

# Dr Amtul Qayoom

## (HEC Approved PhD Supervisor)



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**Office Phone** (92-21) 99261261-8 ext 2604  
**Date of Birth** 02-06-1972

### RESEARCH INTERESTS

Adsorption, biosorption, nanosensors, treatment of water, industrial effluents and lubricating oils, HPLC method validation.

### ACADEMIC AND ADMINISTRATIVE RESPONSIBILITIES

- In charge Chemistry Lab for undergraduate and postgraduate students.
- Development and revision of BS and MS industrial Chemistry curriculum
- Preparation of lab manuals for undergraduate BS Industrial Chemistry Programme
- Class Advisor for First Year BS Industrial Chemistry Programme.
- Departmental Focal Person for Turnitin
- Member Industrial Advisory Board
- Member Board of Studies & Board of Faculties
- Member Departmental SAR committee
- Member MS admission Committee

### SIGNIFICANT PROFESSIONAL SERVICE/ ACADEMIC DISTINCTION

- Member National Curriculum Revision Committee (NCRC)-2018 for Chemistry.
- Reviewer for national as well as international Journals such as Arabian Journal of Science, Journal of Chemical Society of Pakistan, pringer journal: Journal of Nanostructure in Chemistry & Water and Environment.
- Member of Technical Evaluation Committee for procurement of Lab Equipment for Department of Chemistry, under Mega Project-IV. Installation Process Completed
- Conducted solo three session workshop on "Scientific Writing Skills" in Oncology Department,

Agha Khan University Hospital

- Honored to be judge in Sindh Provincial Science Fair 2015 organized by Intel Pakistan Corporation from 27th to 29th October, 2015.
- Member of QEC Cell, Federal Urdu University of Arts, Science & Technology (FUUAST) in 2013 and 2016 evaluation of Department of Chemistry (FUUAST)
- HEC Approved Supervisor
- Won First prize in poster competition in 10-days workshop on Systemic Approach to Teaching and Learning Chemistry (SATLC), Nov 19-Nov 29, 2008, held at University of Karachi, Pakistan.
- Received Travel grant for Oral Presentation at Pure and Applied Chemistry Conference 2008 (PACCON 2008), Jan 30 – Feb 01, 2008, Held at Sofitel Centara Grand Bangkok, Bangkok, Thailand
- Subject expert for review of question book and answer key for NTS testing in 2006
- External Examiner of PhD and MS examinations held in University of Karachi and Federal Urdu University of Arts, Science, and Technology

## **ANALYTICAL SKILLS & TOOLS**

- Shimadzu 1600 & 1800 double beam UV–visible spectrophotometer
- Thermo Scientific Nicolet iS10 FT-IR Spectrometer
- Perkin Elmer Analyst 700 Atomic Absorption Spectrophotometer
- Mettler Toledo Karl Fischer Titrator
- Thermo Scientific Orion 950 Titrator
- Shimadzu SPD-20A Liquid Chromatographic System
- Minitab 17
- Endnote, Mandely & Zotero
- Microsoft Windows XP and 10
- Microsoft Office 2003, 2007 and 2010

## **EDUCATION**

*University of Karachi, Karachi, Pakistan*

**2011**

**Ph.D. in Chemistry**

Dissertation: "A Study of Turmeric as a Remedy to Remove Toxic Metals from Aqueous Solutions"

*University of Sindh, Jamshoro, Pakistan*

**M.Sc. in Chemistry** **1997**

**First stood First**

*Govt. Girls Shah Latif College, Hyderabad, Pakistan*

**B.Sc. (Pass)** **1995**

Major: Chemistry

Minor: Functional Mathematics, Zoology

## **TEACHING EXPERIENCE**

*NED University of Engineering & Technology Karachi, Pakistan*

**Associate Professor–Chemistry** **July 2017-Present**

Supervising undergraduate and postgraduate research projects. Teaching following chemistry courses to MS and BS Industrial Chemistry students

**MS Courses:** Quality Assurance and Automated Analytical Methods, Research Methodology

**BS Courses:** Nanotechnology, Inorganic Chemistry, Analytical Chemistry

*NED University of Engineering & Technology Karachi, Pakistan*

**Assistant Professor–Chemistry** **Aug 2011-July 2017**

Developed proposal and syllabus for BS and MS Industrial Chemistry Programmes. Teaching following chemistry courses to MS, BS and BE students.

**MS Courses:** Quality Assurance and Automated Methods, Research Methodology

**BS Courses:** Nanotechnology, Inorganic Chemistry, Analytical Chemistry, **BE Courses:** Applied Chemistry

**Lecturer – Applied Chemistry** **2006- 2011**

Taught Industrial Chemistry Course to under graduate engineering students and conducted lab classes for Applied chemistry and Analytical Chemistry courses and worked as invigilator and internal examiner.

*Govt Girls College Shahrah-e-Liaquat Karachi, Pakistan*

**Lecturer –Chemistry** **2002-2005**

Taught Analytical and Physical Chemistry courses to intermediate and undergraduate students, conducted lab classes and worked as invigilator and internal examiner.

*Falconhouse Grammar School*

## **Science Teacher**

**1998-2001**

Taught Chemistry to O and A Level Students and worked as class teacher.

## **RELATED EXPERIENCE**

*Novartis Pharma (Pakistan) Ltd*

## **Quality Control Analyst**

**1997 - 1998**

Worked as trainee quality control analyst in Raw Material Testing Lab. Conducted various experiments to ensure quality of raw materials used in different drug formulations. Given the task of daily and periodical water testing.

## **RESEARCH PUBLICATIONS**

### ***Book:***

AmtulQayoom, Arif Kazmi, "Turmeric: A Biosorbent for Toxic Metals: A Study of Turmeric Powder as a Remedy to Remove Toxic Metals from aqueous solution" LAP Lambert Academic Publishing, 2012, ISBN3659226955, 9783659226953 (Thesis)

### ***Journal Articles:***

1. **Amtul Qayoom**, M. Talha, A. Kamal, M.N. Siddiqui, A.R. Viqar, Indigenous kaolinite ore as cost effective adsorbent for re-refining of used lubricating oil, *Revue des Energies Renouvelables*, 21(3), 2018, 473 - 485
2. Farhat Ikram, **Amtul Qayoom**, Zara Aslam, Muhammad Raza Shah, Epicatechin coated silver nanoparticles as highly selective nanosensor for the detection of Pb<sup>2+</sup> in environmental samples, *Journal of Molecular Liquids*, 277, 2019, 649-655, Impact Factor: 4.6
3. Saman Naeem, Saeeda Nadir Ali, **Amtul Qayoom**, Haji Muhammad, Shazia Nisar, Charge transfer complexes of Antihistamines: Spectrophotometric determination" *Journal of Chemical Society of Pakistan*, Impact Factor: 0.27
4. Farhat Ikram, **Amtul Qayoom**, Muhammad Raza shah, Synthesis of Epicatechin Coated Silver Nanoparticles for Selective Recognition of Gentamicin Sensors and Actuators B: *Chemical* 257, 2018, 897-905, Impact Factor: 5.4
5. Farhat Ikram, **Amtul Qayoom**, Nahid Ikram, Muhammad Raza shah Synergistic effect of epicatechin coated silver nanoparticles on antimicrobial activity of gentamicin against aspergillus niger, *Journal of New Technology and Materials* , 2017, 7 (2), 100-105. ISI indexed: Yes

6. Nida Naz, Saeeda Nadir Ali, **Amtul Qayoom**, Shumaila Akram, Liquid Chromatographic Method for Simultaneous Determination of Citalopram with NSAIDs in Bulk Drug, Pharmaceutical Formulation and Human Serum. Journal of Chemical Society of Pakistan, 2017, 39 (6), 970-978, Impact Factor: 0.27
7. Saeeda N. Ali, Saeeda, Najma Sultana, **Amtul Qayoom**, & Muhammad Saeed Arayne. "Synthesis and spectrophotometric study of omeprazole charge transfer complexes with bromothymol blue, methyl orange and picric acid." Moroccan Journal of Chemistry (2017) Vol 5(1) 212-226. ISI Indexed: YES
8. **Amtul Qayoom**, Syed A. Kazmi, Saeeda N. Ali, Equilibrium Modelling for Adsorption of Aqueous Cd(II) onto Turmeric: Linear versus Nonlinear Regression Analysis. Moroccan Journal of Chemistry, 2017, 5(2) 362-370. ISI Indexed: YES,
9. Shumaila Meraj, **Amtul Qayoom**, Saeeda Nadir Ali, Effective process optimization of indigo rope dyeing: a case study, Journal of New Technology and Materials (JNTM), 2016, 6(2) 33-37. ISI Indexed: YES
10. **Amtul Qayoom**, Syed A. Kazmi, Saeeda N. Ali, "Kinetic Modelling of aqueous Cu (II) Adsorption onto Turmeric Powder: Effect of Temperature" Journal of Chemical Society of Pakistan, June 2017, 39(3). Impact Factor: Yes
11. **Amtul Qayoom**, Syed A. Kazmi, Saeeda N. Ali, "Turmeric powder as a natural heavy metal chelating agent: Surface characterization" Pakistan Journal of Scientific & Industrial Research (PJSIR), 2017, 60(1) 1-8: ISI Indexed: YES, HEC Recognized (Yes)
12. Shumaila Akram, Saeeda Nadir Ali, **Amtul Qayoom** and Nida Naz. "High performance liquid chromatographic method for simultaneous determination of alprazolam with antihistamines in bulk drug, pharmaceutical formulation and human serum" Sindh University Research Journal, 2017, 49(1) 3-7, ISI Indexed: YES, HEC Recognized (Yes)
13. Syed Wajid Hussain, **Amtul Qayoom**, Syed Tariq Ali, and Ghazanfar Hussain, Improving Different Parameters of Transformer Oil from Pakistan National Refinery Ltd, Science International Journal (LHR), 2016, 28(3) 2533-2536: ISI Indexed: YES, HEC Recognized (Yes)
14. **Amtul Qayoom**, Syed A. Kazmi, Saeeda Nadir Ali, Adsorption of Aqueous Cd (II) ions onto Turmeric Powder: Kinetic Modelling, Science International Journal (LHR), 2016, 28(4) 33777-3782: ISI Indexed: YES, HEC Recognized (Yes)
15. Saeeda Nadir Ali, Najma Sultana, **Amtul Qayoom**, Muhammad Saeed Arayne "Liquid Chromatographic Determination of Alprazolam with Ace Inhibitors in Bulk, respective Pharmaceutical Products and Human Serum, Science International Journal (LHR), 2016, 28(4)3815-3819 : ISI Indexed: YES, HEC Recognized (Yes)
16. **Amtul Qayoom**, S. Arif Kazmi "Effect of Temperature on Equilibrium and Thermodynamic Parameters of Cd (II) Adsorption onto Turmeric Powder" Journal of Chemical Society of Pakistan, 2012, 34(5) 1084-1090: Impact Factor: 0.27, HEC

Recognized: Yes

17. **Amtul Qayoom**, S. Arif Kazmi "Effect of Temperature on Sequestration of Cu(II) from Aqueous Solution onto Turmeric Powder " Journal of Chemical Society of Pakistan, 2010, 32(5) 582-588, Impact Factor: 0.27, HEC Recognized: Yes
18. **Amtul Qayoom**, S. Arif Kazmi and Naushaba Rafiq "Removal of Cu (II) Ions from Aqueous Solutions by Turmeric Powder" Journal of Chemical Society of Pakistan, 2009, 31(6), 876-881, Impact Factor: 0.27, HEC Recognized: Yes

#### **Articles accepted**

1. Saeeda Nadir Ali, Shumaila Akram, Amtul Qayoom, Nida Naz and Anjum Ayub. Liquid chromatographic method for simultaneous determination of alprazolam with NSAIDs in bulk drug, pharmaceutical formulation and human serum. Pakistan Journal of Pharmaceutical Sciences, Manuscript No.5786, Impact Factor: Yes, HEC Recognized: Yes
2. Nida Naz, Saeeda Nadir Ali, Amtul Qayoom, Sajid Iqbal, Shumaila Akram" "Rapid and Sensitive Method for Simultaneous Determination of Citalopram with Antihistamines by Liquid Chromatography" Pakistan Journal of Pharmaceutical Sciences, Impact Factor: Yes, HEC Recognized: Yes

#### **Articles Submitted**

1. **Amtul Qayoom**, Yuh-Shan Ho "Bibliometric Analysis of Adsorption Literatures: Contribution from Pakistan" in Journal of Chemical Society of Pakistan

#### **Filed Patents Applications**

Complete Application entitled "Synthesis of Epicatechin Coated Silver Nanoparticles for the Selective Recognition of Lead ( $Pb^{2+}$ ) ions in Aqueous Media" filed at 26-04-2017

### **RESEARCH IN CONJUNCTION WITH MASTERS PROGRAMMES**

#### ***Research Supervisor:***

1. Improving different parameters of transformer oil from Pakistan National Refinery Ltd: Syed Wajid Hussain. MS Batch 2013-14
2. Synthesis of silver nanoparticles for the detection of antimicrobial agents (drugs) in water: Ms. Farhat Ikram. MS Batch 2014-15
3. Kaolinite as an adsorbent for re-refining of waste lube oil: M. Talha. MS Batch 2014-15
4. Re-refining of Used Lubricating Oil using Low Cost Adsorbents: Abdul Rub Vikar. MS Batch 2014-15
5. Green Synthesis and Statistical optimization of experimental parameters for catalytic application of transition metal nanoparticles (TMNPs): Muhammad Bilal Khalid Sahota. MS Batch 2015-2016

6. Green Synthesis of Transition Metal Nano Particles and optimization of catalytic application by Design of Experiment (DOE) Methodology: Talha Siddiqui. MS Batch 2015-2016.
7. Curcumin-Alginate Composites for Application in Medical Textile: Alizay Qureshi. MS Batch 2016-17

***Research Co-supervisor :***

8. Spectrophotometric determination of antihistamine through charge transfer complexes. Ms. Saman Naeem. MS Batch 2014-15
9. Liquid chromatographic method for simultaneous determination of alprazolam with co-prescribed drugs in bulk and dosage formulations: Shumaila Akram. MS Batch 2014-15.
10. LC-UV method for determination of citalopram with simultaneously prescribed medicines in raw materials and commercial products: Ms. Nida Naz MS. Batch 2014-15.
11. Investigation and improvement of cold flow properties of biodiesel fuel: Ms. Zehra Ghulam: Batch 2017-2018
12. Spectrophotometric Determination of Anticonvulsants through Charge Transfer Complexes: Sameera Zaki: Batch 2017-2018

**CONFERENCES AND WORKSHOPS**

- Four days training on "Entrepreneurship" held on 24th-27th October 2017 at CIS Lecture Hall, NEDUET.
- QEC Training Programme: Resource Sharing for Optimum use and benefits, 29 december & 4 January 2017, CCEE, NED Acedemy
- HEC Indigneous on Campus Training Programme "Financial Management" held on 16-19 October , 2015
- HEC Indigneous on Campus Training Programme "Organization Interdepartmental Communication" held on 23rd Feb-04 March , 2015
- Presented research work entitled: : Improving different parameters of transformer oil from Pakistan National Refinery Ltd in 1<sup>st</sup> International Conference on Advanced Materials and Process Engineering-2015 jointly organized by Department of Chemical Engineering and Petroleum Engineering held on 14 & 15-12-2015
- Seminar cum Workshop on "New Trends in Electrochemistry" at H.E.J Research Institute of Chemistry ICCBS at University of Karachi on 12 & 13-05-2015
- Regional Workshop on Chemical Laboratory Safety and Security, June 05 -06-2012 held at International Center of Chemical and Biological Sciences, Universities of Karachi, Pakistan.

- International Training Workshop on Air Pollution Modeling: Fate of Air Pollutants in the Atmosphere, March 19-22, 2012, held at Institute of Environmental Studies, University of Karachi, Pakistan
- National Workshop on Chemical Laboratory Safety and Security in Universities of Pakistan, Feb 22-22, 2011, held at International Center of Chemical and Biological Sciences, Universities of Karachi, Pakistan.
- Oral Presentation at 8th International and 20th National Chemistry Conference (INCC 2010) Islamabad, Feb 15–Feb 17, 2010, held at Quaid-e-Azam University Islamabad, Pakistan.
- Workshop on Environmental Chemistry (NCEAC), Jan 19 –21, 2009 at Indus Hotel Hyderabad
- 10-days workshop on Systemic Approach to Teaching and Learning Chemistry (SATLC), Nov 19-Nov 29, 2008, held at University of Karachi, Pakistan(**First prize in poster competition**).
- 11<sup>th</sup> International Symposium on Natural Product Chemistry, Oct 29-Nov 01, 2008 held at International Center of Chemical and Biological Sciences, Universities of Karachi, Pakistan.
- ELT Seminar 2008 (English for Academic and Occupational Purposes, June 12, 2008, at NED University of Engineering and Technology, Pakistan
- **Oral Presentation at Pure and Applied Chemistry Conference 2008 (PACCON 2008), Jan 30 – Feb 01, 2008, Held at Sofitel Centara Grand Bangkok, Bangkok, Thailand.**
- Oral Presentation in 4<sup>th</sup> International Symposium on Biotechnology and 1<sup>st</sup> Pakistan-China-Iran International Conference on Biotechnology, Bioengineering-Biophysical Chemistry, Nov 04-Nov 08, 2007 at Institute of Biotechnology and Genetic Engineering, University of Sindh, Jamshoro.Pakistan
- Poster Presentation at 2<sup>nd</sup> International Seminar on Analytical Sciences, Sep 06-Sep 08, 2007, held at National Center of Excellence in Analytical Chemistry, University of Sindh, Jamshoro, Pakistan
- Enhancing Teaching Effectiveness, Feb 13-Feb 16, 2006, held at NED University of Engineering and Technology, Pakistan
- National Teachers Training Programme by HEC, Dec 09- Jan 07, 2006, held at DUMHS Karachi
- Professional Skill Development Training by NCE/HEC from Jun 27-Jul 01, 2005, held at SPELT House, Karachi, Pakistan
- In Service Training Workshop on Chromatography and Statistics organized by National Core Group of Chemistry, Dec 26-Jan 8, 2005 held at Center of Excellence in Analytical Chemistry, Jamshoro.
- Workshop on Communication Skills, Jan 06, 2003-Jan 31, 2003, held at Government College for Women, Shahrah-e-Liaquat, Karachi, Pakistan



**Languages**

- English – speak fluently and read/write with high proficiency
- Urdu – speak fluently and read/write with high proficiency

**EXTRACURRICULAR ACTIVITIES**

- Accompanied a group of girls students of the NED University as for excursion tour 2007 for Northern Area, Jun 11-Jun 22, 2007
- Team Manager for NED Volleyball Team (Girls), Intervarsity Volleyball (Girls) Championship, Dec 12-Dec 12, 2007, held at LCWU. Lahore

**MEMBERSHIPS**

Chemical Society of Pakistan

