

Prof. Dr. Mazhar ud-Din Rana

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PERSONAL DATA

Father's Name: Ghulam Abbas

Date of Birth: May 12, 1953

Nationality: Pakistani

Religion: Islam

Marital Status: Married

National I.D. Card No.: 36302-9501056-1

EDUCATION

Ph.D., Physics, Bahauddin Zakariya University, Multan, Pakistan, 1998

M.S., Electrical Engineering, Wayne State University, Detroit, Michigan, U.S.A,1989.

M.S., Physics, Wayne State University, Detroit, Michigan, U.S.A,1987.

M.Sc. Physics, University of the Punjab, Lahore, Pakistan,1977.

B.Sc., University of the Punjab, Lahore, Pakistan,1974

TITLE OF THESIS

M.S.: "Low Field AC Magnetic Susceptibility Measurements of Aluminosilicate Glasses".

Ph.D.: "Cation Distribution and Magnetic Properties of Spinel Ferrites".

PROFESSIONAL PROFILE

TEACHING EXPERIENCE

Total of 37 years of teaching/research experience at graduate/post graduate level.

- . 2013-to date Professor(on contract),COE in Solid State Physics, PU,Lahore.
- . 2009- 2013 Chairman, Dept. of Telecommunication Systems, B.Z.University, Multan
- . 2007- 2013 Professor, Department of Physics, B.Z. University, Multan.
- . 2005-2007 Associate Professor, Department of Physics, B.Z. University, Multan.
- . 2003-2005 Professor/Chairman, Department of Physics, Allama Iqbal Open University
Islamabad.
- . 2000-2003 Associate Professor, Dept of Physics, B.Z. University, Multan.
- . 1994- to Assistant Professor, Department of Materials Science,
June 2000 B.Z. University, Multan.

- . 2000-2001 Part time tutor, taught Electromagnetic theory and Nuclear Physics to
M.Sc students at AIOU Multan campus.
- . 1989-1994 Lecturer, in Physics, B.Z. University, Multan, taught
M.Sc / M.Phil. classes.
- . 1988-1989 Part time Instructor, taught Physics to undergraduate students at
Wayne County Community College, Detroit, Michigan, U.S.A.

- . 1987-1989 Teaching Assistant in the Department of Electrical Engineering,
Wayne State University, U.S.A.

- . 1983-1987 Graduate Teaching/Research Assistant in the Department of Physics,Wayne State
University, Detroit, Michigan, U.S.A.

- . 1978-1983 Lecturer in Physics, B.Z. University, Multan, Pakistan, taught M.Sc classes.

RESEARCH EXPERIENCE

- Eighteen and half years experimental work in low temperature magnetism.
- Experience in cryogenics, vacuum technology, low temperature thermometry and measurements in magnetic fields.
- Two years experience in designing fiber optic based digital networks for optical Communication, Optical computing and Digital Signal Processing.
- Fabrication, cation distribution and Magnetic properties of Spinel Ferrites.

COURSES TAUGHT

GRADUATE LEVEL (M.Sc/M.Phil)

- Solid State Physics
- Quantum Mechanics
- Electromagnetic Theory
- Advanced Electronics
- Classical Mechanics
- Nuclear Physics
- Method of Mathematical Physics
- Electrical Magnetic and Optical Properties of Materials
- Computer Architecture
- Opto-Electronics, Lasers
- Experimental Techniques
- Classical Electrodynamics
- Industrial Electronics
- Advanced Vacuum Technology
- Optical Fiber Communication

UNDERGRADUATE LEVEL (B.Sc/B.S)

- General Physics
- Basic Electronics
- Solid State Electronics
- Circuit theory
- Quantum Mechanics
- Digital Computer Electronics
- Computer Architecture
- Artificial Intelligence
- Laser and optical communication
- Digital Logic and Design
- Digital Electronics
- Artificial Intellegence

RESEARCH SUPERVISION

. Ph.D, Synthesis and characterization of hexagonal ferrites for high frequency ap (2013)

. PhD Influence of rare earth elements on synthesis and characterization of hexagonal ferrites for high frequency applications (2014)

.PhD Fabrication, characterization and microwave absorption studies of hexagonal ferrites (2015)

M.Phil, Thesis on Structural and magnetic properties of Sr-substituted Y-type hexagonal ferrites (2012).

M.Phil, Thesis on Effect of sintering temperature on the structural and magnetic properties of sol-gel synthesized Y-type hexagonal ferrites (2012).

M.Phil, Thesis on influence of Mg⁺² substitution on physics, magnetic and electrical properties of Y-type hexagonal ferrites (2011).

M.Phil, Thesis on influence of Nd⁺³ substitution on physics, magnetic and electrical properties of Y-type hexagonal ferrites (2011).

M.Phil, Thesis on characterization of Sr-based W-type hexagonal ferrites prepared by sol-gel method (2009).

M.Phil, Thesis on characterization of rare earth ions substituted W-type hexagonal ferrites prepared by sol-gel method (2009).

.M.Phil, Thesis on synthesis and characterization on La-substituted Hexa-ferrites (2008)

. M.Phil, Thesis on Structural and Magnetic Properties Co-Mg Hexa-ferrites (2007).

. M.Phil, Thesis on Characterization and Magnetic Properties of Cd-Sr Hexa-ferrites (2007)

. M.Phil., Thesis on Magnetic Susceptibility Measurements of Mn-Zn ferrites.

. M.Sc., Thesis on Calculation of Radial Distribution Function of amorphous metallic alloys (Co-B, CuTi, NiTa systems).

. M.Sc., Thesis on Frequency Dependent Magnetic Susceptibility Measurements of spinel CuZn-Ferrites.

. M.Sc. Thesis on Magnetic Interaction in Li-Co ferrites.

. M.Sc., Thesis on the fabrication and electrical properties of Hexa-ferrites prepared by co-precipitation technique.

. M.Sc. Thesis on the fabrication and Magnetic properties of Hexa-ferrites prepared by solid state reaction technique.

. M.Sc., Thesis on the fabrication and Thermopower measurements of W-type $Ba_xCo_{2-x}Zn_xFe_{16}O_{27}$ ferrite prepared by co-precipitation technique.

. M.Sc., Thesis on the Electrical resistivity measurements of W-type $Ba_xSr_{1-x}Cd_2Fe_{16}O_{27}$ Hexa-ferrite.

PROJECTS SUPERVISED

Characetrization and Magnetic Properties of Hexagonal Ferrites

Agency: Bahauddin Zakariya University, Multan.

Fabrication Characterization and Microwave Absorption study in nanostructure Magnetic Materials and their Applications.

Agency: HEC

ACADEMIC HONOURS/COURSES ATTENDED

- Recipient of RPA 2012 by Pakistan Council for Science and Technology, Islamabad, Pakistan.
- Recipient of XI th Star Awards 2000 by South Asia Publication.
- Appointed as a Referee by The Journal of Materials Science (JMS), USA.
- Appointed as a Referee by The Journal of Solid State Chemistry (JSCC), USA.
- Appointed as a Referee for The Materials Letters, Published by Elsevier, UK
- Approved supervisor for Ph. D level research by HEC.
- Approved supervisor for Ph. D level research by PCST.
- Recipient of research productivity allowance (2003-2004) from PCST.
- Enlisted as productive scientists of Pakistan published by PCST
- Frontiers in Physics organized by Pakistan Physical Society (PPS) held at Islamabad, Pakistan, 1995.
- Baragali School on Electronics at Baragali, Pakistan, 1993.
- SPIE International Conference on Optical Computing held at Los Angles, California, USA, 1989.
- Awarded a C.O.T. scholarship by the Ministry of Education, Govt. of Pakistan for higher studies 1982.
- First International conference on Solid State Nuclear Track Detectors (SSNTD) held at Islamabad, Pakistan 1979.
- Awarded scholarship by the Govt. of Punjab, for M.Sc. studies at University of The Punjab, Lahore, Pakistan, 1975-77.

MEMBER SOCIETIES

- Member Senate, B.Z. University, Multan (2006-2013)
- President, Zakariyan Alumini Association of Physicist, B.Z.U, Multan (2008-2010)

- Member Academic Council , Bahauddin Zakariya University , Multan. (2007-1013).
- Member board of studies in Aviation Sciences, B.Z. University, Multan (2009-2013)
- Member board of Studies in Physics, B.Z. University, Multan (2005- 2013)
- Life member Pakistan Institute of Physics (PIP).
- Member Senate Bahauddin Zakariya University, Multan. (1991-1993).
- Life member, Zakarian Alumni Association of Physicist (ZAAP),B.Z.University, Multan.
- Member International society of Optical Engineers (SPIE) USA (1987-1989).
- Member Board of Studies in Materials Science, B.Z.U., Multan (1995-2003).
- Member Board of Faculties, B.Z.U., Multan (1996-2003)
- Member Executive Council, Academic Staff Association, B.Z.U., Multan (1997-98)
- Member DTRC,CoE in solid state Physics, PU, Lahore
- Member selection/promotion committee, CoE in Solid State Physics, PU, Lahore

ACADEMIC/ ADMISTRATIVE RESPONSIBILITIES

- Chairman, Dept. of Telecommunication Systems, B.Z. University, Multan (2009- 2013)
- Director Students Affairs, Dept of Physics, B.Z.University, Multan.(2007-2011)
- Member Academic Council, Bahauddin Zakariya University, Multan (2006-2013)
- Chairman, Department of Physics, Allama Iqbal Open University, Islamabad.(2003-2005)
- Member, Academic Council, AIOU, Islamabad. (2003- 2005).
- Member, Board of Advanced Studies and Research (BASR), AIOU,Islamabad(2003-2005).
- Chairman/ convener , Foreign Purchase Equipment Committee, AIOU, Islamabad(2003--2005).
- Member, Enquiry Committee (Removal from Services Ordinance, grade 1-19), AIOU. (2003-2005).
- Program Coordinator Ph. D, AIOU, Islamabad. (2003- 2005).

- Chairman, Department of Materials Science, B.Z. University, Multan (2002-2003).