



Chemistry Section, Physical Sciences Section
School of Sciences
Maulana Azad National Urdu University (Central University)
Gachibowli, Hyderabad, Telangana-500032, India



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DR. SHAHJAHAN | GUEST FACULTY (CONTRACTUAL)

CURRENT
DESIGNATION/
INVOLVEMENT

Currently working as a Guest Faculty (Contractual) in Chemistry Section

AREA OF
SPECIALIZATION

PHYSICAL CHEMISTRY

ONGOING ACADEMIC
RESEARCH/PROJECTS

INNOVATION WITH
FIELD OF STUDY AND
COLLABORATIVE
EFFORTS

Innovation with field of research

- Interactions of proline in non-aqueous anionic, cationic and non-ionic surfactants at different temperatures
- Electrodeposited germanium on silicon substrate using a mixture of germanium tetrachloride and propylene glycol

Collaborative Efforts

International Collaborators

- **Dr. Abdul Manaf Bin Hashim (Highly cited)**
Malaysia-Japan International Institute of Technology, Universiti Teknologi Malaysia, Kuala Lumpur, Malaysia
- **Dr. Mohammad Tariq (Highly cited)**
Senior Researcher, Department of Chemistry, NOVA School of Science & Technology, NOVA University Lisbon, Portugal
- **Dr. Touseef Begum**
Department of Pharmaceutical Science, Ibn Sina National College for Medical Studies, Jeddah, Saudi Arabia

National Collaborators

- **Dr. Anita Kumari**
Department of Chemistry, Miranda House, University of Delhi, New Delhi
- **Dr. Rajan Patel**
Biophysical Chemistry Laboratory, Center for Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia, Jamia Nagar, New Delhi 110 025

- **Dr. Murtaza**
Department of Physics, School of Engineering, Mahindra University, Hyderabad, Telangana
- **Dr. Abdul Sattar**
Department of ECE, Nawab Shah Alam Khan College of Engineering & Technology, Hyderabad, Telangana

ACADEMIC AND
ADMINISTRATIVE
EXPERIENCE

- **Professor of Chemistry**, Nawab Shah Alam Khan College of Engineering & Technology, Telangana – 16.08.2019 -10.11.2020
- **Associate Professor of Chemistry**, Narsimha Reddy Engineering College, Telangana – 01.11.2018 – 15.08.2019
- **Assistant Professor of Physical Chemistry (Guest)**, Miranda House, University of Delhi, New Delhi - 01.02.2014 – 30.04.2014
- **NAAC Accreditation Work in** Narsimha Reddy Engineering College, Telangana and Nawab Shah Alam Khan College of Engineering & Technology, 2018 - 2020
 - Actively contributed to the NAAC accreditation process in college by preparing documentation, compiling data, and coordinating with faculty and administration.
 - Supported quality assurance efforts by helping develop assessment frameworks and ensuring compliance with NAAC standards.

EDUCATIONAL
QUALIFICATION

- **Doctoral of Philosophy in Chemistry, 2008**
Department of Chemistry, Jamia Millia Islamia (Central University), New Delhi

TEACHING PROFICIENCY

- Urdu, English

RESEARCH PUBLICATION
DETAILS

- Bandwidth enhancement of planar terahertz metasurfaces via overlapping of dipolar modes, D. Kumar, R. Jain, **Shahjahan**, S. Banerjee, S. S. Prabhu, R. Kumar, A. K. Azad, D. R. Chowdhury, Plasmonics, Springer Science, U. S. A, 2020
- Interaction of glycyglycine with cationic surfactants – Cetylpyridinium chloride and cetylpyridinium bromide: A volumetric, ultrasonic and conductometric study, A. Ali, N. H. Ansari, U. Farooq, S. Tasneem, **Shahjahan**, F. Nabi, International Journal of Thermophysics, Springer Science, U. S. A, 37(107), 1-16, 2018
- Synthesis of germanium dioxide microclusters on silicon substrate in non-aqueous solution by electrochemical deposition, Mastura Shafinaz Zainal Abidin, **Shahjahan**, Abdul Manaf Hashim, Indonesian Journal of Electrical Engineering and Computer Science, Indonesia, 6 (1), 193–199, 2017
- Electrodeposited germanium on silicon substrate using a mixture of germanium tetrachloride and propylene glycol, Mastura Shafinaz Zainal Abidin, **Shahjahan**, Mohamad Rusop Mahmood, Abdul Manaf Hashim, Jurnal Teknologi, Malaysia, 72 (1), 77-82, 2015
- Physicochemical studies of glycine, l-alanine, l-phenylalanine, and glycyglycine in aqueous triton X-100 at different temperatures, Anwar Ali, **Shahjahan**, Nisar Ahmad Malik, Sahar Uzair, Vidiksha Bhushan, Tenside Surfactants Detergents, Germany, 52 (1), 54-61, 2015
- Review: The influence of Ziegler-Natta and metallocene catalysts on polyolefin structure, properties, and processing ability, Ahmad Shamiri, Mohammed H.

- Chakrabarti, **Shahjahan**, Mohd Azlan Hussain , Walter Kaminsky , Purushothaman V. Aravind and Wageeh A. Yehye, Materials, Switzerland, 7, 5069-5108, 2014
14. Surface reaction of undoped AlGa_N/Ga_N HEMT based two terminal device in H⁺ and OH⁻ ion-contained aqueous solution, M. S. Z. Abidin, **Shahjahan**, A. M. Hashim Sains Malaysiana, Malaysia – 42 (2), 197-203, 2013
 13. Volumetric, viscometric and refractometric studies of glycine, alanine, valine and glycyglycine in aquo-sucrose at different temperatures, A. Ali, R. Patel, **Shahjahan**, V. Bhushan and N. H. Ansari, Journal of Indian Chemical Society, India, 89, 1335-1342, 2012
 12. Volumetric behaviour of α -amino acids in aqueous cetyltrimethylammonium bromide at 298.15, 303.15, 308.15 and 313.15 K, A. Ali, **Shahjahan** and N. H. Ansari, Russian Chemical Bulletin, International Edition, 59, 1999 – 2004, 2010
 11. Physicochemical behaviour of some amino acids/ glycyglycine in aqueous D-galactose solutions at different temperatures, A. Ali, R. Patel, **Shahjahan** and N. H. Ansari, International Journal of Thermophysics, Springer Science, U.S.A – 31(3), 572-584, 2010
 10. Volumetric and ultrasonic of molecular interactions in binary liquid mixtures of styrene with toluene at different temperatures, A. Ali, F. Nabi , M. Tariq, R. Patel, and **Shahjahan**, Journal of Indian Chemical Society, India, 86, 1042-1046, 2009
 9. Study of thermodynamic and transport properties of glycine, diglycine and triglycine in aqueous tartrazine at different temperatures, A. Ali, R. Patel, **Shahjahan** and V. Bhushan, Zeitschrift für Naturforschung A, Germany, 64a (11), 758-764 , 2009
 8. Volumetric, viscometric, and refractive index studies of amino acids in aqueous tartrazine at different temperatures, A. Ali, R. Patel, **Shahjahan** and S. Tasneem, Polish Journal of Chemistry, Poland, 83, 1353-1363, 2009
 7. Density, Viscosity, Refractive Index, and Speed of Sound in Binary Mixtures of Pyridine + 1- Alkanols (C₆, C₇, C₈, C₁₀) at 303.15 K, A. Ali, M. Tariq, F. Nabi and **Shahjahan**, Chinese Journal of Chemistry, China, 26 (11) 2009-2015, 2008
 6. Volumetric and viscometric behaviour of some amino acids and their group contributions in aqueous tetramethylammonium bromide at different temperatures, A. Ali and **Shahjahan**, Zeitschrift für Physikalische Chemie, Germany, 222, 1519- 1532, 2008
 5. Interactions of proline in non-aqueous anionic, cationic and nonionic surfactants at different temperatures, A. Ali and **Shahjahan**, Acta Physica Chimica Sinica, Elsevier Science, U.K., 24 (6), 987-991, 2008
 4. Volumetric, ultrasonic and viscometric studies of some amino acids in aqueous KBr at 308 K, A. Ali, S. Hyder, Y. Akhtar and **Shahjahan**, Journal of Acoustical Society of India, India – 34, 82-88, 2007
 3. Volumetric and refractive index behaviour of α -amino acids in aqueous CTAB at different temperatures, A. Ali, S. Sabir, **Shahjahan** and S. Hyder, Acta Physica Chimica Sinica, Elsevier Science, U.K., 23 (7), 1007-1012, 2007
 2. Physico-chemical properties of amino acids in aqueous caffeine solution at 25, 30, 35 and 40°C, A. Ali, S. Sabir, **Shahjahan** and S. Hyder, Chinese Journal of Chemistry, China, 24 (11), 1547-1553, 2006
 1. Volumetric, viscometric and refractive index behaviour of some α -amino acids in aqueous tetrapropylammonium bromide at different temperatures, A. Ali and **Shahjahan**, Journal of The Iranian Chemical Society, Iran, 3(4), 340-350, 2006

DETAILS OF
CONFERENCE/SEMINAR
R/WORKSHOP/FDP
(ATTENDED/PRESENTED)

22. The growth of multilayer graphene using palm oil via thermal chemical vapour deposition, Shaharin Fadzli Abd Rahman, **Shahjahan**, Abdul Manaf Hashim, Mohamad Rusop Mahmood, Nafarizal Nayan, First International Science Conference 2023, February 27 - 28, 2023 (Maulana Azad National Urdu University, Telangana)
21. Studying the near field capacitive coupling in planar terahertz metamaterial, S. J. M. Rao, R. Sarkar, Divyam Khandelwal, **Shahjahan***, Gagan Kumar, Dibakar Roy Chowdhury, Workshop on Recent Advances on Photonics 2017 (WRAP 2017), December 18 - 19, 2017 (Mahindra Ecole Centrale, Telangana)
20. Synthesis of multilayer graphene using palm oil by thermal chemical vapor deposition, **Shahjahan***, S. F. A. Rahman, A. M. Hashim, 8th National Conference on Thermodynamics of Chemical, Biological Environmental Systems - 2013 (TCBES 13), November 25 - 26, 2012 (Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh)
19. Growth of multilayer graphene on nickel using palm oil as a carbon source by thermal chemical vapor deposition, S. F. A. Rahman*, **Shahjahan**, M.R. Mahmood, A. M. Hashim*, Malaysia-Japan International Institute Technology (MJIIT)-Japanese Consortium Committee (JUC) Joint Symposium (MJJS), November 21 - 23, 2012, Universiti Teknologi Malaysia (MJIIT, UTM, Kuala Lumpur, Malaysia)
18. Synthesis of germanium on silicon by electrochemical deposition at different current density, M. S. Z. Abidin*, **Shahjahan**, M.R. Mahmood, A. M. Hashim*, Malaysia-Japan International Institute Technology (MJIIT)-Japanese Consortium Committee (JUC) Joint Symposium (MJJS), November 21 - 23, 2012, Universiti Teknologi Malaysia (MJIIT, UTM, Kuala Lumpur, Malaysia)
17. Synthesis of multilayer graphene using palm oil on nickel by thermal chemical vapor deposition, S. F. A. Rahman*, **Shahjahan**, A. M. Hashim*, 4th International Conference on Solid State Science & Technology (4th ICSSST 2012), December 18 - 20, 2012, University of Malaya (Holiday Inn, Melaka, Malaysia)
16. Effect of current density on electrodeposition rate of Ge on Si substrate, M. S. Z. Abidin*, **Shahjahan**, M.R. Mahmood, N. Nayan, A. M. Hashim*, 4th International Conference on Solid State Science & Technology (4th ICSSST 2012), December 18 - 20, 2012, University of Malaya (Holiday Inn, Melaka, Malaysia)
15. Synthesis of graphene using palm oil by thermal chemical vapor deposition, **Shahjahan**, S. F. A. Rahman*, A. M. Hashim*, 4th International Conference on Solid State Science & Technology (4th ICSSST 2012), December 18 - 20, 2012, University of Malaya (Holiday Inn, Melaka, Malaysia)
14. Synthesis of crystalline GeO₂ microclusters containing Ge nanocrystals, M. S. Z. Abidin, **Shahjahan**, A. M. Hashim, The 6th International Conference on Technological Advances of Thin Films and Surface Coatings (ThinFilms2012), July 14-17, 2012 (School of Accountancy and Law, Singapore Management University (SMU), Singapore)
13. Surface reaction on undoped AlGa_N/Ga_N HEMT based two terminal device in aqueous solution M. S. Z. Abidin*, **Shahjahan***, A. M. Hashim*, International Conference on Enabling Science and Nanotechnology 2012 (ESciNano 2012), January 5 - 7, 2012, University Teknologi Malaysia (Persada Johor International Conventional Center, Johor Bahru, Malaysia)
12. Synthesis and characterization of GeO₂ microclusters via electrochemical deposition technique, M. S. Z. Abidin*, **Shahjahan***, A. M. Hashim*, N. K. Ali Al-Obaidi*, N. Nayan, M. R. Mahmood, V.K. Arora*, International Conference on Enabling Science and Nanotechnology 2012 (ESciNano 2012), January 5 - 7, 2012, University Teknologi Malaysia (Persada Johor International Conventional Center, Johor Bahru, Malaysia)

11. Theoretical Analysis of Many Body Interaction between glycine - sodium dodecyl sulfate - water, **Shahjahan*** and Shyi-Long Lee, The Fourth Asian Pacific Conference of Theoretical & Computational Chemistry (APCTCC-4), December 21 - 23, 2009 (Legend Water Chalets, Port Dickson, Malaysia)
10. Theoretical Study of Three-body interaction between glycine, surfactant and water, **Shahjahan*** and Shyi-Long Lee, 98 Chinese Chemical Society Annual Meeting (2009 Annual Meeting Chemical Society), December 4 - 6, 2009. (I-Shou University Yanchao, Kaohsiung County, Taiwan)
9. Study of glycine in aqueous triton x-100 at different temperatures - a volumetric and viscometric approach, A. Ali, **Shahjahan***, R. Patel and N. H. Ansari, 3rd National Conference on Thermodynamics of Chemical and Biological Systems NCTCBS - 2008, October 16 - 17, 2008 (Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)
8. Study of volumetric, viscometric and refractive index behaviour of some α -amino acids in aqueous tetrapropylammonium bromide at different temperatures, A. Ali and **Shahjahan***, Natural Science Info Fest 2008, March 4 - March 6, 2008 (Jamia Millia Islamia, New Delhi)
7. Behaviour of L-proline in non-aqueous anionic, cationic and nonionic surfactants at T = 298.15 to 313.15 K, A. Ali and **Shahjahan***, Forty Fourth Annual Convention of Chemists December 23 - 27, 2007 (Mahatma Gandhi Institute of Applied Sciences, Jaipur)
6. Interaction behaviour of some amino acids in aqueous tetramethylammonium bromide at different temperatures, A. Ali and **Shahjahan***, Natural Science Info Fest 2007, February 28- March 2, 2007 (Jamia Millia Islamia, New Delhi)
5. Physico-chemical study of glycine in aqueous tetrabutylammonium, bromide at different temperatures, A. Ali, **Shahjahan***, F. Nabi, M. Tariq, R. Patel, 9th National Symposium in Chemistry 2007, February 1- 4, 2007 (University of Delhi, New Delhi)
4. Molecular interactions in binary liquid mixtures of toluene with an industrially important monomer at different temperatures: An ultrasonic and volumetric study, A. Ali, F. Nabi, M. Tariq, R. Patel and **Shahjahan**, National Symposium on Acoustics 2006, November 15 - 17, 2006 (National Physical Laboratory, New Delhi)
3. Estimation of molecular radii of binary liquid mixtures using various acoustics methods: A comparison to refractive index approach, A. Ali, M. Tariq, R. Patel, F. Nabi and **Shahjahan**, 15th National Symposium on Ultrasonics, November 1 - 3, 2006 (University of Allahabad, Uttar Pradesh)
2. Volumetric, viscometric and refractive index behaviour of L-serine in aqueous cetyltrimethylammonium bromide at different temperatures, A. Ali and **Shahjahan**, 2nd National Conference on Thermodynamics of Chemical and Biological Systems 2006, October 30 - November 1, 2006 (Veer Narmad South Gujarat University, Surat)
1. Volumetric, viscometric and refractive index behaviour of glycine in aqueous solutions glucose at different temperatures, A. Ali, R. Patel*, M. Tariq, **Shahjahan** and F. Nabi, National Symposium on Current Trends in Chemical Sciences, October 6 - 7, 2006 (Kurukshetra University, Haryana)

DETAILS OF KEYNOTE
SPEAKER/RESOURCE

- **Mentor - 2018 - 2020**
Narsimha Reddy Engineering College, Telangana
Nawab Shah Khan College of Engineering & Technology, Telangana

PERSON/ SESSION CHAIR
ETC.

- **In charge of Chemistry Laboratory – 2018 - 2019**
Narsimha Reddy Engineering College, Telangana
- **In charge of Department of Chemistry – 2019 - 2020**
Nawab Shah Khan College of Engineering & Technology, Telangana
- **Organizing Team Member, 2017**
Workshop on Recent Advances on Photonics 2017 (WRAP 2017), December 18-19, 2017, Mahindra Ecole Centrale, Telangana
- **Chaired Sessions, 2012**
International Conference on Enabling Science and Nanotechnology 2012 (ESciNano 2012), January 5 – 7, 2012 (Persada Johor International Conventional Center, Johar Bahru, Malaysia)
- **Publication Co-Chair & Organizing Team Member, 2012**
International Conference on Enabling Science and Nanotechnology 2012 (ESciNano 2012), January 5 – 7, 2012 (Persada Johor International Conventional Center, Johar Bahru, Malaysia)

DETAILS OF
SUPERVISION
(M.PHIL/M.TECH/P.H.D.)

- **Co-Supervised (Partially) – Ph. D Student, 2011 – 2012**
Ph.D student during Post Doctoral Research in Malaysia-Japan International Institute of Technology, Universiti Teknologi Malaysia, Malaysia (2011-2012)
- **Supervised - M. Tech Students, 2011 – 2012**
M. Tech students during Post Doctoral Research in Malaysia-Japan International Institute of Technology, Universiti Teknologi Malaysia, Malaysia (2011-2012)

PROFESSIONAL
MEMBERSHIPS

- Indian Thermodynamics Society (2006 – 2007)
- Chemical Consultants Network (CCN): Lifetime Membership No. 30984189
- International Association of Engineers (IAENG): Lifetime Membership No. 164394

PERSONAL DETAILS

Father's Name	Late. Mohd. Yasin
Date of Birth	26.06.1979
Gender	Female
Marital Status	Married
Nationality	Indian
Language Known	Urdu, English, Hindi, Arabic (<i>Basic</i>)
Etc..	

Date:

Place: Hyderabad

[Last update on: 02 /12/ 2022]