

# Mousa M.A. Imran

[mousa99@yahoo.com](mailto:mousa99@yahoo.com)

[mimran@bau.edu.jo](mailto:mimran@bau.edu.jo)

Mobile: +962 772206763

Professor of Experimental Nuclear Materials Physics

Department of Physics

Faculty of Science

Al-Balqa' Applied University,

P.O. Box 7051, Salt 19117

Jordan



## **Personal Data**

Date and Place of Birth

January 15, 1970 Qablan

Nationality

Jordanian

Marital Status

Married, with two children

Phone

Office: + 962 5 3530462

Ext.: 3705, 3700

## **Education**

- **Ph.D. Experimental Nuclear Materials Physics**  
University of Rajasthan, India (2001).
- **M.Sc. Physics**, Aligarh Muslim University, India (1994)  
G. Project: laser and radiation Physics  
Grade: First division.
- **B. Sc. Physics ( Honor)**, Aligarh Muslim University, India (1992)  
Grade: First division

## Teaching Experience

- **Head, Department of Radiology and Nuclear medicine,**  
Inaya Medical College, Riyadh- Saudi Arabia      Sept. 17, 2013- Sept.1,2014
- **Al-Balqa' Applied University, Salt – Jordan**      Nov. 12, 2012  
Professor of Physics
- **Al-Balqa' Applied University, Salt – Jordan**      Nov. 12, 2008- Nov. 12, 2012  
Associate Professor of Physics
- **German Jordanian University, Amman-Jordan**      Sep. 12,2010- Sep. 12,2011  
(Part time)
- **German Jordanian University, Amman-Jordan**      Sep. 12,2009- Sep. 12,2010  
(Sabbatical Leave)  
Faculty of Applied Natural Sciences
- **Al-Balqa' Applied University, Salt - Jordan**  
Assistant Professor / Dept of physics      Aug. 23, 2003- Nov.11, 2008  
Lecturer / Dept of physics      Feb. , 2002 - Aug. 22, 2003
- **Higher Institute of Technology, Libya**  
Physics Instructor      Oct. 1, 1994- Aug. 1996  
Sep. 15, 1997- Aug.1998
- **Taught the following courses:**
  1. **Graduate courses- M.Sc students of Physics**  
Special Topics in Experimental Materials Science  
Mathematical Physics  
Advance Quantum Mechanics  
Advance Classical Electrodynamics  
Advance Solid State Physics  
Techniques of Experiments in Materials Science
  2. **Undergraduate - B.Sc. students of Physic, Science, and Engineering**  
Radiation Physics, Radiation Protection and Safety, Nuclear Physics,  
X-Ray Physics, Nuclear medicine Physics, Nuclear Instrumentation,  
Ultrasound Physics and equipment , Quantum Mechanics (I&II),  
Mathematical Physics ( I&II),  
Thermodynamics, Electromagnetic (I),  
Electric Circuits, Applied Physics (Statics)  
Physics 101, Physics 102, Physics 104  
Physics Lab 111, 112 ,114 etc.

## Positions Held

- **Head, Department of Radiological Sciences and Nuclear Medicine Technology**  
Inaya Medical College, Riyadh- Saudi-Arabia      Sept. 2013-Sept. 2014

- **Vice Dean**, Faculty of Science, Sep. 15, 2011- Sep.15, 2013
- **Dean Assistant for planning and quality assurance**, Feb. 2012- Sep. 15, 2013.
- **Vice Dean**, Prince Abdullah Bin Ghazi Faculty of Science and Information Technology, Al-Balqa Applied University, Oct. 24,2010- Sep. 10,2011.
- **Vice Dean**, Prince Abdullah Bin Ghazi Faculty of Science and Information Technology, Al-Balqa Applied University, Feb. 19,2009- Sep. 12, 2009.
- **Head, Applied Sciences Department**, Sep. 2, 2007- Feb.18,2009 .
- Council Member for graduate studies Sep. 20, 2010- Present ( University level)
- Faculty council member.
- Faculty council member for study plans.
- Faculty council member for graduate studies and scientific research
- Department council member for graduate studies and scientific research
- Visiting professor of materials physics, Materials Science Program, Washington State University, Pullman, WA, USA, 2006.
- Visiting professor of materials physics, Semiconductors and Polymers Laboratory, Department of Physics, University of Rajasthan, India, summer 2004
- Visiting assistant professor of materials physics, Materials Science Laboratory, Department of Physics, Jamia Millia Islamia, India, summer 2004.

### **Membership, Grants, and Activities**

- Member of Jordan Physics Society
- Life member of Thermo-Physical Society of India
- DST grants, Department of Physics, University of Rajasthan
- Member of teachers promotion committee, 4<sup>th</sup> Amman education directorate.

### **Research Experience**

- **Radiation Physics**
  - Supervising under graduate students in their projects and training at local hospitals and King Faisal Specialist Hospital and Research, where they work on X-ray Diagnostic, Magnetic Resonance Image MRI. Nuclear Medicine, Ultrasound.
  - Research work involves also the measurements of natural radioactive contents of environmental samples.
  - Dose calculation is a topic of present interest in radiation physics.
- **Experimental Nuclear Materials Physics**
  - Establishment of a well-equipped materials science laboratory at the Department of Physics, Faculty of Science, Al- Balqa Applied University, Jordan- 2005.
  - Good research experience in preparation and characterization of bulk materials using DSC, SEM, TPS, Uv-Vis Spectrophotometer.
  - 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.

## **Supervision /Co-Supervision of Graduate Students**

### **Ph.D. Students**

- **Ph.D. thesis/** Co-Supervisor “Thermal and electrical studies of  $\text{Se}_{90}\text{In}_{10-x}\text{Sn}_x$  ( $x=2, 4, 6$  and  $8$ ) chalcogenide glasses”. Omer A. Lafi. University of Jordan (awarded 2007).
- **Ph.D. thesis/** Co-Supervisor “ Optical and electrical properties of  $\text{Se}_{90}\text{In}_{10-x}\text{Sn}_x$  ( $x=2, 4, 6$  and  $8$ ) chalcogenide glasses”. Adel Shaheen. University of Jordan (awarded 2010).
- **Ph.D. thesis/** Co-supervisor “ Structural relaxation in Se-Te-Sn chalcogenide glass” Sharif Abu Al-Rub. University of Jordan (awarded 2012).
- **Ph.D. thesis/** Co-supervisor “ Physical Ageing in Se-Cd-Zn chalcogenide glasses” Rateb Al-Rjoub. University of Jordan (awarded 2012).

### **M.Sc. Students**

- **M.Sc thesis/** Supervisor “ Electrical and optical properties of  $\text{Se}_{90}\text{Te}_8\text{Sn}_2$  and  $\text{Se}_{90}\text{Te}_6\text{Sn}_4$  chalcogenide glasses. Marwan Kloub. Al-Balqa Applied University (awarded 2009).
- **M.Sc thesis/** Co- Supervisor “ Optic-Electric behavior of  $\text{Se}_{90}\text{Te}_4\text{Sn}_6$  and  $\text{Se}_{90}\text{Te}_2\text{Sn}_8$  chalcogenide glasses. Hamdi Al-Aween. Al-Balqa Applied University (awarded 2009).
- **M.Sc thesis/** Supervisor “ Effect of gamma irradiation on some electric properties of  $\text{Se}_{92}\text{Sn}_8$  chalcogenide glasses. Sameer Al-Bati, Al-Balqa Applied University (awarded 2010).
- **M.Sc thesis/** Supervisor “ Thermal properties of Se-Te-Sn semiconducting glasses”. Ibtehaj Khatatbeh, Al-Balqa Applied University (awarded 2010).
- **M.Sc thesis/** Co-Supervisor “ Thermal properties of  $\text{Se}_{100-x}\text{Sn}_x$  ( $x =2, 4, 6,$  and  $8$ ) semiconducting glasses”. Samer Sakhel, University of Jordan (awarded 2010).
- **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).

- M.Sc thesis/ Co-Supervisor “ Transformations Kinetics in some Selenium-Tellurium-Tin chalcogenide glasses”. Nazem Abu Shaweesh, Al-Balqa Applied University (awarded 2011).
- M.Sc thesis/ Co-Supervisor “ Some electrical properties of Fe<sub>3</sub>O<sub>4</sub> ferrofluid” Mazen Al-Dosooqi, Al-Balqa Applied Univ. (awarded 2012).

### **Thesis Examining Committees**

Maryana Khalid Khalil, University of Jordan (2012)/Mazen Al-Dosooqi, Al-Balqa Applied University (2012)/ Nazem Abu Shaweesh, Al-Balqa Applied University-2011/ Fares Al-Kurdi, Al-Balqa Applied University-2011/ Murad Ahmad, Al-Balqa Applied University-2011/ Ahmad Mousa, Al-Balqa Applied University-2011/ Adel A. Shaheen. Jordan University-2010/ Samer Sakhel. Jordan University-2010/ Lina Abu-Arida. Al-Balqa Applied University-2010/ Sameer Al Bati. Al-Balqa Applied University-2010/ Ibtihaj Khatatbeh. Al-Balqa Applied University-2010/ Omar Naseer. Al-Balqa Applied University-2010/ Marwan Kloub. Al-Balqa Applied University- 2009/ Hamdi Al-Alaween. Al-Balqa Applied University-2009/ Sajedah Al-Amir. Balqa Applied University-2009/ Alia A. M. Kamleh. University of Jordan-2008/ Omer A. Lafi. University of Jordan- 2007/ Fadi Abu Sa'n. University of Jordan- 2007/ Mohammad J. Al Bqoor. Al-Balqa Applied University- 2006/ Samer J. Al-Kharouf. Al-Balqa Applied University, 2006/ Sarhan Zeyadeh, Al-Balqa Applied University, June-2006.

### **Journals Referee**

- Solid State Science (Elsevier)
- Journal of Physics and Chemistry of Solids (Elsevier)
- International Journal of Thermal Science (Elsevier)
- Journal of Alloys and Compounds (Elsevier)
- Physica B, condensed matter (Elsevier)
- Vacuum (Elsevier)
- Materials Science in Semiconductor Processing (Elsevier)
- Materials Science (Springer)
- Research on Chemical Intermediates (Springer)
- Philosophical Magazine (Taylor & Francis)
- European Journal of Physics (IOP Science, European Physical Society)
- Journal of Nanoscience and Nanotechnology. (American Scientific Publishers)
- Science of advanced Materials (American Scientific Publishers)
- Jordan Journal of Physics (Deanship of Research and Graduate Studies, YU, Jordan)

- International Journal of Engineering, Science and Technology. (MultiCraft)
- Advanced Porous Materials
- Acta Metallurgica Sinica( English Letters) ( Springer)
- Journal of Medical Imaging and Health Informatics (American Scientific Publishers)

### **Books**

- Fundamentals of Electric Circuits (Publisher, Al Quds Open University, 2008- Text book)  
Mohammad Al-Awaisi and **Mousa M. A. Imran**
- Translation of Physics Textbook, teacher and student guides, and laboratory manual for the 10<sup>th</sup> grade ( Obekan Research and Development2010)
- Translation of “Physics, Principles and Applications” University Textbook by Giancoli (Obekan Research and Development-2010-2013).

### **Training Courses and Visits**

- Three months scientific visit at Washington State University ( on the preparation of nano-materials and their characterization using VSM, SEM, EDS, XPS, AFM, STM ) sponsored by the World Bank and the Higher Educational Development Program of Jordan.
- Visiting professor of Radiation physics, Radiation Measurements Laboratory, Department of Physics, University of Rajasthan, India. Summer-2005.
- Visiting professor of materials physics, Semiconductors and Polymers Laboratory, Department of Physics, University of Rajasthan, India. Summer-2004.
- Visiting professor of materials physics, Materials Science Laboratory, Department of Physics, Jamia Millia Islamia, India. Summer- 2004.

## Projects

- Physical Properties of Some Disordered Materials, Funded by the Deanship of Scientific Research, BAU: 2003-2005.
- Enhancement and Development of Materials Science Education and Technology, Funded by the World Bank and the Higher Educational Development Program of Jordan: 2003-2006.

## Conferences

- The 2<sup>nd</sup> International Symposium on Nuclear Energy ( ISNE-09) (**Scientific and Organizing Committees**) October, 26-28, 2009 Amman, Jordan.
- Optics 11, An international conference on light 2010, (**International advisory committee**) Calicut-India.
- The Third International Symposium on Nuclear Energy, ISNE-10, (**Organizing Committee**) December, 15-17, 2010, Amman, Jordan.
- The second National workshop on synchrotron users (SESAME) held at Jordan University, Jordan, May 10/5/2007.
- The first National workshop on synchrotron users (SESAME) held at Jordan University, Jordan, May 10/5/2006.
- Nanostructured Advanced Materials and Technology, Amman, Jordan, Nov. 10-23, 2008. ( **Organizing Committee** )
- Sixth International Conference on Diffusion in Materials, Krakow, Poland, July 18-23,2004
- International Conference on Advanced Materials (ICAM), 2000, Merut, India.
- International conference on the thermophysical properties of materials, 2000, Guwahati, India.
- National conference on Semi-conducting Materials and Recent Technology (SMART) organized by the semiconducting society of India, 1999, Pantnagar, India.

## References

- **Prof. N.S.Saxena**, Department of Physics, University of Rajasthan, Jaipur- India, e-mail: [n s saxena@redifmail.com](mailto:n_s_saxena@redifmail.com)
- **Prof. Ma'rouf . K. Abdullah**, Department of Physics, University of Jordan, Phone No.+962-777-421334.
- **Prof. Munir Dababneh** , Department of Physics, Al-Balqa Applied University, [munir49@hotmail.com](mailto:munir49@hotmail.com)



## **Publications**

### **Referred Journals**

1. Effect of chemical ordering on the crystallization behavior of  $\text{Se}_{90}\text{Te}_{10-x}\text{Sn}_x$  ( $x=2, 4, 6, \text{ and } 8$ ) chalcogenide glasses.  
**Journal of Physics and Chemistry of Solids 75 (2014)790–795**      **ELSEVIER**  
Omar A. Lafi, **Mousa M.A.Imran**
2. The effect of indium additive on the structural relaxation of Se-Sb-Sn semiconducting glasses  
**Materials Science in Semiconductor Processing 16 (2013) 1029**      **ELSEVIER**  
Ali F. Al-Shawabkeh, **Mousa M. A.Imran**
3. Thermal characterization of  $\text{Se}_{100-x}\text{Sn}_x$  ( $x = 4, 6, \text{ and } 8$ ) chalcogenide glasses using differential scanning calorimeter.  
**Thermochimica Acta 560 (2013) 71-75.**      **ELSEVIER**  
Omar A. Lafi, **Mousa M.A.Imran**, Ma'rouf K. Abdullah, Samar A. Al-Sakhel
4. Electrical conductivity, density of states and optical band gap in  $\text{Se}_{90}\text{Te}_6\text{Sn}_4$  glassy semiconductor  
**Physica B: Condensed Matter 410 (2013) 201**      **ELSEVIER**  
**Mousa M. A.Imran , Omar A. Lafi**
5. Effect of thermal annealing on some electrical properties and optical band gap of vacuum evaporated  $\text{Se}_{65}\text{Ga}_{30}\text{In}_5$  thin films  
**Vacuum Journal 86 (2012) 1589**      **ELSEVIER**  
**Mousa M. A. Imran**, Omar A. Lafi, M. Abu-Samak
6. Thermal characterization of  $\text{Se}_{85-x}\text{Sb}_{15}\text{Sn}_x$  ( $10 \leq x \leq 13$ ) chalcogenide glasses  
**Physica B: Condensed Matter 406 (2011) 4289**      **ELSEVIER**  
**Mousa M.A. Imran**
7. Glass transition kinetics and optical band gap in  $\text{Se}_{85-x}\text{Sb}_{15}\text{Sn}_x$  ( $x = 10, 11, 12.5, \text{ and } 13$ ) chalcogenide glasses  
**Materials Chemistry and Physics 129 (2011) 1201.**      **ELSEVIER**  
**Mousa M. A.Imran , Omar A. Lafi**
8. Crystallization kinetics, glass transition kinetics and thermal stability of  $\text{Se}_{70-x}\text{Ga}_{30}\text{In}_x$  ( $x = 5, 10, 15, \text{ and } 20$ ) semiconducting glasses.  
**Physica B: Condensed Matter 406 ( 2011) 482.**      **ELSEVIER**  
**Mousa M. A. Imran**

9. Compositional dependence of thermal stability, glass-forming ability and fragility index in some Se–Te–Sn glasses.

**Journal of Alloys and Compounds 509 (2011) 5090. ELSEVIER**

Omar A. Lafi, **Mousa M.A. Imran**

10. Experimental investigation on some electrical parameters of  $\text{In}_{10-x}\text{Sn}_x\text{Se}_{90}$  ( $x = 2, 4, 6,$  and  $8$ ) chalcogenide glasses before and after gamma-irradiation

**Current Applied Physics 11 (2011) 492. ELSEVIER**

Adel A. Shaheen , **Mousa M.A. Imran** , Omar A. Lafi , Ma'rouf K. Abdullah

11. Structural relaxation due to sub- $T_g$  annealing of  $\text{Se}_{98}\text{In}_{1.5}\text{Sn}_{0.5}$  chalcogenide glass

**Journal of Alloys and Compounds 500 (2010) 237. ELSEVIER**

**Mousa M.A. Imran**, Ali F. Al-Shawabkeh

12. The effect of gamma-irradiation on glass transition temperature and thermal stability of  $\text{Se}_{96}\text{Sn}_4$  chalcogenide glass.

**Radiation Physics and Chemistry 79 (2010) 104. ELSEVIER**

Omar A. Lafi, **Mousa M.A.Imran**

13. Effect of gamma irradiation on some electrical properties and optical band gap of bulk  $\text{Se}_{92}\text{Sn}_8$  chalcogenide glasses.

**Physica B: Condensed Matter 405 (2010) 2643. ELSEVIER**

M.A. Al-Ewaisi, **Mousa M.A.Imran**, Omar A. Lafi, M. Kloub

14. Optical properties of  $\alpha\text{-Se}_{90}\text{In}_{10-x}\text{Sn}_x$  chalcogenide thin films before and after gamma irradiation

**Radiation Physics and Chemistry 79 (2010) 923. ELSEVIER**

Adel A. Shaheen , **Mousa M.A. Imran**, Omar A. Lafi, Moh'd I. Awadallah,

Ma'rouf K. Abdullah

15. Electrical studies on bulk  $\text{Se}_{96}\text{Sn}_4$  semiconducting glass before and after gamma irradiation  
**Journal of Physics and Chemistry of Solids 71 (2010) 1534. ELSEVIER**  
Sameer N. Al-Bati, Omar A. Lafi , **Mousa M.A. Imran**, Moh'd M. Shaderma
16. Structural and magnetic properties of electrodeposited Ni nanowires.  
**Journal of Alloys and Compounds 455 (2008) 17. ELSEVIER**  
**Mousa M.A.Imran**
17. Physical ageing in  $\text{Se}_{94}\text{Sn}_6$  glass induced by gamma irradiation  
**Physica B: Condensed Matter 403 (2008) 2639. ELSEVIER**  
**Mousa M.A.Imran**, I.F. Alhamarneh, M.I. Awadallah, M.A. Al-Ewaisi
18. Chemical bond approach to glass transition temperature and crystallization activation energy in  $\text{Se}_{90}\text{In}_{10-x}\text{Sn}_x$  ( $2 \leq x \leq 8$ ) semiconducting glasses.  
**Materials Chemistry and Physics 108(2007)109. ELSEVIER**  
Omar A. Lafi, **Mousa M.A.Imran**, Ma'rouf K. Abdullah
19. Glass transition activation energy, thermal stability and glass forming ability of  $\text{Se}_{90}\text{In}_{10-x}\text{Sn}_x$  ( $x=2, 4, 6$  and  $8$ ) semiconducting glasses.  
**Physica B: Condensed Matter 395 ( 2007) 69 ELSEVIER**  
Omar A. Lafi, **Mousa M.A.Imran**, Ma'rouf K. Abdullah
20. Experimental investigation of gamma ray attenuation in Jordanian building materials using HPGe spectrometer.  
**Journal of Environmental Radioactivity 94 (2007) 129. ELSEVIER**  
*Mohammad Awadallah and Mousa M.A.Imran*

21. Optical Band Gap and Optical Constant of  $\text{Se}_{98}\text{Sn}_x$  ( $x = 2, 4, 6,$  and  $8$ ) Thin Films.  
**Journal of Optoelectronics and Advanced Materials 1(4)(2007)176.**  
**Mousa M.A.Imran**
22. Radioactive contents in construction materials used in Jordanian buildings.  
**Dirasat 34(1)(2007)99.**  
*Mohammad Awadallah and Mousa M.A.Imran*
23. Thermal conductivity, thermal diffusivity and specific heat of  $\text{Se}_{98}\text{In}_{2-x}\text{Sn}_x$  ( $x=0,$   
0.5, 1, and 1.5) semiconducting glasses.  
**Al-Balqa' 11(1) (2005) 11.**  
**Mousa M.A.Imran and Mohammad Al-Awaisi**
24. Crystallization mechanism and thermal stability of  $\text{Se}_{98}\text{In}_{2-x}\text{Sn}_x$  ( $x=0, 0.5, 1,$  and  
1.5) semiconducting glasses.  
**Al-Balqa' 11(2) (2006) 31.**  
**Mousa M.A.Imran and Mohammad Al-Awaisi**
25. Crystallization kinetics and optical band gap studies of  $\text{Se}_{96}\text{In}_4$  glass before and after  
slow neutron irradiation.  
**Journal of Non –Crystalline Solids 298(2002)53. ELSEVIER**  
**Mousa M. A. Imran, N. S. Saxena, Y.K. Vijay, R. Vijayvergiya, N. B. Maharjan,**  
*M. Husain*
26. Simultaneous measurements of thermal conductivity and diffusivity of  $\text{Se}_{80}\text{Te}_{20-x}\text{In}_x$   
( $x = 2,4,6$  and  $10$ ) chalcogenide glasses at room temperature.  
**Bulletin of Materials Science 25(3)(2002)241**  
*N. S. Saxenna, Mousa M. A. Imran and Kedar Singh*
27. Enthalpy recovery during structural relaxation of  $\text{Se}_{96}\text{In}_4$  chalcogenide glass.  
**Physica B: Condensed Matter 293 (2001)394. ELSEVIER**

**Mousa M. A. Imran, Deepika Bhandari and N. S. Saxena.**

28. Kinetic studies of bulk  $\text{Ge}_{22}\text{Se}_{78-x}\text{Bi}_x$  ( $x=0,4$  and  $8$ ) semiconducting glasses.

**Journal of Thermal Analysis 65/1 (2001) 257.**

**SPRINGER**

**M. M. A. Imran, D. Bhandari and N. S. Saxena**

29. Determination of the Avrami exponent from non-isothermal differential scanning calorimeter of  $\text{Se}_{70}\text{Te}_{24}\text{Cd}_6$  chalcogenide glass.

**Physica Scripta 61(2000)502.**

**IOP-SCIENCE**

*N. S. Saxena, Mousa M. A. Imran and Deepika Bhandari*

30. Phase transformations of binary  $\text{Se}_{100-x}\text{In}_x$  ( $x=2,4$  and  $10$ ) semiconducting chalcogenide glasses under isothermal condition.

**Journal of Materials Science letters 19(18)(2000)606.**

**SPRINGER**

**M. M. A. Imran, D. Bhandari and N. S. Saxena**

31. Glass transition phenomena, crystallization kinetics and thermodynamics properties of ternary  $\text{Se}_{80}\text{Te}_{20-x}\text{In}_x$  ( $x=2,4,6,8$  and  $10$ ) semiconducting glasses: theoretical and experimental aspects.

**Materials Science and Engineering A 292(1)(2000)56.**

**ELSEVIER**

**Mousa M. A. Imran, Deepika Bhandari and N. S. Saxena**

32. Differential scanning Calorimetry studies of  $\text{Se}_{85}\text{Te}_{15-x}\text{Pb}_x$  ( $x=4,6,8$  and  $10$ ) glasses.

**Bulletin of Materials Science 23(5) (2000) 396.**

N.B.Maharjan, N.S.Saxena, Deepika Bhandari, **Mousa M.A.Imran** and

D.D.Paudyal

33. Glass transition phenomena, crystallization kinetics and enthalpy released in binary  $\text{Se}_{100-x}\text{In}_x$  ( $x=2,4$  and  $10$ ) semiconducting glasses.

**Physica Status Solidi (a) 181/1 (2000) 357.**

**Wiley-VCH**

**Mousa M A. Imran, N. S. Saxena, D. Bhandari and M . Husain**

Papers In Conferences

34. Phase transformation and enthalpy released in  $\text{Ge}_{22}\text{Se}_{78-x}\text{Bi}_x$  ( $x=0,4$  and  $8$ ) semiconducting chalcogenide glasses. Presented in the national conference on Semiconductor Materials and Recent Technologies (SMART), November, 1999. Sponsored by the Semi-conducting Society of India.
35. Crystallization kinetics of ternary  $\text{Se}_{80}\text{Te}_{20-x}\text{In}_x$  ( $x = 2,4$  and  $10$ ) semiconducting glasses under isothermal and non-isothermal conditions. Proceeding of the 6<sup>th</sup> Asian Thermophysical Properties conference. October 8-11, 2001, Guwahati, India.
36. Accuracy of measurements of the activation energy of crystallization by Kissinger method: theoretical and experimental considerations. Proceeding of the 6<sup>th</sup> Asian Thermophysical Properties conference. October 8-11, 2001, Guwahati, India
37. Structural relaxation study due to sub- $T_g$  annealing  $\text{Se}_{75}\text{Te}_{21}\text{Sn}_4$  chalcogenide glass Proceeding of the 6<sup>th</sup> Asian Thermophysical Properties conference. October 8-11, 2001, Guwahati, India