Department of Chemistry & Chemical Engineering

Falak Sher (PhD)
Associate Professor and Chair
Department of Chemistry and Chemical Engineering
SBASSE, LUMS

Advisory Board Meeting
January 25–28, 2021
Outline

➢ Update on Faculty Hiring

➢ Student Admissions and Placements

➢ Research Activities and Output

➢ Challenges
Faculty - Chemistry and Chemical Engineering

Falak Sher
Associate Professor
PhD: University of Liverpool, UK

Irshad Hussain
Full Professor
PhD: University of Cambridge, UK

Ghayoor Abbas
Associate Professor
PhD: Michigan State University, USA

Basit Yameen
Associate Professor
PhD: MPI for Polymer Research, Mainz, Germany

Rahman Saleem
Associate Professor
PhD: Michigan State University, USA

Habib-ur-Rehman
Associate Professor
PhD: Institute for New Materials, Germany

Salman N. Arshad
Assistant Professor
PhD: UIUC, USA

Muhammad Zaheer
Assistant Professor
PhD: University of Bayreuth, Germany

Muhammad Saeed
Associate Professor
PhD: Tubingen University, Germany

Ali Rauf
Assistant Professor
PhD: Sungkyunkwan University, South Korea

Qasim Imtiaz
Assistant Professor
PhD: ETH Zürich
Postdoc: ETH and MIT

Muhammad Shoaib
Assistant Professor
PhD: Sungkyunkwan University, South Korea
Chemical Engineering Faculty Hiring - Status

1. **Dr. Rofice Dickson (joined)**
   - Process modelling and Optimization
   - Pukyong National University, South Korea

2. **Dr. Faheem Akhtar (in process)**
   - Porous materials and polymer membranes
   - KAUST, Saudi Arabia

3. **Dr. Qandeel Almas (offered but she declined)**
   - Biomass based chemicals – catalysis
   - Georgia Institute of Technology, USA

4. **Dr. Atif Pervez (offered but he declined)**
   - Lithium ion batteries
   - Korea Electro-Technology Research Institute (KERI) in South Korea; University of Calgary; Alexander von Humboldt Fellowship

5. **Dr. Waqas Aslam (on-hold)**
   - Catalytic conversion of syngas into oxygenated fuels
   - University of Queensland, Australia

6. **Dr. Izzat Cheema (on-hold)**
   - Analysis and optimization of Haber process
   - Technische Universität Braunschweig, Braunschweig – Germany
Current Chemistry and Chemical Engineering Students

- **Blue** = Chemical Engineering
- **Orange** = Chemistry

<table>
<thead>
<tr>
<th>Year</th>
<th>Chemical Engineering</th>
<th>Chemistry</th>
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<tbody>
<tr>
<td>Sophomore</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Junior</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>Senior</td>
<td>12</td>
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</tr>
<tr>
<td>MS</td>
<td>20</td>
<td>25</td>
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<tr>
<td>PhD</td>
<td>19</td>
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BS Chemistry Program – Placements

BS Chemistry

Total graduated students = 66

Industry/Teaching
Teaching (TNS Beaconhouse, LGS, Roots etc.) = 7
Industry = 2
Business = 3

Fully Funded Scholarships in US
Students with cGPA of 3.0 or more = 100% success rate
MIT, Princeton, Chicago, JHU, UIUC, Cornell, Minnesota, UMass, Utah, UC Davis, Texas A&M, Indiana–Bloomington, Rice etc.

Graduate Studies

Industry/Teaching

PhD Completed = 10
PhD in process = 33
MS = 11
MBA = 3

MS Students/Staff who won PhD Scholarships = 19
Current students who have received PhD offers = 11
Admission Offers Received by Chemistry Majors 2021

Muhammad Azhan: Emory University, Iowa State University

Azka Arshad: University of Minnesota

Hafsa Irfan: University of Minnesota

Shikufa Mousavi: Emory University

Anam Hayee: The University of Utah

Muhammad Hamza Ansar: Texas A&M University, University of South Carolina, Iowa State University
Admission Offers Received by Chemistry Majors 2021

- Nawal Zahra Jafari
- Binish Ashfaq
- Qasim Qayyum Kashif
- Farwa Awan
- Nabeeha Malik
Placements of Chemistry Alumni

Zain Yousaf
BS Chemistry 2012, LUMS
MS Chemistry, UIUC
Working at Biogen-Cambridge, Massachusetts, USA

Muhammad Affawn Ashraf
BS Chemistry 2012, LUMS
PhD Chemistry, UMASS
Working at Intel (USA)

Sikandar Abbas Wattoo
BS Chemistry 2013, LUMS
PhD Chemistry, CMU
Working at Intel (USA)

Wardah Ejaz
BS Chemistry 2014, LUMS
PhD Chemistry, UMASS
Working at Intel (USA)
Placements of Chemistry Alumni

- **Waqsas Rasheed**
  - BS Chemistry 2013, LUMS
  - PhD Chemistry, Minnesota
  - Working at Tate & Lyle (USA)

- **Syed Ali Moeed Tirmzi**
  - BS Chemistry 2014, LUMS
  - PhD Chemistry, Cornell
  - Working at Intel (USA)

- **Ahmed Yousaf**
  - BS Chemistry 2014, LUMS
  - PhD Chemistry, ASU
  - Working at Intel (USA)

- **Syed Muhammad Usama**
  - BS Chemistry 2014, LUMS
  - PhD Chemistry, Texas A&M
  - Working as a postdoc at Frederick, Maryland, (USA)
Placements of Chemistry Alumni

Abdul Malik
BS Chemistry 2012, LUMS
PhD Texas Tech University
Working at OpenEye Scientific (USA)

Assad Ullah Khan
BS Chemistry 2013, LUMS
PhD Virginia Tech
Working at Micron Technology (USA)

Safeer Alvi
BS Chemistry 2016, LUMS
MS University of Indiana Bloomington
Working at Siemens Healthineers (USA)

Hassan Javed
BS Chemistry 2015, LUMS
PhD Rice University
Working at GSI Environmental Inc. (USA)
Rashid Khalid
BS Chemistry 2013, LUMS
Working at TNS Beaconhouse Lahore Pakistan

Bilal Umer
BS Chemistry 2013, LUMS
Working at Unilever Pakistan

Ahmad Zaman Qamar
Lab Facilitator at Chemistry, LUMS
PhD Chemistry, Southern Illinois University, Carbondale

Aleeza Farrukh
Lab Instructor at Chemistry, LUMS
Ph.D. in Chemistry from the Max Planck Institute for Polymer Research, Mainz

Working as Post Doc at University of California, Irvine (USA)

Working as Assistant Professor of Chemistry at University of Central Arkansas, (USA)
Placements of PhD Chemistry Students

Dr. Shazia Mumtaz
Assistant Professor, Chemistry (BPS-18)
Govt Islamia College
Railway Road Lahore.

Dr. Mira tul Zubaida Butt
Lecturer, Chemistry (BPS-17)
Govt. Hanifan Begum Degree College
for Women, Mustafabad, Kasur

Dr. Hafiza Tayyaba Shahzadi
Lecturer, Chemistry (BPS-17)
Govt. Degree College for Women, Ferozwala, Shiekhupura

Dr. Sharon Riaz
Assistant Professor, Chemistry
University of Sialkot, Sialkot

Dr. Uzma Hira
Assistant Professor, Chemistry
School of Physical Sciences,
University of the Punjab, Lahore

Dr. Akhtar Munir
Assistant Professor, Chemistry
University of Sialkot, Sialkot

Dr. Soneela Asghar
Post Doctoral Research Assistant
WCAIR, Drug Discovery Unit,
University of Dundee, Scotland, UK
Research Publications in 2019

- Biology: 20
- Chemistry: 61
- CS: 46
- EE: 95
- Mathematics: 14
- Physics: 43

Research Publications in 2020

- Biology: 12
- Chemistry: 67
- CS: 34
- EE: 50
- Mathematics: 15
- Physics: 29

Source: Publications Dashboard | Office of Research (lums.edu.pk)
Challenges

➢ Faculty hiring and retention in the key areas, especially for the Chemical Engineering program

➢ Enrolment of students in the chemistry major

➢ Quality of students in the MS chemistry program

➢ Research grants and limited number of available avenues/resources

➢ Industry-Academia research collaborations

➢ Long-term sustainability of Graduate Programs
Thank you