Biography

CV of Dr. M. G. H. Zaidi

M.G.H.Zaidi is the physical chemist, educator and academic administrator. He was born on 22 Feb 1967 in UP India. He has conferred B.Sc. (1985), M.Sc. (1987) all through in first division followed by Ph.D. in Chemistry (1992) from Lucknow University U.P. India. His title of thesis was "Synthesis of Some Newer High Temperature Resistant Polymers". He has been serving Govind Ballabh Pant University of Agriculture & Technology with great distinction and dedication since 1998. Dr.Zaidi has academic and administrative experience of more over 33 years in various capacities at several Indian universities since 1991-92.He has been involved in formulation & direction of research projects as principal investigator in the area of supercritical processing of polymer



materials since 1998. Prof. Zaidi has availed funding from Ministry of Defense, Department of Biotechnology, Department of Science & Technology, Uttarakhand Council of Science & Technology, University Grants commission and Int'l private organizations for execution and propagation of research. Dr. Zaidi's research activities also involve synthesis of polymer based materials through traditional methods and in supercritical fluids, their durability assessment, applications in structural engineering, electronics, energy storage, biomedical sciences and biodegradation. His academic contributions have been acclaimed worldwide by researchers and are cited in top scientific journals across the world. He has been advising and training masters, doctorates, project and research fellows in the area of polymer science over decades. He is the member of editorial board and reviewer of various Int'l journals, member of organizing committee, session chair, technical program committees and plenary, keynote speaker at national and Int'l conferences, symposia and training programs. His contributions to research and development are in collaboration with reputed national laboratories and are recognized as author of patents, research publications, reviews, monographs, technical notes and book chapters in refereed Int'l journals and scientific magazines.

Personal Page	http://www.scholarpedia.org/article/User:MGH_ZAIDI	
University Website	http://gbpuat.irins.org/profile/57440	
Department Website	http://www.gbpuat-cbsh.ac.in/departments/cy/	
Google Scholar	https://scholar.google.co.in/citations?user=SReokTkAAAAJ&hl=en	
Research Gate	https://www.researchgate.net/profile/Mgh_Zaidi2	
You tube	https://www.youtube.com/results?search_query=mgh+zaidi	
ORCID	https://orcid.org/0000-0002-7980-0929	
SCOPUS ID	7102180972	Publon Q-7379-2018
Contact Details		
Residential Address	43A/30-Lalbagh, Pantnagar, Uttarakhand 263 145, India,	
Phone Numbers	9159442333314503(O), 915944234850(R), 919411159853 (M),	
E mail	mgh_zaidi@yahoo.com	
LinkedIn	https://in.linkedin.com/in/m-g-h-zaidi-3b375126	

Academic Appointments Held

- o Professor: From 24.05.2010 to till date, at GBPUAT Pant Nagar
- Head, Department of Chemistry: From 20.06.2015 to 20.06.2020 at G.B.Pant University of Agriculture & Technology (GBPUAT) Pant Nagar
- o Associate. Professor: From 24.05.2004 to 23.05.2010 at GBPUAT Pant Nagar, UK, India
- o Assistant Professor: From 07.11.1998 to 23.05.2004 at GBPUAT Pant Nagar ,UK, India
- o Principal, I/C: From 21.06.97 to 05.07.97 at AHRSD College, Jaunpur, UP, India
- o Incharge, Department of Chemistry: from 05.10.1994 to 06.11.1998 at AHRSD College, Jaunpur
- Lecturer: From 05.10.1994 to 06.11.98 at AHRSD College, Purvanchal University UP, India
- o Teaching Assistant: from 05 .07.1988 to 05.10.93 at SD College, Lucknow University, UP, India

Research Expertise

- Synthesis and modification of polymers in supercritical fluids and traditional methods
- Polymer composites, biocomposites & nanocomposites for structural, electrical, electrochemical, energy storage and biomedical applications
- o Microbial, thermal, tribological degradation of polymer materials
- o Impact of polymer and nanomaterials on ecosystem, nanosafety
- Computational material science

Research Funding

Principal Investigator (PI) of 11 and co-Investigator of 02 externally funded projects from DRDO, DBT, UGC and Int'l private organizations

*MOU with Research Organizations

- o MoU dated 09.02.1991 with NVS Chemicals, Moradabad, UP, India
- MoU dated 26.05.2010 with DBT

Projects Directed As PI

- **1998-2002:** Redox Initiated Graft Co Polymerization of Polymethyl Methacrylate onto Polycarbonate, worth INR 2.50 Lakhs funded by N.V.S. Chemicals, India.
- ***2000-2002:** Synthesis of Weatherable Graft-Copolyolefins, worth INR 2.50 lakhs funded by N.V.S. Chem. India.
- 2001-04: Synthesis of Graft Copolymers in Supercritical Carbon Dioxide, worth INR 19.98 lakhs funded by Directorate of Extramural Research & Intellectual Property Rights (ER/IPR), Defense Research Development Organization (DRDO), Ministry of Defense (MoD), Delhi, India
- 2005-08: Synthesis of C60 Caged Polymers in Supercritical Carbon Dioxide, worth INR 19.98 lakhs funded by Directorate of ER/IPR, DRDO, MoD, Delhi, India
- 2007-08: Synthesis of CNT Encapsulated Polymers in Supercritical Carbon Dioxide, worth INR 4.95 lakhs, funded by Directorate of ER/IPR, DRDO, MoD, Delhi, India
- *2008-11:Processing of Antimicrobial Nanocomposites in Supercritical Carbon Dioxide worth INR 36.07 lakhs funded by Department of Biotechnology (DBT), Ministry of Biotechnology (MoB), Delhi, India. http://dbtnanobiotech.com/project-details.php?pid=MTMzMA==
- 2008-11: Processing of Thermoresponsive Magnetic Nanoparticles in Supercritical Carbon Dioxide worth INR 7.85 lakhs funded as Major Project by University Grants Commission, Delhi, India
- 2009-13: Synthesis of CNT Integrated Epoxy Composites in Supercritical Carbon Dioxide worth INR 21.49 lakhs funded by Air Force Research Development Board, DRDO, MoD, Delhi, India
- 2008-13: Supercritical Carbon Dioxide Synthesis of CNT Epoxy Composites worth 39.89 lakhs funded by Directorate of ER/IPR, DRDO, MoD, Delhi, India

- 2011-12: Fabrication of Graphene Modified Jatropha Oil Cake Epoxy Composites worth INR
 6.95 lakhs under Contract Acquisition Research Scheme (CARS) funded by Defense Institute
 of Bioenergy research (DIBER), Haldwani, DRDO, MoD, Delhi India Uttarakhand, India.
- 2015-17: Supercritical Processing of Metal Organic Frameworks, worth INR 9.98 lakhs under CARS, funded by Centre for Fire, Explosive and Environment Safety (CFEES) ,DRDO, MoD, Delhi, India.

Projects Assisted As Co-I

- 2005-08: Bacterial Gene Pool for Biodegradation of Polymers from Plastic wastes, funded by DBT, worth INR 39 .00 lakhs funded to Professor Reeta Goel, Principal Investigator, Department of Microbiology, GBPUAT, Pantnagar, India by DBT, MoB, Delhi, India
- 2009-12: Delineating the Molecular Mechanisms Associated with Plant Growth Promontory Effect of Nano-Particles on *brassica juncea*, worth INR 25 lakhs funded to Dr Sandeep Arora, Professor, Department of Molecular Biology & Genetic Engineering, GBPUAT by DBT, MoB, Delhi, India

Research Work in Collaboration with National Institutes

- o 2009-2015: Ceramics Matrix Division, Advanced system Laboratory, DRDO Hydrabad
- 2002-2012: Defense Materials Stores Research Development and Establishment ,DMSRDE, DRDO Kanpur
- o 2010-2013: Defense Institute of Bio-Energy Research, DRDO, Haldwani
- o 2015-2017: Central Fire, Explosives and Environment Safety Lab. DRDO, Delhi
- Department of Microbiology (2001-2020), Physics (1998-2004), Mechanical Engineering (2000-2019), Veterinary Public Health (2008-2011), G.B.Pant University of Agriculture & Technology, Pantnagar India

Thesis Advised for M.Sc.

- 2001-02: K.Varshney,Synthesis and Studies on Mango Wood Polymethyl Methacrylate Composites
- **2002-03:** Bramesh Kumar, Modification of Blackberry Wood through Impregnation Polymerization of Methyl Methacrylate
- 2004-05: Sandeep Negi, Metal Polymer Nanocomposites from Supercritical Carbon Dioxide Synthesized Polymers
- 2006-07: Dipti Sharma, Synthesis of Polyvinyl Pyridine Ferrite Nanocomposites in Supercritical Carbon Dioxide,
- o 2008-09: G. Bisht, Effect of Gold Nanoparticles on Biochemical Parameters of B. Juncea
- **2009-10:** S. Suman, Development and Study of Nanocomposites for Control Release Methyl Eugenol
- o 2010-11: P.Popola, Microwave Synthesis of Nanomagnetic Polyacrylonitrile Composites

- 2010-11: S.Sharma ,Synthesis of NBT/ Polyvinylpyridine Composite in Supercritical Carbon Dioxide
- o 2011-12: K. Tewari, Synthesis and Studies on Montmorillonite Nanoparticles
- o 2012-13: V. Joshi , Square Wave Voltammetric Studies of Polymer Nanocomposites
- o 2015-16: A. Sharma, Electrochemical Monitoring of Isoprutoron Release
- o 2016-17: M. Arya, Non-Isothermal Kinetics of Decomposition of Polymer Composites
- o 2017-18: T. Tyagi, Synthesis & Characterization of Polypyrrole /WC composites
- 2018-19:B. Arya: Non-Isothermal Kinetics of Decomposition of Metal organic Frameworks

Thesis Advised for Ph.D

- 2006-07: N. Bhullar (2006-07). Synthesis of C60 Containing Polymers in Supercritical Carbon Dioxide
- **2008-09:** V. Agarwal (2008-09). Synthesis and Studies on C60 Containing Polymers in Supercritical Carbon Dioxide
- **2010-11:** A. Thakur (2010-11). Supercritical Carbon Dioxide Synthesis and Studies on CNT Polymer Composites
- 2011-12:G.Bisht (2011-12). Supercritical Synthesis of Magnetic Nanocomposites for Biomedical Applications
- **2013-14:**H.Mudila (2013-14). Synthesis of Electrically Conducting Polymer Graphene Nanocomposites for Energy Storage
- o 2013-14: S. Rana, Synthesis of Graphene Nanohybrids for Supercapacitors
- 2016-17:K. Khati, Development of Hemoglobin based Composites for Electrochemical Energy Storage
- 2017-18: I. Joshi, Synthesis and Studies on Heamoglobin/ Conducting polymer Composites for Electrochemical Energy Storage
- 2018-19:A. Bisht Development of Metal Carbide Derived Polymer Nanocomposites for Electrochemical Energy Storage

Thesis Co-Advised from other Universities for Ph.D

- 2002-03: L.S. Yadav, Synthesis of Some Novel Oxa/Thiadiazoles Graft Polypropylenes, awarded by Purvanchal University, U.P., India. (Registrar/ Res./No.400/970 dated 12.15.98)
- **2008-09:**P.Varshney, Non-Isothermal Kinetics and Thermodynamics of Solid State Decomposition of Polyethylene Derivatives, awarded by Kumaun University, Uttarakhand
- o 2011-12: T. Agarwal, Microwave Synthesis of Polymer Nanocomposites, awarded by Rohailkhand University, U.P., India
- 2013-14: N. Siddiqui, Development and Studies on Novel Ferrofluids awarded by Rohailkhand University, U.P., India
- 2014-15: S. Pandey, Synthesis and Studies on Novel Clay-Polymer Nanocomposites, awarded by Kumaun University Nainital. India
- 2019-20: S.K.Joshi, Modification of Epoxy through Dispersion of Carbonaceous Fillers in Supercritical Carbon Dioxide (NITK/2K11/Ph.D/1416/12-PHY)

Thesis Examiner of Universities Since

- o 2002-2003: Rohail Khand University, Bareilly, UP, India
- o 2003-2004: Purvanchal University, Jaunpur, UP, India
- o 2011-2012: Saurashtra University Gujrat India
- o 2016-2017:C.C.S. University, Hissar, Haryana
- o 2016-2017: IFTM University Moradabad, UP, India
- o 2018-2019: Lucknow University, UP, India

Member of Advisory & Scientific Committee

• 2011-2012: Scientific committee member, Chemical & Materials Engineering ,World Academy of Sci., Eng. & Tech., Turkey

https://publications.waset.org/profile/3487788546

- 2017-2018: Member of Advisory Board, University Journal of Phytochem.& Aurvedic Heights http://ujpah.in/advisory-board/
- 2018-2019: Advisory Member, Int'l Research Forum for Scientific Research http://www.irfsr.com/committee.php

Member of Editorial Board Since

- 2011-2012: Int'l Journal of Composite Materials, Scientific & Acad. Publishing. USA http://www.sapub.org/journal/editorialboard.aspx?journalid=1109
- 2013-2014: Journal of Materials Physics & Chemistry, Science & Education Publishing USA http://www.sciepub.com/journal/jmpc/editors
- o 2015-2016: Material Science Research India
- o https://www.materialsciencejournal.org/editorial-board/
- 2018-2019: Sustainable Chemical Engineering, Wiser Publishers, Singapore http://ojs.wiserpub.com/index.php/SCE/about/editorialTeam
- o 2018-2019: Editor in Chief Comp. & Nano Engg, Clausius Press, Canada
- o https://www.clausiuspress.com/journal/COMPNE/editorialBoard.html
- o 2018-2019: Advanced Journal of Chemistry B
- o http://www.ajchem-a.com/journal/editorial.board?edbc=6485
- o 2019-2020: Journal of Polymer Science & Engineering En Press USA
- o https://systems.enpress-publisher.com/index.php/JPSE/about/editorialTeam

Member of Academic Council, Board of Studies and Panel Expert

- o 2013-2014: Board of Studies , Gurukul Kangri Univesity Haridwar, Uttarakhand, 2013-14
- o 2014-2015: Board of Studies, Rohailkhand University Bareilly. U.P., 2014-15
- o 2016-2017: Board of Studies, Teerthankar Mahaveer University Moradabad, U.P., 2016-17
- 2015-2020: Academic Council, as Associate Professor (from 24.07.2013 for two years) & as Professor & Head (from 20 June 2015), GBPUAT, Pantnagar
- 2015-2020:Member of Disciple\ne committee at GBPUAT, Pantnagar

- 2016-2017: Subject Expert Enquiry Committee, Indira Gandhi Open University, Uttarakhand Gurukul Kangri Univesity Haridwar, Uttarakhand, 2017-18
- 2017-2018: Member of Technical Evaluation Committee of Defense Institute of Bioenergy Research & State laboratories of Uttarakhand
- 2017-2018: Nominee of UP Governor's for selection at the position of professor at Sardar Patel University of Agriculture and Technology Modipuram, U.P. 2017-18
- o 2016-17& 2019-20. Member of University Discipline Committee during 2016-17& 2019-20

Manuscript Reviewer

- Wiley: Journal of Applied Polymer Science, Polymer Engineering Science, Polymer Composites, Polymers for Advanced Technologies, Chinese Journal of Chemistry, Advances in Polymer Technology
- Elsevier: Journal of Supercritical Fluids, Polymer, Synthetic Metals, Applied Surface Science, Polymer
- **Springer:** Int'l Journal of Plastics Technology, Iranian Polymer Journal Nanotechnology for Environmental Engineering, Asian Journal of Green Chemistry, Iran
- o Dove Press: Int'l Journal of Nanomedicine
- Taylor Francis: Polymer Plastic Technology Engineering
- o Bentham: Nano Science Nanotechnology Asia
- o Polymer Society UK Express Polymer Letters
- o Academic Journals U.S.A.: African Journal of Chemistry, African Journal of Biotechnology
- Scientific & Academic Publishing USA: Journal of Composite Materials, American Journal of Nanoscience
- Soc Pesticide Science, India: Pesticide Research Journal
- o DRDO: Defense Science Journal, India

Associations with Academic Societies

- o 1997-1998: Member of Laser and Spectroscopy Society of India (LM/1997)
- o 2000-2001:Indian Physics Association (2000-2001, PAN/LM/11696)
- o 2003-2004: Indian Society of Analytical Scientist (LM1426)
- o 2005-2006: Society of Pesticide Science India (2006)
- o 2006-2007: Indian Association of Nuclear and Allied Scientists (LM/1106)
- o 2006-2007: Society of Polymer Science India
- o 2008-2009:Indian Science Congress Association (L/16592)
- o 2008-2009:IUPAC Affiliate
- o 2010-2011:Fellow Member Indian Chemical Society (F/7229/2010)
- o 2010-2011: Indian Association of Advancement Materials and Process Engineering
- o 2010-2011:Fellow Member of Indian Congress of Chemistry & Environment
- o 2011-2012: Materials Research Society of India (LMB 1664)
- o 2011-2012:Indian Nanoscience Society

- 2011-2012: Honorary member New England Association of Chemistry Teachers (22.09.2012) https://neact.org/profile/mghzaidi
- o 2012-2013:Kerala Academy of Sciences (L/225)
- o 2019-2020:Bharatya Shikshan Mandal (L/P.M./9627/03.03.2020)
- o 2019-2020:Int'l Association of Engineers (M/269784/05.10.2020)

Participations in Trainings/Symposia/Workshops

- **1999-2000:**Training on Computer Technology, Sponsored by ICAR at College of Technology, Pantnagar, Sept 27- Oct 7, 1999
- 2000-2001:7th National workshop on Radiochemistry and Applications of Radioisotopes, Sponsored by BRNS & DAE at College of Basic Sciences and Humanities, Pantnagar, Mar. 24-April 1, 2000
- 2000-2001:Symposium on Int'l Applications of NIR Spectroscopy, Sponsored by Indian Society of Analytical Scientist, Baroda, Gujrat, 28-29 Feb, 2000
- 2000-2001:37th Annual Convention of Chemists, Sponsored by Indian Council of Chemist at Gurukul Kangri University Hardwar, Nov 15-18, 2000
- 2002-2003:Computer Training for the Data Storage and Statistical Analysis for Agricultural Res., Sponsored by ICAR, at College of Basic Sciences and Humanities, Pantnagar March 02-22, 2002
- 2002-2003:Refresher Course on Thermodynamics and Quantum Mechanics, Sponsored by U.G.C. at Department of Chemistry DDU Gorakhpur University, Nov.30 -Dec 20, 2002
- 2003-2004: Advanced Workshop on Radiochemistry and Applications of Radio Isotopes at Radiochemistry, Sponsored by BRNS & DAE at Radio Chemistry Division BARC, Mumbai, May 3-23, 2004
- 2003-2004: Workshop on Agriculture Diversification and Food Processing in Uttaranchal, Sponsored by UPDASP at GBPUAT, Pantnagar, Jan.23-24, 2004
- 2007-2008: Hands on Training on Microbial Diversity, Isolation and Characterization, Sponsored by Ministry of Environment & Forest at G.B.Pant Institute of Himalayan Env. & Dev., Almora, Uttarakhand, Oct 08-19, 2007
- 2008-2009:Workshp on Effective Teaching Pedagogy to Maximize Learning, Sponsored by Center for Teaching Excellence, UUIC, U.S.A., at College of Technology, Pantnagar Jan 2-3, 2008
- 2010-2011:Workshop on Intellectual Property and Innovation Management in Knowledge Era, Sponsored by NRDC, at IPR Cell, Pantnagar, May 16, 2010
- 2014-2015: Three Day Workshop on Various Disciplines of Engineering & Sciences, Under National Programme on Technology Enhanced Learning. NEPTEL at Amrapali Institute of Technology & Science, Uttarakhand, 21-23 August 2014
- 2018-2019: Workshop on Outcome Based Research, TEQUIP-III, at College of Technology, Pantnagar, Mar 28-29, 2018

Member of National/Int'l Conference Organizing Committee/TPC member/Convener

- o 2011-12: Advanced Polymers, Fibers and Fabrics, DMSRDE, DRDO, Kanpur Aug., 26-28
- 2012-13:Int'l Conference on Chemistry and Materials, Prospects and Prospective,Dec.,14-Department of Appl. Chem., Dr B.R. Ambedker University, Lucknow
- 2013-14:Int'l Conf. on Nanoscience and Nanotechnology, Colombo Univ. Srilanka Dec., 10-12 https://me-kono.eu/conferences/Int'l-conference-on-nanoscience-nanotechnology-icnsnt-2014-colombo
- 2013-14: Int'l Conference of Energy, Colombo University Srilanka, Aug., 12-13 https://energyconference.co/scientific-committee/
- 2014-15:National Conference on Vistas of Environmental Awareness at Kashi Naresh Government Post Graduate College, Gyanpur U.P. March, 28- 30
- 2016-17:National Conference on Alternative Energy Resources, Environment Protection and global Economic Growth (NCARG) DIT University Dehradun, Sept., 8-9
- o 2017-18:19th Int. Conference on Polymer Chemistry and Physics Amsterdam, Aug, 7-8
- o 2018-19: 20th Int. Conf. on Material Res. in Polym. Chem., Tokyo, Japan, Nov., 12-13
- 2018-19: National Conference on Advancement of Material Science & Physics at department of Physics, Manipal University Jaipur, Rajasthan 19-20 Nov 2018 https://jaipur.manipal.edu/muj/news-events/news-list/National-conference-on-Advancement-in-Materials-Science-and-Physics.html
- **2018-2019:** DRDO Sponsored National Conference on Advanced Technologies and Environmental Safety (ATES-2019) at IFTM University Moradabad, 9-10 March, 2019.
- 2019-2020: Int'l Conference on Emerging Techniques in Engineering and Education: Innovations and Applications (ICETEE-2020) Jaipur, India, February 22-23, 2020. https://itsr.co.in/commitee/
- 2019-2020: Recent Development in Nanoscience & Green Chemistry (RDNGC 2020)
 ,G.F.Post Graduate College, Shahjahanpur,01-02 Feb ,2020.
 http://www.gfcollege.in/upload/event/attachment/15829531710.
- 2019-2020:8th Int'l Conference on Nano and Materials Science ICNMS 2020 January 17-20, 2020, Seattle, WA, USA. http://icnms.org/committees.html
- 2019-2020:Convener, Int'l Webinar on Modern Analytical Methods in Chemistry, Department of Chemistry, C.B.S.&H., G.B.Pant University of Agriculture & Technology Pantnagar, Uttarakhand 15-17 June 2020

https://www.gbpuat.ac.in/trainings_conferences/13.06.2020_Webinar_Chemistry-1.pdf

• 2019-2020:Int'l Conference on Emerging Technologies in Engineering and Education (ICETEE) Jaipur Organized by Institute of Technical and Scientific Research, 22-23 Feb 2020, Jaipur India.

https://itsr.co.in/commitee/

- 2019-2020: Int'l Conference on Emerging Intelligent Techniques in Engineering and Education: Innovations and Applications (ICEITEE-2020) Organized by Institute of Technical and Scientific Research, Jaipur 13-14 June 2020 Bangkok, Thailand. https://itsr.co.in/commitee-bangkok/
- 2019-2020:8th Int'l Conference on Material Science & Engineering (ICMSE 2020) 08 Aug. Guiyang Guizhou, China http://www.icmse2020.org/?op=committee
- 2019-2020:6th Annual Workshop on Material Science & Engineering (IWMSE 2020) July 17-18, Jinan, Shandong, China.

http://www.iwmse2020.org/?op=committee

https://iopscience.iop.org/article/10.1088/1742-6596/1622/1/011001/pdf

- 2019-2020: Int'l Conference on Applied Mechanics, Materials and Civil Engineering (ICAMMCE 2020) Sept 20-21, 2020, Shanghai, China http://www.icammce2020.org/com.html
- 2020-2021: 9th Int'l Conference on Nano and Materials Science (ICNMS) 2021 January 26-29, 2021, Seattle, WA, USA.

http://icnms.org/committees.html

 2020-2021: Int'l Conference on Novel Drug Delivery Technologies ICNDDT 2021December 20-21, Dubai, United Arab Emirates

https://waset.org/novel-drug-delivery-technologies-conference-in-december-2021-indubai

 2020-2021: Int'l Conference on Science ,Engineering and Technology ICSET 2021February 28-29, Singapore

https://icset.net/Int'l-advisory-committee.php

Patents

 Method of Preparing a Layered Silicate Reinforced Epoxy Nanocomposite through Supercritical Carbon Dioxide Treatment M.G.H.Zaidi , P.L. Sah and S. Alam Granted/IN 256138 (2013)

http://ipindia.nic.in/ipr/patent/journal_archieve/journal_2011/pat_arch_092011/official_j ournal_16092011_part_i.pdf

 Bacterial Consortia for Low Density Polyethylene Biodegradation R.Goel, A. Kapri and M.G.H.Zaidi, Granted/ IN27736 (2016)

http://ipindia.nic.in/ipr/patent/journal_archieve/journal_2011/pat_arch_092011/official_j ournal_16092011_part_i.pdf

- Formulation of Bacterial Consortium for Degradation of High Density Polyethylene R.Goel, A. Kapri and M.G.H.Zaidi. Granted/IN278739(2016) https://www.allindianpatents.com/patents/278739-formulation-of-bacterial-consortium-for-degradation-of-high-density-polyethylene
- Method of Preparing Antimicrobial Nanocomposites in Supercritical Carbon Dioxide (2019)
 M.G.H.Zaidi, T. Agarwal, and H Negi. R Goel, Granted/IN307178 (2019)
 http://dbtnanobiotech.com/project-details.php?pid=MTMzMA==
- Effective Nano Material Employed Raman Spectrometer (2015), R.P.Joshi,N.G.Sahu, M.G.H.Zaidi Cost Filed /U.S. Application No. 89/967,072 Dec 2015
- Process of E-Waste biodegradation in Presence of Bacterial Consortium (2020) P. Debram, MGH Zaidi, D.C. Suyal, S.Kumar, R.Goel. Appl No 201811049946A, Int Class.c08J11/4, Ind Pat J., 27/2020/25168, published dated 03.07.2020.

http://www.ipindia.nic.in/writereaddata/Portal/IPOJournal/1_4883_1/Part-1.pdf

Publications in Peer Reviewed Journals

- 1. Metal Nanoparticles Based Electrochemical Biosensors for Cholesterol Sameena Mehtab, MGH Zaidi, P.Joshi (2020) J Nanomed Nanotechnol, 10(5): 540-541.
- Synthesis and Characterization of Barium Titanate/Polyacrylonitrile Nanocomposite for Electrochemical Sensing of Doxorubicin S. Mehtab, M.G.H. Zaidi, P.Joshi, D. Bawari (2020) Accepted IOP Sci Notes (accepted)
- 3. Recent Advances in Biochar Modification for Energy Storage in Supercapacitors: A Review K.Singhal, S.Mahtab and M.G.H.Zaidi(2020) Advanced Materials Letters, Accepted,
- Effect of Nanographite on Electrical, Mechanical and Wear Characteristics of Graphite Epoxy Composites S.K.Joshi, A. Kumar and M.G.H.Zaidi (2020), Defense Science Journal 70(3)306-312.
- Effect of Humidity on Electrical Conductivity of Graphite Nanocomposite Based Electrodes: A Review, S Mahtab, P Joshi, B Arya, MGH Zaidi, TI Siddiqui (2020), Material Science Research India 17 (1), 8-15.
- Development of Non-enzymatic Cholesterol Electrochemical Sensor Based on Polyindole/Tungsten Carbide Nanocomposite, S Sharma, P Joshi, S Mehtab, MGH Zaidi, K Singhal, TI Siddiqui (2020), Journal of Analysis and Testing, 1-10
- Flectrochemical Sensing of Isoproturon Based on Polymethylmethacrylate Ferrite Nanocomposite Modified Electrode, S.Mahtab, P.Joshi and M.G.H.Zaidi (2020) Portugaliae Electrochimica Acta, Revised
- 8. Graphene Oxide Assisted Modification in Electrical and Electrochemical Characteristics of Polypyrrole R.Rikhari, B.Saklani, A.Bisht, S.Mehtab, MGH Zaidi

(2019), Sensor Lett.17: 1-5

- 9. Synthesis of Magnetic Hydrogels for Target Delivery of Doxorubicin A.Kumar, G. Bisht, N. Siddiqui, S.Masroor, S. Mehtab M.G.H.Zaidi (2019).Adv.Sci.,Engg.Med..11(11): 1071-1074
- 10. Critical Analysis of Polyindole and its Composites in Supercapacitors Application H Mudila, P Prasher, M Kumar, A Kumar, MGH Zaidi, A Kumar (2019).Mater. Renew.Sust.Energy 8 (2), 9-15
- 11. Haemoglobin/Polyindole Composites: The Novel Material for Electrochemical Supercapacitors K Khati, I Joshi, A Bisht, MGH Zaidi (2019) Bull. Materi.Sci.42 (1), 20-27
- 12. An Insight into Cadmium Poisoning and its Removal from Aqueous Sources by Graphene Adsorbents (2019) H Mudila, P Prasher, M Kumar, H Kapoor, A Kumar, MGH Zaidi, A Verma (2019).Int.J. Env.Health Res 29 (1), 1-21
- Polyindole Based Nanocomposites & their Applications: A Review (2019). S Mahtab, M.G.H.Zaidi,K.Singhal, B. Arya, T.I.Siddiqui (2019).Matger.Sci.Res.India 16(2):97-102
- Synthesis and Electrochemical Performance of Tungesten Carbide (2019).I Joshi, K.Khati, A.Bisht, S.Mahtab, M.G.H.Zaidi (2019). Chem. Sci. Tr., 256-260.
- Rare Earth Based Conducting Polymers: A Review Rekha, Anjali Bisht, Ila Joshi, Shubham Sharma, Sameena Mehtab, NK Sand and MGH Zaidi (2019).Int.J.Chem.Studies 7(3): 1246-1250
- Utilization of Pea industry Waste for Developing Biodegradable Product Upasna, D.Vinay, M.G.H.Zaidi and A.K.Shukla (2019) Pantnagar Journal of Research 17(3),262-266.
- Electrochemical oxidation-Reduction and Determination of Urea at Enzyme Free PPY-GO Electrode Mudila, P.Prasher, S.Rana,B. Khati(2018).M.G.H. Zaidi, Carbon Letters 26: 88-94
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- **19.** Electro-Capacitive Performance of Haemoglobin/Polypyrrole Composites for High Power Density Electrode K Khati, I Joshi, MGH Zaidi (2018). J. Anal.Sci.Tech. 9 (1), 24-27
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- 9. Modifications in Mechanical and Thermal Properties of Poplar Wood through Potassium Persulphate Thiourea Redox Initiated Impregnation Polymerization of Methyl Methacrylate, M.G.H.Zaidi N.Bhullar, A.K. Tyagi P.L. Sah and S. Alam (2006) Platinum Jubilee, 79th National Academy of Sciences Allahabad, U.P., Oct.6-9
- 10. Synthesis And Study of Mechanical Properties Of Nano Magnetic Epoxy Ferrite Composites , N.Bhullar, A.Verma, A. Rawat, A.Verma, M.G.H.Zaidi, P.L. Sah (2007) National Seminar On Multifunctional Nanomaterials Nanostructures and Applications ,Department of Physics Delhi University Dec.19-21
- 11. Synthesis of Polyvinyl Pyridine-C60 Nanocomposites in Supercritical Carbon Dioxide, N. Bhullar, M.G.H.Zaidi (2007). Nat. Conf. Rec. Adv. Nano-Sci. Nano-Tech.ITM Gurgaon Oct. 6

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- 12. Gold Nanoparticle Mediated Alleviation of Oxidative Stress in Brassica Juncea S Arora,, P Sharma, R Nayan and MGH Zaidi (2012)..Int'l Conference on Plant Biotechnology for Food Security: New Frontiers ND05:pp97
- 13. Opto-Thermal Characteristics of Polymeric and Chromium doped Oxide Materials with Photoacoustic, Spectroscopy H.Singh, M.G.H.Zaidi and A.K.Rai (2013) Int'l Conference on Recent Trends in Mechanical Engineering, ITM Gurgaon 16 Nov,pp 122-133.
- 14. Modification in Mechanical, Thermal and Antifungal Properties of Mango Wood through Impregnation Polymerization of Methyl Methacrylate, Komal Khati, Kalpna Varshney and M.G.H.Zaidi.(2014). Indian Sci. Cong.Asso, ISCA-ISC-2014-Poster-4CS-06 Pp103,8-9 Dec. http://www.isca.co.in/SOUV_PROC/conference/ISC-2014%20E-Souvenir.pdf
- 15. Polypyrrole-Graphene Oxide Nanocomposite Based Electrodes With Improved Supercapacitance M.G.H.Zaidi, H.Mudila, S.Rana ,S.Alam (2015).,2nd Conference for Engineering and Agricultural Sciences,Al-Mussaib Technical College, Iraq, 27-28 May.

Invited Talks

- Invited Talk: Novel Polyphosphone Hydrazides as Potential Flame retardant Additive for Polypropylene, Hindi Sanoshthi, Defense Materials Stores Research Development & Establishment, DRDO, Kanpur, April 26-27, 2000
- Invited Talk: Synthesis and Thermal Characterization of Polyphosphone Hydrazides as Potential Flame Retardant, Symposium /Workshop on Industrial Applications of NIR Spectroscopy, Organized by Indian Society of Anal Sci. & Indian Petrochemical Corporation Baroda, Feb. 28-29, 2000
- **3.** Invited Talk: Polymerization in Supercritical Fluids, 7th Conference of the Int'l Academy of Physical Sciences, Allahabad University, Dec. 21-23, 2004
- **4. Invited Talk: Graft Copolymerization in Supercritical Fluids,** Polymers for Advanced Technologies, National Chemical Laboratory Pune. Dec. 17-20, 2006

- Keynote Speaker: Processing of Nanomaterials in Supercritical Fluids, Int'l Conference on Advances in Polymers, Fibers and Fabrics at Defense Materials Stores Research Development & Establishment, DRDO, Kanpur, 26-28 Aug., 2011
- 6. Expert Lecture: Green Synthesis of Nanomaterials, Workshop on Nanomaterials and Characterization at National Institute of Technology, Kurukshetra, 01-03 June, 2012. Nanotechnology in Agriculture, Defense Institute of Bioenergy Research, Haldwani. CEP course, 05 Aug 2012
- 7. Expert Lecture: Nanoscience and Nanotechnology, Challenges and opportunities, Workshop on IInd & IIIrd generation Bio-fuel Defense Institute of Bioenergy Research, Haldwani, 4 Dec 2012
- 8. Keynote Speaker: Nanomaterials, Processing and Applications in Agriculture, Meeting on Future Strategies on Oak Tasar Development, RTRS, Bhimtal, Nov., 17 -18, 2011
- Jatropha Cake Derived Products: Development and Users, Interactive Conference on Bio-Diesel, Defense Institute of Bioenergy Research, Haldwani, 5 Aug 2012
- Expert Lecture: Nanoscience in Green Energy Production, Defense Institute of Bioenergy Research, Haldwani, CEP, Dec., 12. 2013
- 11. Keynote Speaker: Green Processing of Advanced Composite Materials, TIQUIP Sponsored Emerging Research Trends in Engineering and Technologies, IFTM University Moradabad, 16-23 March 2013
- 12. Keynote Speaker: Designing of Supercritically Operated Particle Sizing Systems, Nanoscience and Instrumentation Technology, Golden Jubilee Celebrations at National Institute of Science & Technology, Kurukshetra, 28-29th March, 2013
- 13. Keynote Speaker: Carbon Dioxide Utilization: Challenges and Applications in Material Science, Symposium on Nanomaterials and Instrumentation, National Institute of Technology, Kurukshetra, 10 Mar.2014
- 14. Keynote Speaker: Supercritical Fluids in Material Science and Technology, National Conference on Vistas of Environmental Awareness, Govt PG College Gyanpur, Jaunpur, 28-30 March 2014
- **15. Expert Lecture: Processing of Nanomaterials in Supercritical Fluids,** Defense Institute of Bioenergy Research, Haldwani, CEP,11-15 Dec 2014.
- 16. Keynote Speaker: Green Processing of Materials in Supercritical Fluids, National Workshop on Advancement in Material Science & Physics, Manipal University, Jaipur, Nov 19-21, 2015
- 17. Expert Lecture: Art of Writing Research Manuscript ,Proposals and Technical Reports at Emerging Research Trends in Mechanical Engineering (ERTME 2015), Workshop TEQIP II, IFTM University Moradabad, 6Feb 2015

http://iftmuniversity.ac.in/iftmuniversity/downloads/Aroma_2016.pdf

- Keynote Speaker: Material Science in Supercritical Fluids (2016), National Conference on Recent Technological developments in Mechanical Engineering, DIT Dehradun ,23 Jan
- 19. Keynote Speaker: Advanced Composite Structures, Fabrication, Mechanics and Tribology, TEQIP II Workshop on Technical Writing, IFTM University, Moradabad, 29 March 2016
- **20. Expert Lecture: Processing of Composite Materials in Supercritical Fluids**. Graphic Era Dehradun, 15 Feb., 2016
- **21. Expert Lecture: Nanotechnology in Science and Agriculture**, Dolphin P.G. Institute of Biomedical & Natural Sciences, Dehradun, 31 Jan, 2017
- **22. Expert Lecture: Particle Sizing Technology in Supercritical Fluids** Defense Institute of Bioenergy Research, Haldwani, CEP, June, 06. 2018
- 23. Keynote Speaker: Processing of Polymer Material in Supercritical Fluids, Key Note Speaker at National Conference on Advancement of Material Science & Physics at Department of Physics, Manipal University Jaipur, Rajasthan 19-20 Nov 2018
- 24. Keynote Speaker: Supercritical Fluids, Chemistry, Technology and Applications at Advanced Technologies and Environmental Safety (ATES-2019), IFTM University, India
- 25. Keynote Speaker: Processing of Smart Materials in Supercritical Fluids at National Conference on Recent Developments in Nanoscience and Green Chemistry (RDNGC-2020). 01-02 Feb 2020. G.F. College UP, India

http://www.gfcollege.in/upload/event/attachment/15829531710

- **26. Invited Speaker: Material Science in Protection of Corona Virus,** at IFTM University Moradabad 18 May 2020
- **27. Plenary Speaker: CoV-19: World Swing Between Disaster and Opportunities** at TM University Moradabad 4-6 June 2020
- 28. Keynote Speaker: Magnetic Polymer Nanocomposites Derived through Dispersion of Siliconized Ferrofluid into Epoxy Resin in Supercritical Carbon Dioxide at Int'l Conference on Nanochemistry 2020 (ICN2020) 23-24 April Xi'an China (Scheduled)

https://www.scet-meeting.org/conference/ICN2021/

Honors

1981-82: IHA Silver Medal Award for Securing Highest Marks in English in High School Examination of U.P. Board

2003-04: DST, UCOST, CSIR and INSA Travel Grant Awards, for attending Rapra's High Performance Fillers at Hamburg, Germany

2009-10:DST travel grant for Attending Rapra's "Silicone Elastomer" 2019 Germany

2013-14: Academic Brilliance Award for "Excellence in Research" by All India Edu. Expo.

2013-14: Bharat Jyoti Award, By India Friendship Society, Delhi, India

2016-17: Vice Chancellors Appreciation for quality academics & adm., VC/OSD/3758/Apr.07

2017-18: Bharat Jyoti Puraskar, By India Friendship Society, Delhi, India

2018-19: Educators Excellence Award by Int. Assoc. Res. & Development Organization, Delhi

News in Print Media

- 2009-2010:Pantnagar Achieves First Patent in Nanotechnology: Dainik Jagran, Fri. 22 May 2009 page 01
- 2009-2010: Pantnagar Achieves First Patent in Nanotechnology: Campus News, 1(3):1,16-31May,2009, Amar Ujala, Hindustan Times Pp 1, 22 May 2009
- 2009-2010: Way to Make Plastic Biodegradable: Times of India 11 Jan 2009: http://timesofindia.indiatimes.com/Cities/Allahabad/Way_to_make_plastic_biodegradable/artic leshow/3961030.cms

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- 2009-2010: Report on Plastic Biodegradation, R. Goel, M.G.H.Zaidi (2009) India Today (UP/-UK Issue, 2 Dec) Pp 47-48
- 2010-2011:Bacteria for Plastic Degradation: BBC News Friday, 19 March 2010: http://www.bbc.co.uk/hindi/science/2010/03/100318_new_bacteria_ra.shtml
- 2009-2011: Researchers Lend Hope to Kanpur Plastic Industry: Business Standard, Jan 06, 2010, Reporter Vishnu Pandey /New Delhi/Kanpur 21 Dec 2009 https://www.business-standard.com/article/companies/researchers-lend-hope-to-kanpur-plastic-industry-109122100077_1.html
- 2018-2019: Ecofriendly Plastics. Scientist of Pantnagar Developed Ecofriendly Plastic Dainik Jagran 28 July 2018 Haldwani/Rudrapur Edition Hindi
- https://www.amarujala.com/dehradun/pantnagar-university-scientists-of-madeantibacterial-plastic-relief-from-frequent-sterilization https://www.amarujala.com/channels/downloads?tm_source=text_share

News on Websites

 2019-2020: Disposal of e-waste will harm the environment: News Track 06 Aug 2020 by Vinod Rathore

https://english.newstracklive.com/news/scientists-of-pantnagar-university-discovered-new-technology-ewaste-will-be-disposed-off-without-damaging-the-environment-mc23-nu717-ta272-1110668-1.html

 2019-2020:Pantnagar University Scientists of Made Antibacterial Plastic, Relief from Frequent Sterilization – Scientists at Pantnagar University made antibacterial plastics to get rid of repeated sterilizing

https://www.techforftcp.com/2020/08/pantnagar-university-scientists-of-made-antibacterialplastic-relief-from-frequent-sterilization-scientists-at-pantnagar-university-made-antibacterialplastics-to-get-rid-of-repeated-sterilizing.html

o 2019-2020: Kiccha News Hindi: WArmed Welcome of the Inventor of E Waste Remediation

https://www.creativenewsexpress.com/dr-mgh-zaidi-who-disposed-of-e-waste-welcomed-strongly/

 2019-2020:International Webinar "Modern Analytical Methods in Chemistry" Conducted at Department of Chemistry Pantnagar on 19 June 2020 https://www.livehindustan.com/uttarakhand/rudrapur/story-experts-gave-their-views-in-thewebinar-organized-in-the-chemistry-department-3292779.html

News on TV & Electronic Media

- Disposal of Polythene: Zee News ,BBC News & DD news 26 Aug 2008 https://www.youtube.com/watch?v=NPPQTFxHrMs
- use-of-plastic-is-spreading-diseases-in-people/Uttarakhand 21 July 2019 Hindi Edition https://www.etvbharat.com/hindi/uttarakhand/state/udham-singh-nagar/use-of-plastic- isspreading-diseases-in-people/uttarakhand20190721153224338
- 2019-2020: Material Science in Protection Against Corona Virus: The invited lecture delivered at IFTM University Moradabad, UP India dated 20 June 2020
- 2019-2020:Agriculture Today https://www.youtube.com/watch?v=emy_jvoaB0I https://www.youtube.com/watch?v=iwJYJiMLgeU
- I8 Years Efforts: No Harm to Environment, E waste will remidiate https://www.etvbharat.com/hindi/uttarakhand/state/udham-singh-nagar/scientists-of-pantnagaruniversity-develop-a-technique-to-decompose-plastic-e-waste/uttarakhand20200810193320844
- Uttarakhand: Pantnagar Scientist invesnted Antibacterial Plastic
 scientists-at-pantnagar-university-made-antibacterial-plastics/
 https://amritvichar.com/uttarakhand-scientists-at-pantnagar-university-made-antibacterial-plastics/

Social/Leisure Interest

- Nationalism, civilization and culture.
- o 2010-2011:Life Member of Red Cross Society, of India, Uttarakhand State Branch, Since
- Understanding of German, Russian, Arabic & Urdu.
- o 1980-1981: Playing Badminton Member of Badminton Division Junior (1980-81),
- 1980-1981: Player at XXVII Junior National Ball Badminton Championships by Maharashtra State Ball Badminton Association & Ball Badminton federation of India,25 Dec.1981.
- 2009-2010:Whos Who in Science Academia , Academic Keys https://sciences.academickeys.com/browse_whoswho_by_field/Materials_Sciences/Polyme r_Sciences?sort=institution&start=91
- **2009-2010:** Marquis Who's Who in Science and Engineering, 27 th Ed. Published in U.S.A.

Philosophy of Teaching, Research & Academic Administration

Quality teaching, research and academic administration are under the prime importance in the interest of national development. The purpose of catering knowledge in this area of chemical sciences is not only to produce the graduates, masters and doctorates with highly marketable skills of theory and experiments, but also to equip them with broad knowledge that must be useful in their future endeavors. Most importantly, I attempt to convey students about my enthusiasm towards chemical sciences, their interdisciplinary approach, behaviors and applications to students and to communicate the research findings to public.

I have been teaching in teaching and research since 1987. The areas of my teaching are engineering chemistry, general chemistry, nanochemistry, quantum mechanics, classical, non equilibrium and statistical thermodynamics, polymer chemistry, collides, kinetics and surface chemistry. I have always been guided by the observation that the presentation of coursework in an interesting and challenging fashion. I encourage students to understand concepts and apply them to problems, rather than simply memorize information. I use a combination of power point, traditional chalkboard and electronic gadgets based presentations to address a broad spectrum of students to provide extra materials particularly illustrations of theoretical and numerical exercises for students who lack essential background knowledge or skills in the areas of chemistry. I often assign group activities in my lecture classes and require group work in the laboratory classes. This approach teaches future graduates to be team-players, instills a strong sense of shared purpose, and helps them develop interpersonal and communication skills.

Being ion the capacity of principal investigator of the projects and as Head of Department, I always take care about noble coordination of the subordinates, obedience towards seniors, resource generation, modification in modern teaching aids and timely disbursal of duties. I always prefer to be wholly dependable and rely on existing resources to best avoid any burden over administration. Managing of infrastructural facilities for smooth functioning of teaching and research has always been on my priorities.

Society is in need of low cost, durable human friendly materials, cheap sources for harvesting electrochemical energy from materials. In addition to this, I emphasize on importance of materials for structural, agricultural, defense applications and their computational methods. My area of research is development of environmentally benign methods for processing of technologically important polymers, nanocomposites, nanomaterials and investigation of their thermal, electrical, mechanical, tribological and antimicrobial properties and biodegradation. Processing methods involves application of supercritical fluids, microwaves, electrochemical, UV radiation and facile synthesis. This provides a broad, interdisciplinary training platform to graduate and undergraduate students that offer students an educational experience with an unusually wide variety of types of materials and state-of-the-art of spectral, microscopic, thermal, electrical, mechanical and electrochemical characterizations of the materials. The computational methods involved in research are based on thermodynamic and kinetic evaluation of thermal degradation of polymers and related materials. As the advisor of students, I always prefer to assist them through providing fundamental knowledge of the research area, literature, setting up the experiments, recording, presentation and interpretation of data.

I have developed well functioning lab through various research findings for high quality experimental training to students in the area of chemical sciences. The key infra structural facilities involve Supercritical fluid reactor system with PID temperature control, PPI,USA, Varian Pro Star 230 HPLC/GPC system with RI detector, UV-VIS spectrophotometer G10 Thermo Spectronic ,BIOTECH microplate reader, Photochemical reactor-Luz Chem Canada ,IVIUM Electrochemical work station, Keithley four probe AC/DC conductivity meter, High precision balances, CO₂ incubator, ,rotary flash evaporator, mini reaction system, Muffle furnace, microwave/vacuum ovens, p^H/ conductivity meter, refrigerated centrifuge and many more.

I don't forget to spare the time to students for discussing their future career opportunities. This type of contact is one of the most important factors in student motivation and involvement; it enhances students' intellectual commitment and encourages them to think about their own values and future plans. This is my hobby to teach and advise students properly for their best role towards the academic, scientific and technological developments of the society.

References

1. Mr. Sanjeev Kumar Joshi,

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Ex Vice Chancellor, G.B.Pant University of Agriculture & Technology, Pantnagar Uttarakhand.

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(M.G.H.Zaidi)

Dated.10.10.2020