

Engr. Muhammad Ali Siddiqui

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Lecture Notes: <http://www.slideshare.net/MuhammadAliSiddiqui6>



Personal Information

Birth Date: March, 1986
 Birth Place: Hyderabad, Sindh, Pakistan.
 Civil Status: Married.
 Country Visited: Singapore, South Korea, China, Bangladesh, Kingdom of Saudi Arabia

Professional Experience

- 2016- Present** **Assistant Professor / PEC Coordinator / ISO Area Coordinator / Student Advisor**
- Department of Metallurgical Engineering, NED University of Engineering & Technology, Pakistan
- 2012– 2016:** **Lecturer**
- Department of Metallurgical Engineering, NED University of Engineering & Technology, Pakistan
- 2012– Present:** **Visiting/part time Faculty Member:**
- Dr. Ishrat-ul-Ebad Khan Institute of Oral Health Sciences, DOW University Health Science, Pakistan
 - Department of Materials Engineering, NED University of Engineering & Technology, Pakistan
- 2009– 2012:** **Laboratory Engineer,**
- Department of Materials & Metallurgical Engineering, NED University of Engineering and Technology, Pakistan
- 2008 –2009:** **Production Engineer,**
- H.M Cables, Kottri, Plant, Pakistan

Education

- 2009-2011:** • M.E, **Specialization: Material Engineering**, NED University of Engineering and Technology, Pakistan
- Dissertation Topic: “*Effect of Calcination and Sintering Temperatures on BaTiO₃ Piezoelectric Ceramic Material Synthesized by Solid-State Reaction*” Presented in 1st International Conference on Advance Materials & Process Engineering, Organized by Department of Chemical, Polymer and Petrochemical Engineering NED UET
- 2004-2007:** • B.E, **Specialization: Metallurgy and Materials Engineering**, Mehran University of Engineering and Technology, Pakistan
- Thesis Project: “*Hardenability and Microstructural Study of AISI 1045 and DIN 20MnCr5 Steels*”,

Scientific Interests for Research

My strong background on Physical Metallurgy, Phase transformation in Steel and Making of Steel provide me deeper understanding capability for the microstructure-composition-property towards synthesis-processing relationship standpoint.

1. Design and development novel High entropy alloys.
2. Design and development of High strength steel; effects of alloying and impurities on it.
3. Design and development of the weldable nanostructured bainitic alloys which provides high strength- in GPa with optimum ductility and toughness.
4. Design and development of Line pipe steels for cryogenic applications.
5. Oriented and Non-oriented Electrical Steel for power generation applications.
6. Failure Analysis of Engineering Materials

Publications

1. **M. Ali Siddiqui** at el, **Synthesis and characterization of Barium Titanate Powder by Solid-State Synthesis and Hydrothermal Routes**, 1st International Conference on Advance Materials & Process Engineering, Organized by Department of Chemical, Polymer and Petrochemical Engineering NED UET, 2015
2. **M. Ali Siddiqui** at el, **Effect of Tempering Temperature on Susceptibility of Intergranular Corrosion of Austenitic Stainless Steel (AISI 304)**, published in the proceedings of 5th international congress on Energy sustainability and Mechanical design, 2015.
3. **M. Siddiqui** at el, **Effect of Heat Treatment on Corrosion rate Of AISI 1045 When Subjected to Various Environments**, published in the proceedings of 5th international congress on Energy sustainability and Mechanical design, 2015.

Achievements, Distinction and Awards:

1. Nominated for **Foreign- Equipment -Trainings** held in Singapore, South Korea and China.
2. Nominated for **Student Exchange Program** between Pakistan and Bangladesh: *Bangladesh Universities study Tour*.
3. Nominated for workshop course on “**Management and Leadership Development**” arranged by “National Institute of Labour Administration Training (NILAT), Government of Sindh, Pakistan.
4. Nominated for “**Internal QMS Auditor Course**” arranged by Lloyd’s, LRQA.
5. Nominated for “**Quality Management, Control and Assurance**” arranged by Higher Education Commission-Pakistan (an indigenous on campus training).
6. Member or Convener of different technical evaluation committees of Tenders of Laboratory Equipment since department inauguration, 2010.
7. Secured **1st Position** or highest CGPA in Batch in Master of Engineering.
8. Secured **4th Position** in Bachelor of Engineering.

Trainings (Obtained and Delivered)

i. Foreign Technical Training

1. **China:** Low and Ambient Temperature Impact Tester 150J and 300J with cryogenic attachment (PIT-G pendulum Testing Machine), arranged by WANCE China 2016.
2. **South Korea:** Computerized Universal Testing Machine (DTU-900HCB), Salt Spray Tester (DTC-104A) and Charpy Impact Tester arranged by Daekyung Tech & Testers. December 2014.
3. **Singapore:** Metallurgical Microscope Image Analysis System" and Software "3D analysis DOCU arranged by Olympus, 2010.

ii. Indigenous Training Obtained from Local Suppliers

1. Vacuum Tube Furnace, 2016
2. CNC Router, UK, 2015
3. Dynamic Fatigue Testing Machine, shore western USA. 2014
4. Investment Casting Setup, China, 2013
5. Atmospheric controlled Sintering chamber Furnaces, Turkey. 2013
6. PANalytical, on XRD Software, X'Pert HighScore Plus. 2011
7. Metallography Lab Equipment, Turkey. 2010

Administrative Responsibilities/Duties

i. Member of Different Committees / Tender Committee Member.

- Member of Pakistan Engineering Council (PEC).
- Member of Board of Studies, BOS –Department Level.
- Member of Board of Review, BOR –Department Level.
- Member of Duty Society, NED University of Engineering and Technology
- Member or Convener of different technical evaluation committee of the Laboratory Equipment Tenders.

ii. ISO 9000-Area Coordinator/PEC Coordinator

- Manage and monitoring all the academic activities.
- Planning and perform the audits as per schedule of NED UET QSP.

iii. Laboratory In-charge

- Heat Treatment and Sintering Furnace Laboratory, since 2013
- Foundry Laboratory: Sand Testing and Investment casting laboratory, since 2013
- Inspection and Testing of Materials Laboratory, Since Jan 2015
- Mechanical Working Laboratory, since 2016

iv. Procurement and Installation of Laboratory Equipment's

- Tendering, Procurement and installation of equipment procured by Metallurgical Engineering Department, since 2010 to date
- Actively engaged for Commissioning and Installation of the following Equipment's/Machines.
 1. Metallography Sample Preparation Equipment's, it includes Abrasive cut-off Machine, Mounting Machine, Automatic Grinding/Polishing Machine. (2010 and 2012)
 2. Metallurgical Microscope and Stereo Microscope, (2010-11)
 3. XRD and its Software X-pert high score Plus (2011) (**Materials Engineering Department**)
 4. Heat Treatment and Sintering Furnaces, (2013)
 5. Investment Casting Setup. Includes. Vulcanizer, Wax Injector, Vacuum Mixer, Drying oven, Air melting system, and Induction melting system.(2013)
 6. Humidity Chamber (2013)
 7. Fatigue Testing Machine. (2014)
 8. Universal Testing Machine. (2014)
 9. Salt Spray Chamber (2014)
 10. CNC Router (2015)
 11. Impact Testing Machine (2016)
 12. vacuum Tube Furnace (2016)

v. Others

- Departmental Representative for “Metallurgical Commercial Wing”. Since 2013

Industrial Training (Certificate Courses)

1. **Pakistan:** Pak Swiss PSTC PCSIR on Dies and Mold Technology, 2009
2. **Pakistan:** Bolan Casting limited, Internship, 2007
3. **Pakistan:** Peoples Steel Mills Limited, Internship, 2006
4. **Pakistan:** Internal QMS Auditor Training Course (Based on ISO 9001:2008), on 28th -29th November 2014 From Lloyd's Register LRQA clubbed with HEC Indigenous on Campus Training on Quality Assurance, NED UET, 28th Nov to 10th December, 2014.
5. **Pakistan:** Technical Writing with Latex, 25th to 30th August, 2014
6. **Pakistan:** Management and Leadership Development, 21st to 23rd September, 2016

Webinar/Conference/Seminar Attained

1. Safety in chemical Industries, University of Karachi
2. Advance Structural Materials organized by NED Materials Society in collaboration with AQUAFIN Pakistan (Pvt) Ltd.
3. International Conference on Energy and Sustainability arranged by Mechanical Engineering Department, NED UET, Pakistan, and April 2013, 2014, and 2015.
4. 1st International Conference on Advanced Materials and Process Engineering-jointly organized by Department of Chemical and Polymer and Petrochemical Engineering NED University of Engineering, 2015