

DR.SYED FARMAN ALI SHAH

Professor & Chairman

Department of Chemical Engineering

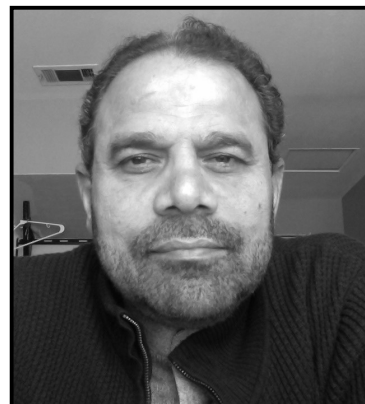
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Work Address: Chemical Engineering, Mehran University of Engineering and Technology (MUET), Jamshoro.

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ACADEMIC RECORD

Postdoc (Advanced Bio-energy): 2014-2015 University of California Riverside, USA

PhD (Chemical Engineering) 2005-to-2010 MUET

M.E (Chemical Engineering) 1999 to 2002 MUET

B.E (Chemical Engineering) 1981-1985 MUET, First Position, **Gold Medal**

B.Sc.(Pass) 1979-1980 University of Sindh, Jamshoro

AREAS OF INTEREST

- Chemical, Biochemical and Environmental Engineering, Energy, HSE and Social Work

EXPERIENCE

➤ Administration

- 2014-Todate: Chairman Department of Chemical Engineering
- 2013-2014 Convener, Employees Welfare Cell, MUET, Jamshoro
- 2006-2016: Coordinator, Postgraduate Studies, MUET, Jamshoro
- 2006-Todate: Member, Departmental Management Review Committee, MUET, Jamshoro
- 2014-Todate: Member, Management Review Committee, MUET, Jamshoro.
- 2010-Todate: PhD Supervisor, MUET, Jamshoro
- 2011-Todate: PhD Supervisor, University of Sindh, Jamshoro
- 1989-2011: Student Advisor, Chemical Engg MUET, Jamshoro
- 2011-Todate: DMRC, Directorate of Postgraduate studies, MUET, Jamshoro.
- 2011: Member, Selection Board, MUET, Jamshoro
- 2013: Member, Selection Board, University of Sindh, Jamshoro
- 2010: Member, Selection Board, University of Karachi, Karachi.
- 1991-1992: Warden, MUET, Jamshoro
- 1987-1989: Security Officer, Government College of Technology, Nawabshah

➤ Teaching

- 1987-1989: **Lecturer** at Government College of Technology, Nawabshah, Government of Sindh.
- 1989-Todate: **Lecturer, Assistant Professor, Associate Professor, Professor** at MUET, Jamshoro

MEMBER IN PROFESSIONAL BODIES

1. American Institute of Chemical Engineers(AIChE),USA
2. International Association of Engineers, London, U.K.
3. Pakistan Institute of Chemical Engineers.
4. Pakistan Engineering Council.
5. Technical Committee on Environment Impact Assessment(EIA),Darawat Dam,a project of Water

- and Power Development Authority(WAPDA),Pakistan.
6. Board of Studies, Department of Chemical Engineering, MUET, Jamshoro.
 7. Board of Studies, Department of Chemical Engineering, Dawood University of Engineering and Technology, Karachi
 8. Editorial Board, International Journal of Biology, Pharmacy and Allied Sciences (ISSN:2277-4998)
 9. Editorial Board, Pakistan Journal of Environment and Analytical Chemistry
 10. Editorial Board, Journal of Modern of Science and Technology (ISSN 2201-6686)
 11. Member Review and Scientific Committee, Global Institute of Sciences and Technology, Australia

RESEARCH PROJECTS

S.#	PROJECT TITLE	FOR	STATUS
1.	Enhanced production of Biofuel funded by Higher Education Commission	PhD	Completed
2.	Enhanced production of Biogas through distillery waste	M.E	Completed
3.	Treatment of industrial waste water from PTA(NB Jalbani)	M.E	Completed
4.	Environmental study of distilleries in Sindh(SY Khuhawar)	M.E	Completed
5.	Development of Natural flocculent for wastewater treatment from cotton waste(Pervaiz Shah)	M.E	Completed
6.	Analysis and treatment of Industrial wastewater through Chemical coagulation- adsorption process(AK Shah)	M.E	Completed
7.	Energy Conservation National Refinery Ltd. Karachi	B.E	Completed
8.	Production of Bio fertilizer from Municipal waste	B.E	Completed
9.	Corrosion protection through EM Technology	B.E	Completed
10.	Nuclear waste in Pakistan	B.E	Completed
11.	Comparative study of spent wash in distilleries of Sindh	M.E	Completed
12.	Bioremediation of oil Spill in oil fields in Pakistan(Aziza Aftab)	PhD	Completed
13.	Analytical study of ground water quality of K N Shah(ZA Abbasi)	M.E	Completed
14.	Bioremediation of Petroleum hydrocarbons in oil sludge(Rizwan Bhutto)	M.E	Completed
15.	Coal-bed Methane through microbial consortium(MA Qazi)	MPhil	Completed
16.	Improvement in Secondary Treatment Plant of Habib Distillery Nawabshah (Zahid Bhambhro)	M.E	Completed
17.	Ethanol production from Date palm(Kashif Jandan)	M.Phil	Completed
18.	Design & Development of Coal fly ash Bed for the treatment of Industrial Wastewater-A Case Study of a dyes and pigments manufacturing industry(Shahnawaz Jagirani)	M.E	Completed
19.	Soil fertility response under indigenous organic management(Jaffer Hussain)	M.E	Completed
20.	Plant extract from Cactus and its use in treatment of polluted water(Javed Jhagra)	M.E	Completed
21.	Production of Biodiesel from poultry waste(Hafiz Anis)	M.E	Completed
22.	Enzymology of Anaerobic digestion of cane Molasses from indigenous <i>Kalauyveromyces Marxianus</i> yeast (Abdul Qadeer Laghari)	M.E.	Completed
23.	Determination of toxic trace & heavy metals in ambient air of urban area of Karachi(M.Sarfraz)	M.E	Progress
24.	Treatment of Soap industry liquid effluent through Coal fly ash(Junaid Imam)	M.E	Progress
25.	Industrial Wastewater Treatment Through Enhanced Bio-Degradation Supported By Nano catalysts (Ashfaq H.Pirzada)	PhD	Progress
26.	To enhance the recovery of bio diesel from algae(N.B Jalbani)	PhD	Progress

RESEARCH PROJECTS SUPERVISED: 50 in Total

Undergraduate:	More than 25 groups (5-7 in each group)
Masters:	19 Completed, 03 in progress
PhD:	01 Completed, 02 in progress

RESEARCH PUBLICATIONS: 51 in Total

A. Peer Reviewed Research Journals:	29
B. Peer reviewed Conferences:	19
C. Book Chapters:	02
D. Book(Process)	01

A. PEER REVIEWED JOURNALS

1. Memon, A A, **Shah FA**, N.Kumar “Bioethanol Production from Waste Potatoes as a Sustainable Waste-to-energy Resource via Enzymatic Hydrolysis”, *Earth and Environmental Science* 73 (2017) 012003 doi :10.1088/1755-1315/73/1/012003
2. Rehman, R.A., **Shah, S.F.A**; Aftab; A; Ali, Z.M., Trans-Esterification of Poultry Skin Fat to Produce Biodiesel”, *Pakistan Journal of Analytical & Environmental Chemistry*, 17(2), pp: 143-147, **2016**.
3. **Shah, S.F.A**, Aftab A, Soomro, N., Nawaz, M.S. and Vafai, K; “Waste Water Treatment-Bed of Coal Fly Ash for Dyes and Pigments Industry”, *Pakistan Journal of Analytical & Environmental Chemistry*, 16(2), pp: 48-56, **2015**.
4. Aftab, A.A., **Shah, S.F.A**, Aziz, S., Memon, H.U.R. Dahot, M.U., “Bioaugmentation of Hydrocarbons using Bacterial species extracted from oil contaminated site”, *Sindh University Research Journal (Science Series)*, Vol. 48 (2) 455-460, **2016**.
5. Hussain, J., & **Shah, S.F.A.**, “Effective Microorganisms is a sustainable environment product and its application cause study in Pakistan, a review paper”, *Journal of Contemporary Management*, 3(2), 65-71, **2014**.
6. Zeenat, M.A.; Memon, A.R.; Laghari, A.J.; Mughal, M.A.; **Shah, S.F.A**; Saleem, H; “Exploitation of Low Cost Coal Fly Ash Adsorbent with Coagulants for the Treatment of Industrial Complex Nature Dyes Waste water” *International Journal of Scientific and Engineering Research*, 5(9), pp:, **2013** , Impact Factor: 1.4
7. Noor, A.A., **Shah, F.A.**; Kanhar N.A., “Microbial Efficacy of Phosphate Solubilization in Agro-Saline Soils of Various Areas of Sindh Region”, *Mehran University Research Journal of Engineering and Technology, Jamshoro*, 32(2), pp. 167-174, **2013**
8. Aftab A; A R Memon, **Shah, S F.A**; H UR Memon. U. Dahot “Determination of Hydrocarbons and isolation of inherent bacteria from crude oil-contaminated soil for ex-situ bioremediation”, *Sindh University Research Journal (Science Series)*, V.45(3), pp: 476-481, **2013**
9. Shah, A.K.; Zeenat, M.A., Laghari, A. J., **Shah, F.A**; “Utilization of fly ash as low-cost adsorbent for the treatment of industrial dyes effluents- a comparative study”, *Research & Reviews: Journal of engineering and Technology*, 1(1), pp: 1-10, **2013**
10. Shah, A K; **Shah, F.A**; Memon, H.U.R, “Coagulation-Adsorption Hybrid Process for the

- Treatment of Dyes and Pigments Wastewater”, *Mehran University Research Journal of Engineering and Technology, Jamshoro*,32(4),pp.595-602,**2013**
11. Shah,A.K;Syed,F.S;Memon,A.R;**Shah,F.A**;Hrijan,K.;“Efficient coupling optimization of coagulants with the adsorption for Depollution of dyes manufacturing effluent”, *Sindh University Research Journal(Science series)*,44(4),pp:605-608.,**2012**
 12. Shah,A.K;Memon,A.R;**Shah,F.A**;“ Assessment of Coagulant Synergy for the Depollution of Binder Emulsion Plant Effluent”,*Pakistan Journal of Analytical & Environmental Chemistry*,12(2),pp:83-90,**2012**
 13. **Shah,F.,A.**,Aziz,S., Memon H.U.R., Zeenat M Ali and M.I. Rajoka,“Effect of Agitational intensity on ethanol production by Eco-molasses an industrial waste through yeast *Sachharomyces Cerevisiea* at digitally controlled pilot scale bioreactor”, *Australian Journal of Basic and Applied Sciences*, Vol.5(1),pp:48-54,**2011**.
 14. Laghari,A.J.,Zeenat,M.A.,Bugchio,M.N.,**Shah,F.A.**,Zardari,L.A.,Khuhawar,M.Y.,“Capillary Gas Chromatographic Separation of Copper, Mercury, Lead and Cadmium as Complexes of PyrrolidineDithiocarbamate”,*Australian Journal of Basic and Applied Sciences*, 5(5),pp:1108-1111,**2011**
 15. Aziz,S.,**Shah,F.A.**,Soomro,S.A.,Memon,A.R.,Uqaili,A.A Memon H.U.R,G.Shaikh,G.Y., Shaikh and Rajoka,M.I., “Effect of nitrogen on ethanol production from black strap molasses as renewable energy source”, *Journal of Science International*,23(3),pp:217-222, **2011**.
 16. Aziz,S, **Shah,F.A** Memon H.U.R;Soomro,S.A, Bano A. and Rajoka,M.I, “Hyper Production of Ethanol from Cane Molasses at Optimized Agitational Intensity Using Indigenous Thermotolerant *KluyveromycesMarxianus*” , *Australian Journal of Basic and Applied Sciences*,5(3),pp: 750-754,**2011**
 17. Aziz S.; Jalal, F.; Nawaz, M.; Niaz, B. **Shah, F.A.**; Memon, M.H.U.R.; Latif, F., “Hyper production and Thermal Characterization of a Novel Invertase from a Double Mutant Derivative of *Kluyveromyces Marxianus*”, *Food Technol. Biotechnology*. 49 (4), pp:465–473,**2011**
 18. Shar ,G.Q.; Kazi,T.G; **Shah,F.A.**;Shar,A. H.;Soomro,F.M.; “Variable Uptake and Accumulation of Essential and Heavy Metals in Maize (Zeamays L.) Grains of Six Maize Varieties”,*Australian Journal of Basic and Applied Sciences*, 5(2), pp: 117-121, **2011**.
 19. **Shah,F.A.**,Aziz,S., Memon H.U.R,Zeenat, M.A. and Rajoka, M.I,“Enhanced production of Invertase from Thermotolerant yeast through black strap molasses a waste product of sugar industry”, *Australian Journal of Basic and Applied Sciences*, Vol.5(1),pp:1-6,**2011**.
 20. **Shah,F.A.**,Aziz,S,Memon H.U.R and Rajoka, M., “Ethanol production kinetics by a Thermotolerantmutant of *Sachharomyces Cerevisiea* from starch industry waste (Hydrol)”,*Pakistan Journal of Analytical & Environmental Chemistry*,11(1),pp:16-21,**2010**
 21. Laghari,A.J.,Zeenat,M.A.,**Shah,F.A**,Zardari,L.A.,Khuhawar,M.Y.,“Pyrrolidine thio-carbamate as a Reagent for GC Analysis of Metal Ions”, *Australian Journal of Basic and Applied Sciences*,4(12),pp:6046-6051,**2010**.
 22. Aziz,S, Memon H.U.R, **Shah,F.A**, M.I. Rajoka and Soomro,S.A., “Production of Ethanol by indigenous wild and mutant strain of Thermotolerant *Kluyveromyces marxianus* under optimized fermentation conditions, *Pakistan Journal of Analytical & Environmental Chemistry*, 10(1&2),pp:**2009**.
 23. Arshad,M.,K,Z.M.,Rehman,K.U.,**Shah,F.A** and Rajoka, M.I., “Optimization of process variables for minimization of byproduct formation during fermentation of blackstrap molasses

to ethanol at industrial scale”. *Letters in Applied Microbiology*, Vol.47, pp:410-414, **2008**

24. **Shah, F.A.** and Pathan, M.I., “Bacterial Study of Anaerobic Bioreactor for Distillery Effluent”, *Mehran University Research Journal of Engineering and Technology, Jamshoro*, Vol.25(1), pp:23-28, **2006**.
25. **Shah, F.A.**, and Pathan, M.I., “Analytical Study of Fatty acids in Bioreactor of an Anaerobic Treatment of Distillery Effluent”, *Mehran University Research Journal of Engineering and Technology*, Vol.24(1), pp:59-62, **2005**.
26. **Shah, F.A.** and Pathan, M.I., “Effect of E.M. Technology on the compressive strength of Cement”, *Quid e Awam University Research Journal of Engineering Science and Technology*, Vol.5(2), pp.83-86, **2004**
27. **Shah, F.A.** Phul, A.T. and Talpur, M.S.H., “Use of Effective Microorganisms Solution as an Additive to Synthetic Paint”, *Mehran University Research Journal of Engineering and Technology*, Vol.21 (2), pp.65-68, **2002**.
28. **Shah, F.A.**, Ansari A.K., Shaikh, M.B. “A New Manufacturing Process Iron and Steel”, *Journal of Engineering and Applied Sciences*, Vol.20(1), pp.56-63, **2001**
29. **Shah, F.A.**, Shaikh, M.B; Mahesar, G.H, Case study of Energy conservation at National Refinery Ltd. Karachi”, *Mehran University Research Journal of Engineering and Technology*, Vol.19(1), pp:43-48, **2000**
30. **Shah, F.A.**, Shaikh, M.B., Mahesar, G.H., “An Advanced Approach for the Preparation of Blown Bitumen (Grade 10/20)”, *Mehran University Research Journal of Engineering and Technology*, Vol.19(1), pp:53-56, **2000**.

B. Book Publication

1. **Shah, F.A.**; Abbasi, Z.A.; Pirzada, A.H.; “Assessment Of Ground Water Of K.N. Shah And Its Surroundings”, *Lambert Academic Publishing, Germany*, **2013** (in process)

C. Book Chapter

Arshad, M.; Zia, M.A.; **Shah, F.A.**; Ahmad, M.; “Perspectives on Water Usage for Biofuels Production”, *Springer International Publishing AG, 2018, DOI 10.1007/978-3-319-66408-8_1*

Aziz, S, Memon H.U.R, **Shah, F.A.**, Rajoka, M.I and Soomro, S.A.; “Ethanol production from molasses using an indigenous strain of thermotolerant *Kalauyveromyces Marxianus* under controlled conditions”, *Energy, Environment and Sustainable Development*, Springer Vienna, pp. 147-159, **2012**

D-Papers in International Conferences

1. Laghari A Q, ”.....” 4th International Conf sus energy MUET, October, 2016
2. **Shah, S F A**, “Invited talk in the International Conference on Emerging Technologies”, University of Gujrat, May, 1-2, 2016
3. **Shah, SFA**, Nawaz, MS, Vafai, K (2015), “Indigenous Waste Water Treatment-Bed of Coal Fly Ash for Dyes and Pigments Industry”, International Conference on Bio-Medical Engineering and Environmental Technology (BMEET-15), March 21-22, 2015 London, UK
4. **Shah, S.F.A.**, “Bioenergy Future Prospects in Asia”, 5th World Congress of Bioenergy, September, 24-26, 2015 Xi’an, China

5. Aftab,A;H.U.R,Memon,**Shah,F.A.** M.U.Dahot,(**2013**) “Determination of Hydrocarbons and Isolation of Inherent Bacteria from Crude Oil-Contaminated Soil for Ex-Situ Bioremediation” , International Conference on Global Engineering, Science and Technology, Singapore
6. Shah, A.K.; Memon, H.U.R.;**Shah, F.A.**; Harijan, K. ;(**2012**), “Industrial wastewater treatment through hybrid process of chemical coagulation-adsorption”, 62nd Canadian Chemical Engineering conference, Vancouver, Canada (Accepted).
7. **Shah,F.A.**;Shah,A.K.;Mehdi,A.;Aftab,A.;Ali,Z.A.:(**2012**), “Analysis and treatment of industrial wastewater through chemical coagulation – adsorption process: A case study of Clariant Pakistan”,4th International Conference on Porous Media and its Applications in Science, Engineering and Industry, Postdam, Germany,American Institute of Physics.
8. Bhatti,Z. A.; Qureshi,K.;**Shah,F A.**:(**2012**), “Physico-Chemical Properties of Molasses- An Indigenous Feedstock Used for the Production of Fuel Alcohol in Pakistan”, 2ndInternational Conference on Energy, Environment and Sustainable Development, Mehran University of Engineering and Technology, Jamshoro.
9. Aziz,S.;**Shah,F.A.**;Soomro,S.A;Memon,A. R.; Uqaili,Memon,H.U.R.;Sheikh,G.Y.(**2012**), “Effects of Oxygen Flow Rate of Ethanol Production from Molasses by Thermophilic Strain of *KluyveromycesMarxianus* in Fully Controlled Bioreactor”, 2ndInternational Conference on Energy, Environment and Sustainable Development, Mehran University of Engineering and Technology, Jamshoro.
10. **Shah, F.A.**;Aziz,S.; Memon H.U.R;Ali Z M.;Rajoka,M I.:(**2011**),“Effects of Agitational intensity on production of ethanol using Thermotolerant yeast *Sachharomyces Cerevisiea* in a digitally controlled pilot scale bioreactor of 150 liters”, Bioenergy III Conference: Present & New Perspectives on Biorefineries,Lanzarote,Spain.
11. Sustainable Water Management, Mehran University of Engineering and technology, Jamshoro-Sep,15-18,**2010** (Participated).
12. **Shah,F.A.**;Aziz,S.,Latif,F.;MemonHUR;Rajoka,M I.(**2008**),Fuel ethanol production by a thermotolerant mutant of *Sachharomyces cerevisiea*from EnzozHydrol: Scale-up production in a 150-L fermenter, International Conference of Manufacturing Engineering Management, World Congress in Engineering London.
13. **Shah,F.A.**; Pathan, M.I.; Farhan, M.; and Rajoka, M.I.:(**2006**), “Kinetics of ethanol production by a thermotolerant mutant of *Sachharomyces cerevisiea*”,Asia Bio Fuels Conference, Beijing, China.
14. Pathan M.I. and **Shah, F.A.** ; (**2006**), “Effect of E.M. Technology on Compressive Strength of Cement”14th Arab International Cement Conference and Exhibition,*Cairo, Egypt*.
15. **Shah, F.A** and Pathan, M I ,(**2005**), “Bacterial Study of the Anaerobic Bioreactor for Distillery Effluent”, International Conference on Analytical and Environmental Chemistry, National Center of Excellence in analytical Chemistry, University of Sindh, Jamshoro.
16. International Conference on Environmental Science and Technology, New Orleans,Lousiana,USA,January,23-26,**2005**(Paper accepted)
17. **Shah, F.A**; Pathan, M I ;(**2004**), “Enhanced biogas through anaerobic treatment of distillery effluent”, International Review Conference Biotechnology, Vienna, Austria.
18. First International and National Symposium on Biotechnology, held in Center of Advance Studies in Biotechnology, University of Sindh, Jamshoro March 22-23,**2003**

19. Second International and 12th National Chemistry Conferences at National Center of Excellence in Analytical Chemistry, University of Sindh, Jamshoro, Pakistan, **2003**
20. 7th National Symposium on Analytical and Environmental Chemistry at the University of Sindh Jamshoro, Pakistan, **2003**

ORGANIZED SCIENTIFIC EVENTS

1. 1st International Conference on Chemical Engineering, Mehran University of Engineering and technology, Jamshoro, Pakistan, January, 14-16, **2016**
2. The 1st National Conference on Modern Trends & Techniques In Mechanical Engineering & Management (NTTMM'15), Quaid-e-Awam University of Engineering, Science and Technology, Nawabshah, February, 12-13, **2015**
3. International Conference on Environmental Issues of Sindh (ICEISR-2014), Shah Abdul Latif University, Khairpur, Pakistan; 2014.
4. Third International Conference on Energy Environment and Sustainable Development, Mehran University of Engineering and technology, Jamshoro, Pakistan, October, 22-24, **2014**
5. 15th International Conference on Pharmacy and Chemical Engineering, Kuala Lumpur, Malaysia, August 22-23 **2013**
6. Second International Conference on Energy Environment and Sustainable Development, Mehran University of Engineering and technology, Jamshoro, Pakistan, Feb, 27-29, **2012**
7. National workshop on Arsenic, Mehran University of Engineering and technology, Jamshoro, Pakistan, Nov. 15-19, **2011**.
8. International Conference on Sustainable Water Management, Mehran University of Engineering and technology, Jamshoro-Sep, 15-18, **2010**
9. National Training Workshop on Food processing, MUET, Jamshoro, **2007**
10. National Workshop on Gender and Environment, MUET, Jamshoro, **2007**

EXAMINER/EVALUATOR

1. National Research Projects of Higher Education Commission, Pakistan
2. Mehran University of Engineering and Technology, Jamshoro
3. Quaid e Awam University of Engineering Sciences and Technology, Nawabshah
4. Dawood College of Engineering and Technology, Karachi
5. Dawood University of Engineering and Technology, Karachi, Pakistan
6. Mehran University Research Journal of Engineering and Technology, Jamshoro, Pakistan
7. Quaid e Awam Research Journal of Engineering Sciences and Technology

PARTICIPATION IN NATIONAL CONFERENCES

1. Urban Water Demand Management, Mehran University of Engineering and Technology, Jamshoro.
2. Food Processing , Mehran University of Engineering and technology, Jamshoro
3. Gender and Environment, Mehran University of Engineering and technology, Jamshoro
4. Mainstreaming Gender and Environment, Mehran University of Engineering and technology, Jamshoro.

5. Energy & Environment for Sustainable Development , Mehran University of Engineering and Technology, Jamshoro
6. Depletion of water Resources & recycling, Mehran University of Engineering and technology, Jamshoro.

PROFESSIONAL TRAININGS

1. Industrial Training at, Zeal Pak Cement Factory, Hyderabad
2. Teachers' Training at Directorate of Technical Education Karachi.
3. Computer Operation and Handling Course at Mehran University of Engineering. & Technology, Jamshoro.
4. Computer Course at Mehran University of Engineering. & Technology, Jamshoro.
5. Teaching English as Foreign Language-a course by English Language Development Center, Mehran University of Engineering. & Technology, Jamshoro.
6. Training Course by Institute of Environmental engineering and Management, Mehran University of Engineering. & Technology, Jamshoro.
7. Training Course on Biotechnology, by University of Sindh Jamshoro.
8. In-service Training workshop on Biotechnology at Institute of Biotechnology, University of Sindh Jamshoro.
9. Training Course,IOSH, Managing Safely.