

## Brief Profile

**Name** : Dr. Umar Farooq

**Date of Birth** : 19-03-1991

**Educational Qualification**

- *Ph.D.* : Ph.D.
- *M.Tech* :
- *B.Tech* :

**Work Experience**

- *Teaching* : 1 year
- *Research / Industry* :

**E-mail ID** : umar.farooq@miet.ac.in/darumer27@gmail.com

**Contact No.** : 9682565419

**Area of Interest** : Nanomaterials for sustainable energy applications

**Teaching**

- *Subjects Taught at UG Level* : Physical chemistry
- *Subjects Taught at PG Level* : Physical and inorganic chemistry

**Research Guidance**

- *B.Tech* : 00
- *M.Tech* : 00
- *Ph.D.* : 00

**Research Publications**

- *Journals* : 10
- *Conferences* : 2
- *Book Chapters* : 2

**Patent/IPR** : 00  
(*Books Published etc.*)

**No. of National/International Conferences attended/ Paper Presented** : 20

**No. of Conferences Organized** : 2

**STC/FDP/Seminars/Workshops Organized** : 0

**STC/FDP/Summer/Winter Schools/Workshops /Seminars attended** : 0

**Certification Courses (NPTEL etc.)** : 0

**Memberships of the Professional Societies** : 0

**Awards/Honors** : 2 best poster awards/ 1 best paper presentation award

**Funded Project** : 0

Name of Project	Funding Agency	Duration
00	00	00

**Any other relevant Information** :

## LIST OF PUBLICATIONS

### Journal:

- [1] S. K. Jain, U Farooq, F. Jamal, A. Kalam and T. Ahmad. Hydrothermal Assisted Synthesis and Structural Characterization of Zn doped SnO<sub>2</sub> Nanoparticles for Catalytic Reduction of 4-Nitrophenol. *Material Today Proceedings*. 2021 36, 717-723.
- [2] F. Naaz, U. Farooq, M. A. Majeed Khan, T. Ahmad. Multifunctional Efficacy of Environmentally Benign Silver Nanospheres for Organic Transformation, Photocatalysis and Water Remediation. *ACS Omega*. 2020, 5, 40, 26063–26076.
- [3] U. Farooq, P. Chaudary, P. Ingole, A. Kalam, T. Ahmad. Development of Cuboidal KNbO<sub>3</sub>@ $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> Hybrid Nanostructures for Improved Photocatalytic and Photoelectrocatalytic Applications. *ACS Omega*. 2020, 5, 32, 20491-20505.
- [4] KB Masood, U Farooq, J Singh. Evolution of the structural, dielectric and electrical transport properties of Bi<sub>2</sub>Te<sub>3</sub> nano-sticks synthesized via polyol and solvothermal routes. *Physica B: Condensed Matter* 588, 412183.
- [5] U. Farooq, F. Naz, R. Phul, N. Ahmad Pandit, S. K. Jain, T. Ahmad, Development of Heterostructured Ferroelectric SrZrO<sub>3</sub>/CdS Photocatalysts with Enhanced Surface Area and Photocatalytic Activity. *Journal of Nanoscience and Nanotechnology*, 2020, 20, 1-10.
- [6] T. Ahmad, A. Nazim, U. Farooq, H. Khan, S. K Jain, M. Ubaidullah, J. Ahmed. Biosynthesis, characterization and photo-catalytic degradation of methylene blue using silver nanoparticles. *Material Today Proceedings* 2020, 29, 1039-1043
- [7] U. Farooq, J. Ahmed, S. M Alshehri, T. Ahmad, High Surface Area Sodium Tantalate Nanoparticles with Enhanced Photocatalytic and Electrical Properties Prepared through Polymeric Citrate Precursor Route. *ACS Omega*, 2019, 4, 19408–19419.
- [8] R. Phul, V. Shrivastava, U. Farooq, M. Sardar, A. Kalam, A. G Al-Sehemi, T. Ahmad, One pot synthesis and surface modification of mesoporous iron oxide nanoparticles. *Nano-Structures & Nano-Objects*, 2019, 19, 100343.
- [9] K A Parrey, T Farooq, S A Khandy, U Farooq, A Gupta. First principle studies on structure, magneto-electronic and elastic properties of photovoltaic semiconductor halide (RbGeI<sub>3</sub>) and ferromagnetic half metal oxide (RbDyO<sub>3</sub>). *Computational Condensed Matter*, 2019 19, e00381.
- [10] U. Farooq, R. Phul, S. M Alshehri, J. Ahmed, T. Ahmad, Electrocatalytic and Enhanced Photocatalytic Applications of Sodium Niobate Nanoparticles Developed by Citrate Precursor Route. *Nature Scientific Reports*, 2019, 9, 4488.
- [11] T. Ahmad, U. Farooq, R. Phul, Fabrication and Photocatalytic Applications of Perovskite Materials with Special Emphasis on Alkali Metal Based Niobates and Tantalates. *ACS Ind. Eng. Chem. Res.* 2018, 57, 18-41.

[12] R. Phul, C. Kaur, U. Farooq, T. Ahmad, Ascorbic acid assisted synthesis, characterization and catalytic application of copper nanoparticle, *2018, 2, 90-94*.

#### **Books / Book Chapters:**

[1] F. Naaz, U. Farooq and T. Ahmad, Ceria as an Efficient Nanocatalyst for Organic Transformations. In Nanocatalysts. *IntechOpen, 2019, 1-31*.

[2] U Farooq, AH Pandit, R Phul Recent Advances in Metal Oxide/Sulphide - Based Heterostructure Photocatalysts for Water Splitting and Environmental remediation. *Environmental Nanotechnology for Water Purification, 2020, 187-216*

#### **Conferences:**

[1] Participated in the “7<sup>th</sup>National Symposium and Conference on Solid State Chemistry and Allied Areas” organized by department of Chemistry, Jamia Millia Islamia, New Delhi in association with Indian Association of Solid State Chemists and Allied Scientists (ISCAS) during November 24-26 2011.

[2] Participated in one day seminar on “Recent Advances in Chemistry” (RAC) on 12 March 2012 organized by Department of Chemistry Jamia Millia Islamia Central University New Delhi.

[3] Attended two-day workshop on “Nanoscience and Nano-technology” from 1-2 March 2013 organized by Department of Chemistry, Jamia Millia Islamia Central University New Delhi.

[4] Participated in MHRD GIAN course on “Recent Developments in Nano Materials for Energy and Health Care Applications” organized by Department of Chemistry Jamia Millia Islamia, New Delhi, from 19-24 December-2016.

[5] Participated in one day workshop entitled as “Thin Film Application” organized by Centre for Nanoscience and Nanotechnology, Jamia Millia Islamia, New Delhi, in association with Rigaku Japan on 17 November-2016.

[6] Presented a poster entitled “Synthesis and Characterization of Sodium Niobate (NaNbO<sub>3</sub>) Nanoparticles using Polymeric Citrate precursor Route” in the seminar entitled as “Recent Advances in Chemistry 2016” organized by Department of Chemistry, Jamia Millia Islamia, New Delhi, on 26 April-2016.

[7] Presented a poster entitled as “Synthesis and characterization of sodium niobate nanoparticles via polymeric citrate precursor route” in the National Seminar on Biophysics (BIOPHYSIKA-2017) organized by CIRBS, Jamia Millia Islamia, New Delhi, on 16 March-2017.

[8] Presented a poster entitled “Photo-catalytic Activity of Sodium Tantalate Nanostructures, Synthesized by Firing Gel Method” in the seminar entitled as “Recent Advances in Chemistry 2017” organized by Department of Chemistry, Jamia Millia Islamia, New Delhi, on 28 March-2017 (**Best Poster**).

[9] Participated in author workshop entitled as “How to Write and Publish Scholarly Articles” jointly organized by Dr. Zakir Hussain Library, JMI and Springer Nature on 24 August-2017.

[10] Presented a poster entitled “Photocatalytic Degradation of Organic Dye at different pH using NaTaO<sub>3</sub> Nanoparticles synthesized by Polymeric Citrate Precursor method” in an international conference ICN:3I-2017 organized by Dept. of Mechanical and Industrial Engineering and Centre of Nanotechnology, IIT, Roorkee during

06-08 December-2017.

[11] Presented a poster entitled “Electrocatalytic and Enhanced Photocatalytic Properties of Sodium Niobate Nanoparticles Synthesized via Polymeric citrate Precursor route” in the “International Conference on Advanced Functional materials and Devices (ICASMD-2018)” organized by C-MET, Hyderabad during 8-10 March-2018.

[12] Participated in the Workshop on Developing Capacities for Reference and Research DELNET Discovery Services, Plagiarism and Academic Integrity and Digital Reference Management Tools” organized by DELNET-Developing Library Network New Delhi in collaboration with Dr. Zakir Hussain Library, JMI, New Delhi on 23 April-2018.

[13] Presented oral presentation entitled “Enhanced Photocatalytic and Dielectric Properties of Sodium Niobate Nanoparticles Synthesized via Polymeric citrate Precursor route” at Two-Day National Workshop on Nanoscience Opportunities and Challenges” Organized by Department of Physics and Department of Chemistry, Islamic university of Science and Technology, Awantipora, J&K on 4-5 September-2018.

[14] Presented a poster entitled as “Ta doped  $\text{NaNbO}_3$  Nanoparticles with Improved Photocatalytic and Dielectric Properties Synthesized via Hydrothermal Route” at International Conference on Advanced Materials (ICAM-2019) organized by Centre for Nanoscience and Nanotechnology, Jamia Millia Islamia, New Delhi, 2019.

[15] Participated in Wiley Author Workshop organized by Dr. Zakir Hussain Library on 22 January-2019.

[16] Presented the poster entitled “ $\text{SrZrO}_3/\text{CdS}$  Heterostructure Nanocomposite with Improved Photocatalytic and Dielectric Properties” at Fifth International Conference on Nanotechnology for Better Living” organized jointly by NIT Srinagar and IIT Kharagpur on 7-11 April-2019 (**Best Poster**).

[17] Presented a paper entitled “Photocatalytic, Dielectric and Structural Evaluation of Interwoven Nano-flake  $\text{NaNbO}_3$  and Ta Doped  $\text{NaNbO}_3$  Building Blocks” at JTA Multidisciplinary International Conference (JTACON-2020) organised by Jamia Teachers Association (JTA), Jamia Millia Islamia, New Delhi on 16-18 February 2020 (**Best Paper**).

[18] Participated in Virtual international conference on Multifunctional Advanced Materials” (VICMAM-2021) 9th-10th August 2021

[19] Participated in 3 day ACS Seminars @ IIT Roorkee: Advances in Polymer Nanocomposites (September-2021)

[20] Participated in International Hybrid Meeting on “Physics and Chemistry of Advanced Materials (PCAM-2021)” at IIT Delhi