrical and optical properties of $Se_{90}Te_8Sn_2$ and $Se_{90}Te_6Sn_4$ chalcogenide glasses. Marwan Kloub. Al-Balqa Applied University (awarded 2009).
2009	6. M.Sc thesis/ Co- Supervisor " Optic-Electric behavior of $Se_{90}Te_4Sn_6$ and $Se_{90}Te_2Sn_8$ chalcogenide glasses. Hamdi Al-Aween. Al-Balqa Applied University (awarded 2009).
2010	7. M.Sc thesis/ Supervisor " Effect of gamma irradiation on some electric properties of $Se_{92}Sn_8$ chalcogenide glasses. Sameer Al-Bati, Al-Balqa Applied University (awarded 2010)
2010	8. M.Sc thesis/ Supervisor " Thermal properties of Se-Te-Sn semiconducting glasses". Ibtehaj Khatatbeh, Al-Balqa Applied University (awarded 2010).
2010	9. M.Sc thesis/ Co-Supervisor " Thermal properties of $Se_{100-x}Sn_x$ (x =2, 4, 6 and 8) semiconducting glasses". Samer Sakhel, University of Jordan (awarded 2010).
2011	10. M.Sc thesis/ Supervisor " Dependence of electrical conductivity on composition in Se-Te-Sn semiconducting glasses" Fares Al-Kurdi, Al-Balqa Applied University (awarded 2011).
2011	11. M.Sc thesis/ Co-Supervisor " Transformations kinetics in some Selenium-Tellurium-Tin chalcogenide glasses". Nazem Abu Shaweesh, Al-Balqa Applied University (awarded 2011).
2012	12. M.Sc thesis/ Co-Supervisor " Some electrical properties of Fe_3O_4 ferrofluid" Mazen Al-Dosooqi, Al-Balqa Applied Univ. (awarded 2012).
2018	13. M.Sc. thesis " The effect of tin additive on thermal properties of Se-Pb chalcogenide glasses. Amal Rabah , University of Jordan (awarded 2018).
2018	14. M.Sc. thesis "Optical properties of Se-Pb-Sn chalcogenide glass". Ibrahim Al-Hawarat,, Al-Balqa Applied University (awarded 2018).
2019	15. M.Sc thesis "Energy and time characterization and modeling of

	the Clover composite HPGe detector of Al-Balqa Applied University" Amjad Qbailat, Al- Balqa Applied University (awarded 2019).
2019	16. M.Sc thesis " Studies on applications of composite germanium detectors" Sara Al-Amarat, Al-Balqa Applied University (awarded 2019).
2020	17. M.Sc. thesis " Study of some materials commonly used to simulate human tissues for brachytherapy dose measurements" Razan Araidh, Al-Balqa Applied University (awarded 2020).
2020	18. M.Sc. thesis " Coincidence detection efficiency of the BALQARAD system at Al-Balqa Applied University" Ghadeer Awwad Elfawair,,Al-Balqa Applied University (awarded 2020).
2020	19. M.Sc. thesis " Sensitivity enhancement of multidimensions gamma-ray spectrometry of neutron activated samples" Safaa Marei, Al-Balqa Applied University (awarded 2020)

Research Grants

2003-2005	1. Physical Properties of Some Disordered Materials, Funded by Deanship of Scientific Research, Al-Balqa Applied University, Principal Investigator, 2003-2005.
2003-2006	2. Enhancement and Development of Materials Science Education and Technology, **Funded by the World Bank** and Higher Educational Development Program of Jordan, Co-Investigator, 2003-2006.
2020	3. Fostering innovation in the Jordan and Moroccan textile industry, Erasmus Project No.-598347-EPP-1-2018-1-ES-EPPKA2-CBHE-JP.
2020	4. Establishment of intercalated Program in Basic Medical Sciences in Jordan, Erasmus CBHE: 610091-EPP-1-2019-JO-EPPEKA2-CBHE-JP