

CURRICULM VITAE



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Residential Address: 20-Ayesha street, Abdali Chowk, Islampura, Lahore
Marital Status: Married
C.N.I.C. No. 35202-4529141-1
Date of Birth: 11-10-1967
Passport No. AH0721412
Present positions:
i) **Controller of Examinations,** University of the Punjab, Lahore.
ii) **Director,** Centre for Coal Technology, University of the Punjab Lahore, Pakistan.
iii) **Professor,** Institute of Chemical Engineering & Technology, University of the Punjab, Lahore.
PhD research topic: Co-combustion of Biomass with Coal
Supervisor: Prof. Bernard. M. Gibbs
Co-Supervisor: Dr. W. Nimmo
Qualification:

<u>Examination</u>	<u>Division</u>	<u>Year</u>	<u>Institution</u>
B.Sc. (Engg.) Chemical Engineering	Ist	1993	Institute of chemical Engineering & Technology, University of the Punjab, Lahore.
MBA (Marketing)	Ist	2003	Institute of Business Administration, University of the Punjab, Lahore.
M.Sc (Engg.) Chemical Engineering	Ist (Gold Medallist)	2007	Institute of chemical Engineering & Technology, University of the Punjab, Lahore.
PhD	-	2010	Energy and Resources Research Institute, School of Process, Environmental and Materials Engineering, University of Leeds, UK

Positions held/Experience:

Controller of Examination University of the Punjab, Lahore.	13-10-2014 to Date
Director, Centre for Coal Technology, University of the Punjab, Lahore.	2-12-2011 to Date
Professor of Chemical Process Technology Institute of Chemical Engineering & Technology, University of the Punjab, Lahore, Pakistan.	13-10-2011 to Date
Assistant Professor, Chemical Engineering Institute of Chemical Engineering & Technology, University of the Punjab, Lahore, Pakistan.	14-01-2003 to 12-10-2011
Production Manager Service Industries, G.T. Road, Gujrat, Pakistan.	01-08-2002 to 13-01-2003
Deputy General Manager PICO, Sheikhpura, Pakistan.	15-04-2002 to 31-07-2002
Deputy Manager Production EMCO Industries Ltd. Lahore, Pakistan.	11-06.1998 to 14-4-2002
Assistant Manager Marketing IAC, Lahore, Pakistan.	1-12-1997 to 10-06-1998
Assistant Manager Production EMCO Industries Ltd. Lahore, Pakistan.	01-05-1994 to 22-10-1997

RESEARCH PUBLICATIONS

1. Javaid Akhtar, Shumaila Rehman, Naseer Sheikh, **Shahid Munir**, Agglomeration of Pakistani Coal (lakhra) using Diesel Oil, Energy Sources Part A (Recently Accepted)
2. **Shahid Munir, Usman Rafaqat, Javed Akhtar, Naseer-ud-Din Sheikh**, (2015). Cleaning of Dukki (Baluchistan) Coal by Oil Agglomeration published in International Journal of Oil, Gas and Technology, 9(1): 79-88.
3. **S. Munir, K. Shahzad, S. Aslam, M. Mukhtar, J. Akhtar**, "Parametric Study of Coal Gasification Under Bubbling Fluidized Bed Conditions" in proceeding of Ist International Young Engineers Convention (FIYEC-IYEC-2014) organized by the Pakistan

Engineering Council at University of Engineering & Technology (UET) held on April 18, 2014.

4. **S. Munir, Sana Mushtaq, Shumaila Azam, J. Akhtar, N. Sheikh, K. Shahzad** “Up-gradation of Duki Coal by Agglomeration with Xylene”. in proceeding of Ist International Young Engineers Convention (FIYEC-IYEC-2014) organized by the Pakistan Engineering Council at University of Engineering & Technology (UET) held on April 18, 2014.
5. **Shahzad.K, Kanwal.S, Nawaz.S, Sheikh.N, Munir.S, (2014)**. Effects of moisture and Coal blending on HGI of Pakistani Coal. *International Journal of Coal Preparation and Utilization*, 34(1),1-9.
6. **Ashraf.I, Kanwal.S, Shahzad.K, Sheikh.N,Munir.S, (2013 Submitted)**. Upgradation of Pakistani Coal by Heavy Media Separation. *International Journal of Mineral Processing*.
7. **Imran Ashraf, Sumaira Kanwal, M. Khurram Shahzad, N. Sheikh, S. Munir,(2012)**. Upgradation of Dandot Coal by Heavy Media Separation. In *Proceedings of International conference on Engineering Sciences, ICES 2012, 28-29 February,Lahore*
8. **Munir.S ,W. Nimmo, B.M. Gibbs,(2012)**. Pakistani Sugarcane bagasse as potential secondary fuel for NO_x reburning in large scale coal combustion systems in proceeding of UK-Pakistan Coal Conference (UK-PK2012),3-5th July , 2012, Leeds, UK.
9. **Munir.S, (2012)**. Energy Crisis in Pakistan and its Solution in proceedings of UK-Pakistan Coal Conference (UK-PK2012),3-5th July , 2012, Leeds, UK.
10. **Munir, S.; Nimmo, W.; Gibbs, B.M., (2011)**. The Effect of air staged, co-combustion of pulverised coal and biomass blends on NO_x emissions and combustion efficiency. *Fuel* 90 (2011) 126–135.
11. **Munir.S, NO_x Emission Control using Biomass as Reburn Fuel , 4th Symposium on Engineering Sciences 1st March 2011, ICET, University of the Punjab, Lahore.**

12. **Munir, S.; Nimmo, W.; Gibbs, B. M.,** (2010). Sheameal and Cotton Stalk as potential fuels for co-combustion with coal. *Bioresource Technology*, 101 (19). 7614–7623.
13. **Munir, S.; Nimmo, W.; Gibbs, B.M.,** (2010). Co-combustion of Agricultural Residues with Coal: Turning Waste into Energy. *Energy & Fuels*, 24 (3), 2146-2153.
14. **Daood, S.S.; Munir, S.; Nimmo, W.; Gibbs, B.M.,** (2010). Char oxidation study of sugar cane bagasse, cotton Stalk and Pakistani Coal under 1% and 3% oxygen concentrations. *Biomass and Bioenergy*. 34 (3), 263-271.
15. **Munir, S.,** (2010). A review on Biomass-Coal Co-combustion: current state of knowledge. *Proceedings of Pakistan Academy of Sciences*. 47(4), 265-287.
16. **Munir, S.; Nimmo, W.; Gibbs, B.M.,** (2010). Air and Fuel Staged Co-combustion of Coal with Biomass in Power Station Boilers. *Journal of Quality and Technology Management. Volume VI, Issue II, Dec, 2010, pg. 81-111.*
17. **Munir, S.; Nimmo, W.; Gibbs, B.M.,** (2010). Biomass as potential Reburn Fuel in Coal-fired Boilers. *Journal of Quality and Technology Management. Volume VI, Issue II, Dec, 2010, pg. 43-79.*
18. **Shahzad. K, Nawaz. S, Kanwal. S, Munir. S,** (2015) Desulphurization and demineralization of Lakhra Coal by moltern caustic leaching, *Energy Sources Part A*. Volume 37.
19. **Munir, S.; Nimmo, W.; Gibbs, B.M.,** (2010). Potential Slagging and Fouling Problems associated with Biomass-Coal blends in Coal-fired Boilers. *Journal of Pakistan Institute of Chemical Engineers. Vol.38, 1-26.*
20. **Munir, S.; Daood, S.S; Cunliffe, A.M.; Nimmo,W.; Gibbs, B.M.,** (2009) Thermal Analysis and Devolatilization Kinetics of Cotton Stalk, sugar cane bagasse, and shea meal under nitrogen and air atmospheres. *Bioresource Technology*, 100 (3), 1413-1418.
21. **Munir, S.; Akhtar, N.A.; Nimmo, W.; Gibbs, B.M.,** (2009). NO_x formation during combustion process and in-furnace control technologies. *Journal of Pakistan Institute of Chemical Engineers*, 37, 13-21.

22. **Munir, S.; Nimmo, W.; Gibbs, B.M.,** (2009) Air and Fuel staged Co-combustion of Biomass with Coal. In *Proceedings of the 10th International conference on Energy for a Clean Environment*, 7-9 July Lisbon
23. **Munir,S., Daood,S.S., Rizvi, Z.H., Butt, M.A.,** (2009). Development of an Inclined Plate Extractor-Separator for Immiscible Liquids. *Energies*, 2, 957-975.
24. **Munir.S ,W. Nimmo, B.M. Gibbs, (2008).** Biomass Co-firing, Worksop on perspectives on Co-Combustion, Preceding the 7th European Conference on Coal Research and It's Applications, The University of Cardiff, UK, 3rd-5th September 2008.
25. **Daood,S.S., Munir,S., Akhtar,N.A., Butt,M.A.,** (2007). Effect of operating parameters on extraction in sieve plated pulsed column. *Proceedings of Pakistan Academy of Sciences*, 44(3), 189-195.
26. **Rizvi, A.H., Daood, S. S., Javed, M. T., Munir, S., Pourkashanian, M., Nimmo, W.** (2015) Reactivity Analysis of Pakistani Thar Lignite Reserves in oxidizing Thermogravimetric Analysis Atmospheres, *Energy & Fuels*, 29(8); 5349-5360

PARTICIPATED IN CONFERENCES / SEMINARS / SYMPOSIUM / WORKSHOPS (NATIONAL AND INTERNATINOAL LEVEL)

INTERNATINOAL LEVEL

1. Visited China regarding Coal Power Plants by Sapphire Group from February 12, 2015 to February 17, 2015.
2. Participated in Conference and Study Tour regarding “Waste to Energy” organized by International Solid Waste Association (ISWA) from June 22 to June 27, 2014 in Vienna - Austria.
3. Participated in Panel Discussions in 10th International Conference for Oil, Gas & Energy Industry organized by POGEE at Expo Centre, Lahore on 29-05-2014.
4. S. Munir, K. Shahzad, S. Aslam, M. Mukhtar, J. Akhtar, “Parametric Study of Coal Gasification Under Bubbling Fluidized Bed Conditions” in proceeding of Ist International Young Engineers Convention (FIYEC-IYEC-2014) organized by the Pakistan Engineering Council at University of Engineering & Technology (UET) held on April 18, 2014.
5. S. Munir, Sana Mushtaq, Shumaila Azam, J. Akhtar, N. Sheikh, K. Shahzad “Up-gradation of Duki Coal by Agglomeration with Xylene”. in proceeding of Ist International Young Engineers Convention (FIYEC-IYEC-2014)

organized by the Pakistan Engineering Council at University of Engineering & Technology (UET) held on April 18, 2014.

6. Visit China regarding installation of 1320 MW Coal-Fired Power Plant at Qadar Abad – Sahiwal by the Government of the Punjab in January – 2014.
7. International Conference on “Renewable Energy Technologies in Pakistan” organized by the Faculty of Agriculture and Technology, University of Agriculture, Faisalabad and University of Kassel, Germany on October, 2013.
8. International Conference on “Energy Production by Natural Resources” June 05, 2013 in Saudi Arabia.
9. Presented a key note address and a research paper in UK-Pakistan Coal Conference 3rd-5th July 2012, Leeds, UK
10. International Conference on Engineering Sciences Lahore, 28-29 Feb, 2012 presented paper on “Up-gradation of Dandot Coal by Heavy Media Separation”
11. Third International Conference on “Assessing Quality in Higher Education”, UNESCO-HEC-Punjab University, Lahore, December 6-8, 2010.
12. Summer conference: A Low Carbon Future, 24th June, 2010. Doctoral Training Center, Low Carbon Technologies, University of Leeds, UK
13. Rowena Ball seminar on Clean Combustion: The charXive challenge and the clean coal quest: thermo kinetic principles and methods for capturing and sequestering carbon dioxide."9th June 2010. Energy and Resources Research Institute, University of Leeds, UK.
14. 10th International conference on Energy for a Clean Environment, 7-9 July 2009, Lisbon Portugal. (Presented a paper: Air and Fuel staged Co-combustion of Biomass with Coal.)
15. Second International Conference on “Assessing Quality in Higher Education”, HEC-UMT-Punjab University, December 1-2, 2008.
16. Oxy-Fuel Combustion: Opportunities and Challenges, One day IOP symposium on 7th May 2008, University of Leeds, UK.
17. Workshop on Technology Challenge for a Sustainable Future, 16 Dec 2008. School of Process, Environmental & Materials Engineering, University of Leeds, UK. (Presented poster: Air and Fuel Staged co-combustion of Biomass with Coal.
18. Workshop on Perspectives on co-combustion preceding the 7th European Conference on Coal Research and its Applications, The University of Cardiff, 3rd –5th September 2008.

19. Oxy-Fuel Combustion: Opportunities and Challenges, One day IOP symposium on 7th May 2008, University of Leeds, UK.
20. Second International Conference on “Assessing Quality in Higher Education”, HEC-UMT-Punjab University, December 1-2, 2008.
21. First International Conference on “Assessing Quality in Higher Education”, UNESCO-HEC-Punjab University, Pearl Continental Hotel, Lahore, December 11-13, 2006.
22. Participated and Delivered a talk on the topic of “Utilization of Indigenous Coal for National Economic Development” at SGS International Coal Conference on November 24-25, 2015 (Crystal Hall, Pearl Continental Hotel, Lahore, Pakistan)

NATIONAL LEVEL

1. First National Conference on Chemical Engineering Congress, April 2003, Lahore, Pakistan.
2. Workshop on Research & Development Needs in Pulp & Paper Industry by National Core Group in Chemistry, Higher Education Commission of Pakistan held on September, 20, 2006 at the Institute of Chemical Engineering & Technology, University of the Punjab, Lahore.
3. Workshop on Research & Development Needs in Textile Processing by National Core Group in Chemistry, Higher Education Commission of Pakistan held on March, 28, 2006 at the Institute of Chemical Engineering & Technology, University of the Punjab, Lahore.
4. Workshop on Technology Challenge for a Sustainable Future, 16 Dec 2008. School of Process, Environmental & Materials Engineering, University of Leeds, UK. (Presented poster: Air and Fuel Staged co-combustion of Biomass with Coal.
5. Workshop on Perspectives on co-combustion preceding the 7th European Conference on Coal Research and its Applications, The University of Cardiff, 3rd –5th September 2008.
6. Summer conference: A Low Carbon Future, 24th June, 2010. Doctoral Training Center, Low Carbon Technologies, University of Leeds, UK
7. 4th Symposium on Engineering Sciences. 1st March 2011. Institute of Chemical Engineering & Technology, University of the Punjab, Lahore.
8. National Conference on Electric Power Deficit held by the Institution of Electrical & Electronics Engineers Pakistan (IEEEEP) in collaboration with UET Lahore on October 29, 2011.
9. Presented key note address in 1st Innovation youth Workshop, 2012, 11th-12 August, University of the Punjab.

10. National Conference on “Bioclean Coal Technologies” in the National Institute for Biotechnology and Genetic Engineering, Industrial Biotechnology Division (NIBGE) on 07-08-2012.
11. Seminar on “Energy Crisis and Its Solutions” on June 13, 2012 at the University of the Punjab, Q. A. Campus, Lahore.
12. Seminar on “Technologies for Capitalizing local coal for industry in the Lahore Chamber of Commerce and Industry on 04-09-2013.
13. Seminar on “Future of Research in Pakistan” on May 18, 2013 at Higher Education Commission (HEC), Islamabad.
14. National Consultation Conference of 1000 + Stakeholders on Pakistan Vision 2025 and 11th 5 year Plan 2013-2018 organized by the Ministry of Planning, Development and Reforms, Government of Pakistan held on 22-11-2013 at Jinnah Convention Centre, Islamabad.
15. 5th Symposium on Engineering Sciences (Chair Technical Session), organized by Prof. Dr. Mahmood Saleem, Institute of Chemical Engineering & Technology, University of the Punjab, Lahore held on 02-04-2014.
16. Present a Key Note Address on “Energy Crisis and Its Solution through Coal” in the Seminar regarding “Current Engineering Issues” organized by the College of Emerging & Emerging Technology (CEET), Institute of Chemical Engg. & Technology, University of the Punjab and Pakistan Institute of Metallurgical Engineering (PIME) held on 10-04-2014.
17. Seminar on “Tackling Energy Crisis Through Coal” organized by All Pakistan Textile Processing Mills Associates (APTMA) at Serena Hotel, Faisalabad on 03-04-2013.
18. Seminar on “Utilization of Local Coal for Electricity Production Its Social Implication at Social and Cultural Studies University of the Punjab, Lahore on 31-04-2013.
19. National Conference on “Energy Crisis and Role of Coal in its Solution organized by Youth Parliament of Pakistan at Federation of All Pakistan Chamber of Commerce & Industry (FPCCI), Regional Office, Lahore on 20-04-2013.
20. National Energy Conference on “Energy Crisis and its Solution” organized by the Jang Group of Newspaper and National Energy Forum Pakistan at Pearl Continental Hotel, Lahore on October, 2013.
21. Participated in EU Trade Event on December, 2013 at Lahore.
22. Conference on Leaping Towards Self Sufficiency in Energy-Expediting the Development of Thar Coal and Power Project at Karachi on 25-01-2014.
23. Seminar on “Technologies for Green Energy” organized by the Lahore Chamber of Commerce & Industry (LCCI) and Institute of Research Promotion (IRP) at Jinnah Auditorium, Lahore on 27-06-2013.

24. Presented Key Note Speaker, National Seminar on Coal Technologies – Geology, Mining, Processing and utility Organized by Centre of Energy Research and Development, University of Engineering & Technology (UET), at Faletti's Hotel Lahore on 26-11-2014.
25. Participated as an technical expert in on “Enhancing Social sustainability of Energy Development by gender mainstreaming in Hydro Power Project in Pakistan sponsored by World Bank on 25-02-2015 at 10:00 a.m. organized by National Centre for Resettlement and Rehabilitation (NCRR) at the Inst. Of Social and Cultural Studies, University of the Punjab and Shirkat Gah Resource Centre, Lahore.
26. Participated as Panel Expert in National Management College (NEPA) on 15-01-2015.
27. Participated in International Forum on “Higher Education 2015” organized by Institute of Social and Cultural Studies, University of the Punjab, Lahore on 12-03-2015 at Auditorium of Dr. Pervaiz Hassan Environmental Law Centre.
28. Delievered Plenary Lecture at 1st International Conference on Energy Systems for Sustainable Development 2015, organized at Department of Chemical Engineering, COMSATS Institute of Information Technology, Lahore (May 20-22, 2015)
29. Organized Seminar and delivered talk on “Role of Indigenous Coal in Solving Energy Crisis” (May 25, 2015 at Al-Razi Hall, Centre for Undergraduate Studies, University of the Punjab).
30. Participated in a Workshop on Restructuring of Mines & Minerals, organized by Mines and Minerals Department, Punjab, at Sutlej Hall, Avari Hotel, Lahore on July 1, 2015.
31. Participated in Lecture Discussions on the topic of Energy Deficit at National Management College (Senior Management Wing), on October 27, 2015
32. Participated in 2nd International Conference on Engineering Sciences, Institute of Chemical Engineering & Technology, University of the Punjab, Lahore (December 02-03, 2015)
33. Participated and Delivered Talk on Coal Exploitation and Utilization for Economic Development in 73rd Annual Session of Pakistan Engineering Congress (December 25, 2015 at Mashhadi Hall, 4th Floor, PEC Building, Liberty Market, Gulberg-III, Lahore)

Power Projects

Working as Member of the Panel of Experts (POE) to review and approve Coal-Fired Power Projects for Punjab Power Development Board and Punjab Power Development Company, Government of the Punjab.

1. Punjab Power Development Company, Government of the Punjab 660x2 MW Coal Based Power Plant at Qadar Abad - Sahiwal District, Punjab.
2. M/s Electro Power Generation Pvt. Ltd. 50 MW Coal Based Power Plant at Kalar Kahar, Distt. Chakwal.
3. M/s Saba Power Generation Company Pvt. Ltd. 50 MW Coal Based Power Plant at Kattha Sugral, Distt. Khushab.
4. M/s Noble Power Generation Company Pvt. Ltd. 50 MW Coal Based Power Plant at Mauza Dharabi, Tehsil Tala Gang, Distt. Chakwal.
5. M/s Malakwal Power Pvt. Ltd. 50 MW Coal Based Power Plant at Vareena Distt. Mandi Bahuddin.
6. Punjab Power Development Company, Government of the Punjab 110 MW Coal Based Power Plant near Industrial Estates, Sundar, Lahore.
7. Punjab Power Development Company, Government of the Punjab 110 MW Coal Based Power Plant near M-3 Industrial City, Faisalabad.
8. 2 x 660 MW Coal Based Power Plant at Rahim Yar Khan by Nishat group and Shanghai Electric Company, China
9. 2 × 660 MW Coal Fired Power Project at Balloki, Kasur by M/s. China Gezhouba Group Co., Ltd.
10. Punjab Power Development Company Limited, Government of the Punjab, 150 MW Coal Based Power Plant at Sialkot
11. Punjab Power Development Company Limited, Government of the Punjab, 150 MW Coal Based Power Plant at Faisalabad
12. Punjab Power Development Company Limited, Government of the Punjab, 150 MW Coal Based Power Plant at Multan
13. Punjab Power Development Company Limited, Government of the Punjab, 150 MW Coal Based Power Plant at Lahore
14. 30MW Waste to Energy Power Plant at Lakhodair Site Lahore undertaken by Lahore Waste Management Company (LWMC)
15. 660 MW Coal Fired Power Project at Muzaffargarh by M/s Kot Addu Power Company Limited (KAPCO)

SNGPL Gas Project Coordination

1. Energy Efficiency in small to medium size industry through improvement in Design of Industrial Gas Burner.

2. Calculation of Gas Meters
3. Estimation Modelling for calculation of volumetric impact of above ground / underground Leakages taking into consideration of SNGPL. Field conditions.
4. Designing of a Model Recuperator / Heat Economizer which is to be installed on the stocks of Furnace to recover heat by preheating combustion air.
5. Implement in Design of Industrial Gas Burners.
6. Development of method to avoid high velocity solid particles in order to enhance the life of filters.
7. Carried out a Research Project to compare the results of the test with the analysis report of Dr. John Smart (Consulting Engineer).
8. Carried out Research Project on the Provision of Technical Specification, supplier's details & mechanism of ISO Kinetic Kit to SNGPL.
9. Carried out Elaboration of the Rout/Path/Process/Mechanism of Solid Particles especially Clay and quartz detected in gas pipeline.
10. Carried out a Research Project to the optimum amount of inhibitor to be injected for protection of gas pipeline transmitting gas with high amount of Sulphur Content to Engro Power.
11. Carried out Pre-Feasibility of 5MM CFD Biogas Plants program for SNGPL.
12. Seepage detection measurement from low gas assemblies.

Book Published

Published book titled “Co-combustion of Coal with Biomass: Energy for a Clean Environment”

Publisher: VDM Verlag Dr. Müller, **ISBN-13:** 978-3639327984

Research Supervision

Supervised and Supervising various thesis of the PhD, MPhil, MS TQM students and B.Sc. (Engg.).

SR. NO.	TITLE OF THESIS
PhD	
1	Air-Staged Co-Combustion of Coal and Agricultural Residues
2	Kinetic Analysis of Thar Coal and the Effects of its Blending and Air Staging on NO _x Reduction
3	The Mediating Role of Innovation and Knowledge Management in the Relationship of TQM and Organizational Performance

4	An Investigation of the Role of ISO 9000 Implementation in Achieving Competitive Advantages
M. Phil/.M.Sc	
1	Implementation of TQM in Pakistani Manufacturing Companies, an empirical investigation
2	Development of Training Program for pharmaceutical sales personnel in the light of TQM needs
3	Role of Govt./Public sector to enhance exports from Pakistan
4	Methods of designing territories in pharmaceutical
5	Use of innovative tools in marketing strategies
6	How to chose an appropriate leadership style
7	Managing Sales force in marketing contact
8	Thermogravimetric Analysis of Biomass Char in Inert Atmosphere
9	Identification of Mineral Matter in Indigenous Coal Samples using XRD and SRF Techniques
10	Extraction of Rice Bran Oil by using Ethanol-Water System
M. Sc. Coal Technology	
1	Cleaning of Lakhra Coal by Agglomeration using diesel oil
2	Up gradation of Khushab Coal by heavy media separation
3	Effect of pH on Floatability of Chamalang Coal using Anionic and Nonionic Collectors
4	Cleaning of Dukki (Balouchistan) coal by oil agglomeration process.
5	Effects of coals blending on HGI (Hardgrove Grindability Index)
6	Study on compressive strength of test blocks made of blends of cement, fly ash and sand.
7	Effect of coal ranks on Hardgrove Grindability Index (HGI) values
8	Study of thermal behaviour of indigenous and imported coals using Thermogravimetric (TGA).
9	Upgradation of Mianwali Coal by froth flotation using oleic acid as collector.
10	Reduction of chemical oxygen demand (cod) of textile waste water by using coal ash.
11	Upgradation of Mianwali coal by combination technology (Froth Flotation and leaching)
12	Synergetic effect of anionic and non-ionic collectors on floatability of Makerwal coal.
13	Effect of sodium silicate as depressant for mineral matter in flotation of

	Makerwal coal.
14	Cleaning of Dukki Coal by agglomeration process using n-Hexane.
15	Effect of corn cob blending with Mianwali coal on flue gas emissions.
16	Upgradation of Lakhra coal by Froth Flotation using Oleic acid as collector.
17	Determination of Hardgrove Grindability Index of float products by heaving media separation of Khushab and Lakhra Coals.
18	Effect of Biomass blending with coal on fuels Gas during oxygen deficient combustion.
19	Estimation of Grindability by Sink Float Test Data of Dukki and Sharigh Coals
20	Upgradation of Chamalang Coal by Combination Techniques (Agglomeration by Using Furnace Oil and Froth Flotation)
21	Upgradation of Chamalang Coal by Combination Techniques (Agglomeration by Using Diesel Oil and Froth Flotation)
22	Cleaning of Dukki Coal by using Combination Technology (Heavy Media Separation and Froth Flotation Technologies)
23	Upgradation of Dukki Coal by using Combination Technology (Heavy Media Separation and Froth Flotation Techniques)
24	Effect on Comparative Strength of Test Blocks Made of Blends of Cement, Fly Ash and Sand
25	Beneficiation of Lakhra Coal by Leaching with H ₂ O ₂ /H ₂ SO ₄ Mixture
26	Study of Comprehensive Strength and Thermal Conductivity of Cement-Fly Ash Blend Mortars.
27	Cleaning of Dukki Mines Coal by Agglomeration with n-Heptane.
28	Agglomeration of Chamalang Coal by Lubricating Oil: Effect of Stirring Speed, Oil Dosage and Mesh Size.
29	Desulfurization and Demineralization of flotation concentrate of Mianwali Coal by Leaching with Sodium Hydroxide.

B.Sc. Engineering Supervision (Equal to Master)

SR. NO.	TITLE OF THESIS
1.	A plant design report on production of 300 MT/Day industrial alcohol from molasses using flocculent yeast & TBR
2.	A plant design report on the production of 1400 MT/year of acetone via dehydrogenation of isopropyl alcohol.
3.	A plant design report on the production of 200,000 MT/year vinyl chloride from ethylene.
4.	Design project on the production of sheet glass by float glass method.
5.	A plant design report on the production of BTX from 150 MT per day of plant formate (Fractionation section)
6.	A project design report on production of 10 Tons per day of formic acid from hydrolysis of methyl formate.
7.	A plant design report on the production of 1000 tons per day of urea from CO ₂ & NH ₃ By total recycle process.
8.	Plant design report on the production of 1400 MT/year of ethylenediamine from ethylenedichloride
9.	A plant design report on the production of Mono-ethylene Glycol 200 T/Day.
10.	A plant design report on production of 6,00,000 Tons/yr of purified terephthalic acid.
11.	A plant design report on Hydrotreating of naphtha
12.	Manufacturing of self indicating silica Gel
13.	A Process Report on the Production of Biogas
14.	A process report on TGA & DSC of a random sample of Polyurethane
15.	A plant design project on production of 52-38 TPD of Synthesis gas via gasification of 30 TPD of coal
16.	A plant design report on the production of 250 MT/day bio-ethanol through fermentation of molasses
17.	A process report on burning behavior of coal and biomass in air and inert atmosphere
18.	A plant design project on production of 800 MTPD of Ammonia from Thar Coal
19.	A design project report on production of Synthetic Gas from 50 Tons/Hour of Thar Coal using the Kopper-Totzek Gasifier
20.	A plant design project on the production of 3500 MTPD Urea by

	advance cost and Energy saving 21 (Aces21) process
21.	A Process Report on the production of Biodiesel from Waste Vegetable Oil.
22.	A Process Report on Synthesis of Alkyd Resin
23.	A project Report on the production of Styrene from ethyl benzene.
24.	A Project Report on the production of 50 T/day of Power Alcohol from Molasses
25.	A Project Report on the production of PTA from P-xylene
26.	Desulfurization of Chamalang Coal by chemical oxidation using $KMnO_4$ pH9.3.
27.	A Process Report on Thermal Analysis of Biomass
28.	A Plant Design Project on Production of Syn Gas from 50 KW FBDB Gasifier.
29.	A Plant Design Project on Production of 75 TPH steam Generated by Coal Fired Circulating Fluidized Boiler.
30.	A plant Design Project on the production of Syngas from Coal using 50 KW Lurgi Gasifier.
31.	Preparation of Urea Formaldehyde Resin
32.	A plant design project on production of Synthesis Gas by coal using high temperature Winkler Gasifier.
33.	A Process Report on preparation of activated carbon from Coal (CHAMALANG) by chemical activation.
34.	A Process Report on Comparative Characterization of Biomass
35.	Production of High Octane Gasoline 1340 BPD from Naphtha

List of Articles published in various newspapers and Magazines:

Sr. No.	Title	Newspaper/Magazine	Date of Publication
1	“Thar Coal” “Daway Aur Haqeeqat”	Daily Jang	04-09-2012
2	“Thar Coal; the Game Changer”	Daily The Nation	03-09-2012
3	“Thar Kay Koilay Say Bijli Kaisay Paida Ki Ja Sakti Hai”	Daily Ausaf Sunday Special Edition	20-09-2012
4	“Tawanai Ka Buhran Aur Us Ka Hal”	Daily Jhang Sunday Magazine	16-09-2012
5	“Tackling the Energy Crisis”	Daily The Nation	02-07-2013
6	“Thar Kay Koilay Say Bijli Ki	Daily Nawa-i-Waqt	02-07-2013

	Paidawar”	Magazine	
7	“The Energy Crisis and the Strategy to resolve it”	Daily The News	28-07-2013
8	“Sab Say Bara Challenge Sasti Bijli”	Daily Pakistan Magazine (Zindagi)	04-08-2013
9	“21 Century Coal”	The Nation	01-03-2014
10	“Koilya Ka Mohool Doost Istimal Pakistan Ko Tawanai Buhraan Say Nikaal Sakta Hai”	Daily Jang Sunday Magazine	18-05-2014
11	Interviewed by Mr. Sohaib Marghub on Introducing the Changes in Examinations System in 2016	Daily Jang	30-06-2015

T.V. Interviews / Programs

Sr. No.	Interview	Program	T.V. Channel	Date
1	Appeared in Discussion Hosted by Dr. Rana Tanvir Qasim in Programme on the topic of Energy strategy and Higher Education for Nation's Progress.	“Justaju”	Paigham TV	23-07-2014
2	Appeared in an exclusive interview by Orya Maqbool Jan	“Mutbadil”	Channel 24	11-07-2015
3	Participated in a Panel Discussion on the Topic of “Energy Buhraan, Kiya Wajohat Par Qabu Pa Liya Gaya...?” with P.J Mir.	Q & A	Din News	22-12-2015
4	Appeared in an exclusive interview With Seemal Hashmi	City @ 10	City 42	16-07-2015
5	Participated in a panel discussion on the topic of “Defaulters PhD Scholars” with Najam Wali Khan	News Night	City 42	25-04-2016

Academic Responsibilities:

I am working as Professor, Institute of Chemical Engineering & Technology and Director, Centre for Coal Technology, University of the Punjab, Lahore, Pakistan.

As Professor my duties include to deliver lectures and practical demonstrations in the following subjects:

- i. Instrumentation and Process Control to final year students
- ii. Heat and Mass Transfer Operations to third year students

- iii. Chemical Process Technology to second year students
- iv. Chemical Reaction Engineering to 6th semester students
- v. Fluid and Particle Mechanics to third semester students
Production and Operations Management to Final Prof students
- vi. Industrial Management and Process Economics to final prof students
- vii. Thermo chemical conversion in process to M. Phil students:
 - Marketing and Financial Management to MS students.
 - Organizational behavior to MS students.
 - Management and strategy Management to MS students.
- viii. Advanced Coal Technology to M.Phil students.

Professional Training Courses

- Participation in “Way Forward to Address the Challenges and Issues faced by HEC while Attesting/Equating the Educational Credentials of Pakistani Institutions in 21st Century” held at Lahore, January 31, 2015.
- Indigenous on-Campus Training Program for Management Team, University of the Punjab in collaboration with Higher Education Commission – Pakistan from October 27-31, 2014.
- Level 2 Award in Health & Safety in the Workplace by Chartered Institute of Environmental Health, 14 August 2007, at University of Leeds, UK.
- Safety Induction Course on 7th August 2007 by School of Process, Environmental and Materials Engineering, University of Leeds, UK.
- Workshop on “Research & Development Needs in Textile Processing” by Higher Education Commission, March 28, 2006 at Punjab University, Lahore.
- Workshop on “Research & Development Needs in Pulp & Paper Industry” by Higher Education Commission, September 20, 2006 at Punjab University, Lahore.
- Quality Management System ISO 9001: 2000 conducted by Institute of Chemical Engineering & Technology, University of the Punjab, Lahore for four weeks from 24.05.2004 to 24.06.2004.
- Student counselling and essentials of job hunting for career planning conducted by Institute of Chemical Engineering & Technology, University of the Punjab, Lahore in April, 2004.
- Human Resource Development (Orientation Program) conducted by Institute of Administrative Sciences, University of the Punjab, Lahore in July, 2003.

- Hydraulic Controls conducted by Staff Training Institute, Lahore in May, 2001.
- Human Resource Development conducted by Employers Federation of Pakistan in October, 1999.
- CNC Milling, Programming & Operation, conducted by Skill Development Council Lahore in July, 1997.
- The Principles and applications of statistical process control techniques, conducted by Keith Ackers Associates in July, 1997.
- Internal Quality auditing ISO 9000, conducted by Pakistan Institute of Quality control in August, 1997.
- Quality Management and ISO 9000 System, conducted by Emmay Associates for eight weeks in March, 1996.
- Internal Quality Auditing, theories and practices conducted by Keith Ackers Associates in November, 1996.
- Six Weeks Industrial Training at Prime Chromium (PVT), Limited (1990)

Member Statutory Bodies of the University of Punjab, Lahore, Pakistan:

- Member of the Senate, University of the Punjab, Lahore since 2011 to date.
- Convener, Board of studies of the Centre for Coal Technology, University of the Punjab, Lahore since 2011 to date.
- Convener, Advisory Cell on Foreign Education, Visa and related matters, University of the Punjab, Lahore.
- Member/Secretary, Committee for Preliminary Hearing of Appeals in the Disciplinary Cases for the year 2015.
- Convener, Core Committee to develop/strengthen University-Industry-Linkages, University of the Punjab, Lahore.
- Chairman of the House Allotment Committee for non-teaching staff constituted by the Worthy Vice Chancellor since 16-07-2012 to date.
- Member, The Committee for the appointment of Wardens and Superintendent of the University Hostel for the year 2014-2015.
- Member of the Core Committee of the University of the Punjab, Lahore.
- Member of the Committee for formulating the guidelines to design the courses of all programs being run in the University of the Punjab since 2013.
- Member of the Main Auction Committee of the University of the Punjab.
- Member of the Advanced Studies and Research Board, University of the Punjab, Lahore.
- Secretary, Unfair means Committee, University of the Punjab, Lahore.

- Member, Main Purchase and Indent Committee, University of the Punjab, Lahore.
- Member of the Standing Committee on Energy, Lahore Chamber of Commerce and Industry (LCCI), Lahore.
- Member of the Standing Committee on Energy, Lahore Chamber of Commerce and Industry (LCCI) on engineering.
- Member of Calendar Committee, University of the Punjab, Lahore.
- Member, Budget Committee for the year 2015-2016, University of the Punjab, Lahore.
- Member of the Equivalence Committee constituted by the Worthy Vice Chancellor since June, 2012 to date.
- Member, Departmental Selection/Promotion Committee, University of the Punjab, since January 2015.
- Member, Solar Energy Generation Proposal (10-15 MW) from HiSEL/ISDN Power Corporation.
- Member, Hall Council for the year 2014-2015, University of the Punjab, Lahore.
- Member of the Committee of the University to look into the matters regarding Institution of Gold Medal/Scholarship/Endowment Fund and other related issues.
- Member, Price Control Committee for the Residential Colony and Hostel area Markets, University of the Punjab, Lahore.
- Member, Admission Policy 2013-2014, University of the Punjab, Lahore.
- Member of Promotion Committee, University of the Punjab since 11-09-2014.
- Convener for organizing Lahore Science Festival at University of the Punjab, 2013.
- Member of the Committee constituted by the Worthy Vice Chancellor for appointment of Research Scholars/Lecturers on contract basis at faculty of Engineering and technology, University of the Punjab since 26-06-2012.
- Member of Accreditation Committee, Pakistan Engineering Council to accreditate BSc Engineering Programs in the discipline of Chemical Engineering and Energy Engineering
- Member of the Search Committee of Lahore College for Women University, Lahore.
- Member of Board of Studies Comsats University, Lahore.
- Member of the Incentive Award Committee on Research Publication constituted by the Worthy Vice Chancellor since 21-05-2012 to date.
- Member of the Appellate Committee constituted by the Worthy Vice Chancellor July, 2012 to date.
- Member of the Adhoc Committee constituted by the worthy Vice-Chancellor to discharge the functions of the Board of Studies in Quality and Technology Management (9/10/2004 to 2006).
- Member of the departmental purchase committee for the Institute of Chemical Engg. & Technology constituted by the Worthy Vice Chancellor since 12-06-2012 to date.

- Member of the Doctoral Programme Committee for the Institute of Chemical Engineering & Technology.
- Member Board of Studies for Institute of Chemical Engineering & Technology since 2011 to date.
- Student advisor, Institute of Chemical Engineering and Technology (6/9/2006 to 10/07/2007).
- Member of the Finance Committee constituted for the commencement of 1st International Conference on Quality in Higher Education. (23/1/2007 to 13/12/2006)
- Member of the Committee, constituted for the revision of Syllabi and Courses for B.Sc. (Engg.) Chemical Engineering (2005)
- Co-ordinator, B.Sc. (Engg.) Chemical Engineering Final year class (6/6/2005 to 10/7/2007)
- Member of the Committee constituted to SNE since 2005.
- Member, Book Fair, Committee, 2004.
- Member of the Committee constituted for the preparation of Prospectus of the Institute of Chemical Engineering & Technology, University of the Punjab, Lahore for the year 2005-2006.
- Member, Technical Services for Commercial Development alongside the new Road connecting the Canal Bank Road to Wahdat Road through the land of University of the Punjab, Lahore.
- Member, Departmental Tenure Review Committee (DTRC) of the Department of Space Science.
- Incharge Examinations, Institute of Chemical Engineering & Technology, December, 2010 to date.
- Incharge Admissions for BSc Engineering degree courses for Faculty of Engineering, University of the Punjab for session 2011-2012.
- Member, Appellate Committee specifically constituted to consider the cases of the former employees who involved forgeries/malpractices in the result of B.A./BSc Annual Examination 2012
- Convener, Technical Committee for finalization of the specifications/evaluation and recommendations regarding procurement of Paper, Stationary, Cloth and General Items, during the financial year 2015-16
- Member, Committee regarding Equivalence of Development of Crop Varieties/Animal Breeds/Patents/Technologies etc. with Publications
- Member, Calendar Committee for Compilation of University Calendars Vol-I & Vol-II
- Member, Convocation Coordination Committee for 124th Convocation, University of the Punjab, Lahore
- Member, Board of Studies for Chemical Engineering, Minhaj University, Lahore (MUL)

Distinctions:

- Working as technical expert for the evaluation of feasibility studies of Coal –Fired Power Plants in Punjab with Punjab power development board.
- Presented Consultative Research Report on PM’s “Vision-2025” and “11th Five Years Plan 2013-18” for Energy and representation of University of the Punjab, Lahore.
- Representation of the Punjab University at launching ceremony of “Pakistan Vision 2025” on Monday 11th August, 2014 at Islamabad.
- Collaborated with M/s SNOWDEN, an Australian consulting firm hired by Punjab Govt. for the estimation of coal deposits of Punjab and analysis of 300 coal samples from coal reserves of Salt range and Indus Trans Range.
- Member of the Organizing Committee for UK-Pakistan Coal Conference, 3rd-5th July 2012 at University of Leeds UK,
- Published book titled “Co-combustion of Coal with Biomass: Energy for a Clean Environment” **Publisher:** VDM Verlag Dr. Müller, **ISBN-13:** 978-3639327984
- Won a grant of Rs. 178 million for the expansion and up gradation of Centre for Coal Technology from Planning Commission of Pakistan in 2014.
- Obtained a grant of Rs. 3.6 Million for the Upgradation of Centre for Coal Technology from the University of the Punjab.
- Obtained grant for Washability Characteristics of Pakistani Coal (Rs. 0.25 Million; Funding Organization: University of the Punjab, 2014-15)
- Obtained grant for Upgradation of Pakistani Coal by Heavy Media Separation and Froth Flotation (Rs. 0.25 Million; Funding Organization: University of the Punjab, 2013-14)
- Obtained a grant for Thermal Analysis and Devolatilization Kinetics of Biomasses (Rice Husk, Cotton Stalk, Sunflower Stalk, and Corn Cob)(Rs. 0.25 Million; Funding Organization: University of the Punjab, 2012-13)
- Obtained a grant for Combustion and Pyrolysis of Coal and Falsa (*Grewia Asiatica*) in Air and Inert Atmosphere (Rs. 0.25 Million; Funding Organization: University of the Punjab, 2011-12)
- Co-Investigator in Research Project on Co-Combustion of Pakistani Coal with Biomass under International Strategic Partnership in Research and Education (**INSPIRE**) Program funded by British Council and HEC Pakistan. University of Leeds and University of Sheffield are partners from UK.
- Co-Investigator for ICET and SNGPL Research Project under MOU
- Won Best Paper presenter award in 4th Symposium on Engineering Sciences held on 1st March 2011 at the Institute of Chemical Engineering & Technology, University of the Punjab, Lahore
- Won two GOLD medals by obtaining first position in MSc Chemical Engineering Punjab University 2007.
- Acted as Coordinator for International Conference on Engineering Sciences 28-29 Feb,2012, Lahore
- Won HEC overseas Scholarship for PhD in Chemical Engineering in Austria, 2006

- Won HEC Overseas Scholarship for PhD in Chemical Engineering under faculty Development Program, 2007.
 - Won HEC Overseas Scholarship for PhD in Quality Management under faculty Development Program, 2007.
 - Won PETRONAS Scholarship for PhD in Malaysia, 2007.
 - Outstanding Performance Award from Punjab University, 2005.
 - First position in the subject Mathematics and statistics for Management in MBA, 2003, Punjab University Lahore
 - First position in the subject Export Marketing in MBA, 2003, Punjab University Lahore
 - Merit Scholarship in BSc Chemical Engineering University of the Punjab 1987.
 - Member, National Council for Quality and Technology, Pakistan since 2005.
 - Won 4th Prize in Innovation to Innovation Summit in the year 2014.
 - Won Quaid-e-Azam and Shahbaz Shareef Gold Medal from Tehreek-e-Istehkam-e-Pakistan Council, Pakistan for meritorious services in the field of Coal Technology at National Auditorium, Lahore on 09 February, 2014.
 - Won Sitara-e-Pakistan Gold Medal from Tehreek-e-Istehkam-e-Pakistan Council, Pakistan for best performance at National Auditorium, Lahore on May 01, 2014.
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