

# Curriculum Vitae of Prof Shah @ NIT Srinagar



Worship is nothing but work

## Prof M A Shah, Ph.D. Physics

### Former Head/Chairperson,

### Postgraduate Department of Physics

National Institute of Technology Srinagar (NIT Srinagar)

Hazratbal, Srinagar-190006

(Jammu & Kashmir) – India

[www.shahnit.org](http://www.shahnit.org)

Phone: +0091-1942424241, Fax: 0091-1942420475

Mobile: +91- 9419018195 (Hand set)/ 07889426961

E mail: [shah@nitsri.ac.in](mailto:shah@nitsri.ac.in) /[mashahnit@gmail.com](mailto:mashahnit@gmail.com)



## National Initiative @ NIT Srinagar

Initiative @ NIT Srinagar	Worked As	Year
<b>INSPIRE Internship Programme</b> DST, Govt of India (P.M's Initiative for Science Toppers of Valley)	Convener/ Coordinator for 10 successful programs	2011 ongoing

# Curriculum Vitae of Prof Shah @ NIT Srinagar

<b>Post-Graduate Programme</b> In M.Sc Applied Physics (Most successful)	Founder/ Coordinator	2015 – ongoing
<b>Nano-Mission Grant (Highest)</b> For Establishing Laboratory for Multifunctional Nanomaterials (LMN)	Principal Investigator (PI)	2015-2020
Installed & Commissioned <b>Scanning Electron Microscope (SEM)</b> {World Bank Funded}	Member-Secretary/ <b>PI of the Project</b>	2006
<b>International Conferences</b> “Nanoscience for better Living” NBL Series with IITs of the country	Convener and Chair of NBL series	2011-ongoing
Introduced & Conducted <b>NPTEL Examinations</b> in Kashmir Region	Single Point Contact -IR	2013-2020
Supported and Mentored <b>Super-30 Initiative</b> For underprivileged and tribal students	Advisor & Mentor	2013-ongoing
Board Member of SSM College Engineering	Member	2011
Received <b>FIST Grant from DST, Govt of India</b>	Co PI & Head of the Department	2022
Member for Implementation of SATHI Project	Core Member	2023

## Education & Alma Mater

Degree	University/ Institute	Year
Doctor of Philosophy <b>(Ph.D Physics)</b> (Materials Physics)	Jamia Milia Islamia, Central University A++ New Delhi	[1994-1999]
Master of Science <b>(M.Sc. Physics)</b> <b>Ist Class</b>	University of Kashmir, (NAAC Accredited A <sup>++</sup> ) Kashmir (J&K)	[1991-1993]
Bachelor of Science <b>(B.Sc)</b> <b>Specialization with Electronics</b>	University of Kashmir, (NAAC Accredited A <sup>++</sup> ) Kashmir (J&K)	[1987-1990]

Sheikh Saqar Fellow: Visiting fellowships at JNCASR, Bangalore, in Sheikh Saqar Laboratory, worked with Padmashree Prof. C N R Rao, number of times since year 2007. I am associated with JNCASR, Bangalore through Prof Rao, with whom I have few publications.

## Professional/Research Career

# Curriculum Vitae of Prof Shah @ NIT Srinagar

S. No.	Position and Affiliation	Period
01	<b>Lecturer,</b> Department of Physics, NIT Srinagar (Formerly REC Srinagar) Sep 10, 199 (Date of Joining)	[1999- 2000]
02	<b>Assistant Professor,</b> Department of Physics, National Institute of Technology Srinagar (Formerly REC Srinagar)	[2000-2009]
03	<b>Assistant Professor,</b> Department of Physics, Faculty of Sciences King Abdul Aziz University Jeddah (On Leave for teaching assignment)	[2009-2011]
04	<b>Assistant Professor,</b> Post-Graduate Department of Physics, National Institute of Technology Srinagar	[2011- 2018]
05	<b>Associate Professor, (Due 2009)</b> Post Graduate, Department of Physics, National Institute of Technology Srinagar	[2018 to 2022]
06	<b>Professor, (Due 2012)</b> Post Graduate Department of Physics, National Institute of Technology Srinagar	[2022 to till date]

## Major Assignments at NIT Srinagar

S. No	Name of the Assignment	Period
1.	<b>Headship,</b> PG Department of Physics	From 2021 till 2023
2.	<b>Chairman</b> International Conference on Nanoscience (NBL)	From 2011 till
3.	<b>FIST Project,</b> Co-PI and defended as HoD Physics	From 2022
4.	<b>Chairman</b> Multiple Academic Committees within and outside institute	From 2022
5.	<b>Principal-Investigator Nano-Mission Project,</b> Govt of India (Completed)_	From 2015

## Fellowships/Training Programmes

S.No	Programme	Institution	Year
01	UGC Course in Solid State Physics	ASC, Jawaharlal Nehru University, New Delhi	2002
02	INSA Visiting fellowship	Crystal Growth Laboratory, JMI, New Delhi	2003

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03	UGC-Anna University	Crystal Growth Center, Anna University	2005
04	Training Programme on Electron Microscopy	Arranged by Hi-Tachi Singapore	2006
05	Visiting fellowship	DRDO- JNCASR, Bangalore	2007
06	Training Programme on Electron Microscopy	SAIF, Punjab University, Chandigarh	2008
07	Sheikh Saqar Fellowship	International Center, JNCASR, Bangalore	2011
08	GIAN Programme on Environmental Sciences	IIT Hyderabad	2016
09	GIAN Programme on Electronic Devices	Electrical Engineering, Jamia Millia Islamia, New Delhi	2017
10	Physics Lab. Workshop,	LUMS, Sponsored by ICTP Italy	2018
11	Faculty Development Programme	NIT Srinagar (Institute Programme)	2019
12	Item Writing For JEE/NEET	National Testing Agency	2020 onwards
13	Organized and Attended STUTI Program	NIT Srinagar with AUM, Banasthali Uni	2021
14	Curriculum Development	Islamia College Srinagar (On Nanotechnology)	2022
15	Training/Research Collaboration with Faizo	International Center for Theoretical Physics (ICCT), Italy	2023

## Outreach Programmes Organized @ NIT S During Covid

S. No	Name of the International Event	Date of the event
1.	Celebration of National Science Day @ NIT Srinagar	2 <sup>nd</sup> Feb 2022
2.	Celebration of National Science Day @ GDC Pampore	2 <sup>nd</sup> Feb 2022
3.	Celebration of International Science Day on Environment	11 Nov 2021
4.	Short Term Course in Semiconductor to Smart Devices	21-25 May 2021
5.	Our Relation with Nature-Environmental Symposium	11 Oct. 2021
6.	Climate Change: A major Concern	06 June 2021
7.	Inspiring next generation Nanotechnologists	29-31- Hybrid mode
8.	Nanotechnology: Where Size and Shape Matters	11 Oct. 2021
9.	Environmental Workshop with IIT Hyderabad	Nov 2021
10.	Paying Rich Tributes to Prof Chopra and other Scientists	July 2021
11.	Science Fairs and Projects for students	June 2021
12.	Visit of many Degree Colleges and students in the deptt	During 2021
13.	Organized multiple Programmes during Covid	On line
14.	II Edition of	21-25 May

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	Short Term Course in Semiconductor to Smart Devices	2022
15	II Edition of Environmental Symposium for School Children	5 <sup>th</sup> May 2022
16	Science Day for School Children of the Valley	28 <sup>th</sup> Feb 23

## Mega National Programmes Organized @ NIT

S.No	Financial Year	Sanction Order No/ Ref No.	Sanctioned Date	Period	Amount Received
1.	2012	Internship/2011	07-12-2011	17-21 March 2012	19.50 Lakhs
2.	2012	Internship/2012	25-04-2012	19-23 May 2012	32.50 Lakhs
3.	2012	Internship/2012	26-06-2012	22-26 August 2012	32.50 Lakhs
4.	2013	Internship/2013/S 133	23-10-2013	21-25 Nov 2013	16.25 Lakhs
5.	2014	Internship/2013/C196	18-12-2013	14-18 March 2014	16.25 Lakhs
6.	2014	Internship/2013/C196	18-12-2013	14-18 March	16.25 Lakhs
7.	2015	Internship/2015	15-09-2015	14-18 Nov 2015	13.20 Lakhs
8.	2016	Internship/2016	15-09-2016	14-18 Nov 2016	13.00 Lakhs
9.	2017	Internship/2017	27-11-2017	22-26 Dec 2017	13.00 Lakhs
10.	2018	Internship/2018	28-06-2018	26-30 July 2018	13.00 Lakhs
Total Funding for 10 Programmes = Rs.					

## International Conferences Organized @ NIT S/ITs

S. No	Name of the International Event	Date of the event	No
1.	5 <sup>th</sup> Edition of International Conferences on Nanotechnology for Better Living, ICNBL-16	25-29 May 2016	350
2.	6 <sup>th</sup> Edition of International Conferences on Nanotechnology for Better Living, ICNBL-19	07-11 April 2019	400
3.	7 <sup>th</sup> Edition of International Conferences on Nanotechnology for Better Living, ICNBL-21	07-11 April, 2021 Online & off-line	350
4.	8 <sup>th</sup> Edition of International Conferences on Nanotechnology for Better Living, ICNBL-23	Scheduled from 25-28 May-2023	500
5.	9 <sup>th</sup> Edition of International Conferences on Nanotechnology for Better Living, ICNBL-25 With IIT Hyderabad		

*The above events were supported by many universities, institutes, organizations*

**Note: The first to 4<sup>th</sup> Edition were organized at IIT Kanpur.**

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*First International Conference:*

*"Future trends in composites materials and processing with a theme "Innovations in composites for the new century" Date and Venue: December 12-14, 2007, IIT-Kanpur, India/*

*Second International Conference: "Carbon nanotechnology: Potential and challenges" Date and Venue: December 15-17, 2010, IIT-Kanpur, India/*

*Third 3rd conference May 25 to May 29, 2012 at IITK.*

*Forth International Conference on Nanotechnology for Better Living, Theme: Technological Advancements of Fly Ash Date: February 27-28, 2018, Venue: IIT-Kanpur*

## Membership of Professional Bodies/Societies

S.No	Name of Professional Society	Number
01	Member of Materials Research Society India	LMB2381
02	Member of Electron Microscopy Society of India	LM-1064
03	Electron Microscopy Society of Saudi Arabia	
04	American Physical Society (APS)	<u>Up to 2025</u>
05	Asian Nanotechnological Forum (ANF)	<u>Applied</u>
06	Applied for Indian Academy of Sciences (INSA)	
07	Applied for royal society of Chemistry	

## Books Published with National & International Publishers

S. No.	Name of Book	Publisher	Year
13	Proposed book on Applied Physics and Nanoscience	<b>In Process</b>	2024
12	<b>Lab in Sky:</b> Experimental Physics for UG/PG Student	New Delhi Publisher, New Delhi	2021
11	<b>Nano Science and Technology:</b> A Text Book for UG/PG students (Modified version of Principles of Nanoscience)	I K International Pvt Ltd New Delhi	2020
10	<b>Edited Book:</b> Nanotechnology Applications in Agriculture, Food Science and Medicine	: IGI- Global, Hershey, Pennsylvania 17033- 1240, USA	2020
9	<b>Text Book</b> Science of Small: Nanotechnology	M/S Wiley New Delhi	2019
8	<b>Proceedings</b> Nanotechnology for Better Living with IIT Kharagpur	Applied Science Innovation	2019

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7	<b>Research/Reference Book:</b> Tribological and Mechanical Properties of Synthetic Diamond Coatings	LAP Lambert Academic Publishing, Germany	2018
6	Booklet: Insights in Nanotechnology	LAP Academic	2016
5	<b>Proceedings</b> Nanotechnology for Better Living with IIT Kanpur	IIT Kanpur	2016
4	Journey of my Life for INSPIRE	Local Srinagar	2014
3	<b>Edited Book:</b> Nanotechnology Applications for Improvements in Energy Efficiency and Environment	IGI- Global, Hershey, Pennsylvania 17033-1240, USA	2014
2	<b>Edited Book:</b> Functional Nanomaterials for Energy and Environmental Applications	Trans Tech Publications, Switzer	2012
1	<b>Text Book:</b> Principles of Nanoscience and Nano Technology- Modified edition {Reproduced}	Naroosa Publishing House, New Delhi/ Alpha Science London	2010
In all the books I am the First Author and mostly on Nanotechnology and Nanomaterials published by publishers of repute.			

## Books Chapters Published

S. No.	Name of Book Chapter	Edited Book & Publisher	Year
01	TiO <sub>2</sub> : A versatile semiconducting material for environmental and antibacterial applications	Nanotechnology: Ethical and Social Implications, Nano and Energy Published by CRC press	2012
02	Al <sub>2</sub> O <sub>3</sub> Nanobricks via an Organic free route using water as solvent	Dynamic methods and process Advancement in Mechanical, Manufacturing and materials Engineering. IGI- Global, Hershey, Pennsylvania 17033-1240, USA	2013
03	Preparation of Copper Oxide (CuO) Nanoparticles and their bactericidal Activity	Dynamic methods and process Advancement in Mechanical, Manufacturing and materials engineering. IGI- Global, Hershey, Pennsylvania 17033-1240, USA	2013
04	Electron Microscopy: A versatile tool in Nanoworld	Functional Nanomaterials for Energy and environmental Appl Publisher: Trans Tech	2013



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		Publication Switzerland	
05	Large scale production of MgO Nanostructures and their possible applications	Functional Nanomaterials for Energy and environmental Appl Publisher: Trans Tech Publication Switzerland	2014
06	Principles of Raman Scattering in CNTs:	Handbook of Research on Nanoscience, Nanotechnology and Advanced Materials Publisher: IGI- Global, Hershey, Pennsylvania	2014
07	Review of various Nanostructures to enhance the efficiency of solar-photon-convers	Nanotechnology Applications for Improvements in Energy Efficiency and Environmental Management Publisher: IGI- Global, Hershey, Pennsylvania USA	2015
08	Comparative Analysis carried out on Modern Indentation Tech	Intech open, On line Publishers, USA	Dec 2020
09	Advanced Nanomaterials for Infectious Diseases	Nanotechnology for Infectious Diseases, Springer	Dec 2021
10			
11			

## Major Projects @ NIT Srinagar

S. No	Title of the Projects	Funding Agency	Sanction Order no. &	Amount (Lakhs)
01	Optical Study in Melt grown crystals of polytypic materials	UGC, New Delhi	F-10-7/2004 (SR) 5 January 2004	0.50 Lakhs
02	Procurement of Scanning Electron Microscope and Crystal Growth Puller	NPIU, TEQIP	NIT- Srinagar/P/TQ/05 12 Sep 2005	100.00 Lakhs
03	Optical Properties of Cadmium Iodide polytypic crystals	UGC, New Delhi	32-16/2006 (SR) 19 March	03.77 Lakhs
04	Growth and Characterization of Nanomaterials employing Green Techniques	DST, New Delhi	SR/NM/NS- 04/2014 25 September	175.00 Lakhs
05	Development of low machinery for the processing of various stones	DST, New Delhi	IDP/IND/14/2015 16 May 2015	60.00 Lakhs
06	Preparation and Properties of biodegradable composites and their application in food packaging	NPIU, TEQIP	Nil 18 June 2019	12.60 Lakhs
07	Nano-emulsions as carriers for	NPIU, TEQIP	Nil	16.00 Lakhs



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	targeted delivery of bioactive com		18 June 2019	
08	FST Project	DST New Delhi	March 2022	1.65 Lakhs
09				
10	Patent Submitted on Smart Shoes using nanomaterials			

## Editorial Board Member

S.No	Name of Journal	Publishing
01	International Journal of Machining and Machinability of Materials (IJMMM)	
02	International Journal of Biomedical Nanoscience and Nanotechnology (IJBNN)	
03	International Journal of Surface Engineering and Interdisciplinary Materials Science (IJSEIMS)	
04	Current Electronics and Telecommunication (CET)	
05	International Journal of Advanced Research (IJAR)	
06	Advanced Materials Proceedings (AMP)	
07	Applied Science Innovations (ASI)	

## List of Articles Published in Popular Magazines

S.	Title	Paper/Journal/Magazine	Date
01	On - Sarvepali Radhakrisnan - A Great Teacher	GK, Srinagar	5 <sup>th</sup> Sept 23
02	Tribute To An Engineer and Policy Maker	GK, Srinagar	May 23
03	Farewell To Man with Muffler	Excelsior	May 23
04	Roadmap New Education Policy	Excelsior	June 23
05	UNESCO DAY 2022- Year of Science	Greater Kashmir	01-01-2022
06	Science Give Physics a Chance	Greater Kashmir	Dec 2021
07	Education Fix Education, Environment and Health	Greater Kashmir	Nov 2021
08	Environment Soil, Air and Water Pollution	KNS Monthly Magazine	June 2021
09	Materials Graphene- Versatile materials for Construct	Kashmir Horizon,	June 2021

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10	NEP successful implementations	Daily Excelsior Jammu	June 2021
11	Nanoscience- An Interdisciplinary Making the disciplines meet	GK Srinagar	01/06/2021
12	Semiconductors New Devices, New Frontiers	GK Srinagar	29/04/2021
13	Education set up in Kashmir Commission Functional and Formal Umbrella	GK Srinagar	11/2/2021
14	Umbrella structure for implementation NEP	Daily Excelsior, Jammu	22 /2/21
15	NEP NITs/IITs as Role model New Education	Daily Excelsior, Jammu	Sep 2 2020
16	Good bye to Pen-Paper Examination	Daily Excelsior, Jammu	Dec, 2 2020
17	New Education Policy 2020	KNS Monthly Magazine	July, 2020
18	Raising New foundations	Greater Kashmir	30 2019
19	Better Materials for Better Living	Greater Kashmir	April 2019
20	A safe approach to Nanotechnology	Science Daily, USA	08/2009
21	Boiling up zinc oxide nanorods without sol	AAAS. Eureka Alert	2009
*	<b>More than 100 articles in News papers/ journals/ Magazines/ mostly on education Writer and Speaker: Mostly I write on Education System of Jammu &amp; Kashmir</b>		

## Ph.D Students Guided

S. N	Name	Enroll. No.	Title of Thesis	Status	Remark
1.	Ashaq H Sofi	2013-FOS- PhD-Autumn- 03	Optical and Electrical properties of Indium Oxide and its derivatives	Awarded	Presently working in university
2.	Sajjadudin	2013-Ph.D FOE-13	Characterization and Properties of Nanocrystalline Diamond Coatings	Awarded	Principal SSM
3.	Kaleem Ahmad	2013-Ph.D FOE-13	Tribiological and Mechanical Characteristic of CVD Dimond coatings deposited on Cemented Tungsten C	Awarded	Presently working in KU
4.	Farooq A Dar	2014-FOS- PhD-SPRING- 05	Preparation and properties of Aluminium Oxide Nanostructures and its inter phases	Awarded	Presently working in CUK
5.	Muzaffar Ahmad Boda	2015-FOS- PhD-Autumn- 08	Augmentation in photoelectrochemical property of bare and functionalized multipodal TiO <sub>2</sub> nanotube array over compact Titania Nanotubes	Awarded	Doing Post Doc in China
6.	Shabir A Akhoun	PHD-FOS-PhD 20-2011	Synthesis and characterization of metal oxide nanostructures and their Energy applications	Awarded	Presently working in KU
7	Shaheed S Ahmad	I.D. No. PHPHY203	Preparation and Properties of Manganese Oxide/Hydroxide Nanomaterials and Their	Awarded	Working in Higher

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			Applications		education
8.	Mudasir A Mir	2017-PHD-FOS-SPRING-1	Design and development of Humidity Sensor based on porous Alumina	Awarded	Presently working in SMVD
9.	Ab Mateen Tantray	2018PHAPHY 002	Structural and Optical Properties of Zinc Oxide Nanostructured Photoanodes	Awarded	Presently working in KU
10.	Jaffar Farooq Mir	2018PHAPHY 001	Structural and Optical Properties of photoanode based on Iron oxide Nanostructures	Awarded	Presently working in CUK
11.	Anil Maini	2013-FOS-PhD-Autumn-22	Structural, Electrical and Optical Properties of Copper Oxide Nanostructures	Submitted	Presently working in BGSBU
12.	Arshid A Mir	2019PHAPHY 009	Design and Fabrication of Titanium dioxide (TiO <sub>2</sub> ) Nanostructures	Awarded	Presently working in SSM
14.	Reyaz A Shergojri	2019PHAPHY 006	Fabrication, characterization and applications of Nickel Oxide Nanostructures	Submitted	
15.	Malik Aalim Mushtaq	2019PHAPHY 005	Design and Fabrication of Fe <sub>2</sub> O <sub>3</sub> /β-FeOOH nanostructures prepared through green approaches for biomedical applications.	Submitted	
16.	Aamir Sohail Wani	2019PHAPHY 011	Synthesize of Bismuth oxide (Bi <sub>2</sub> O <sub>3</sub> ) nanostructures for structural and optical properties	Ongoing	
17.	Arun Kumar		On CuO nanostructures and their properties	On going	
18.	Aman K Chitoria		Joined in 2023	On going	
19.	Nowsheena Ayb		Joined in 2023		
20.	Abrar War		Joined in 2023		
21.	Khurshid Ahmad		Joined in 2023		

## Research Interests

**Research Interests:** Fabrication of Nanomaterials through soft route

- **Functional Nanomaterials (Oxides/hydroxides)**
- Synthesis and Characterization of Metal oxides/Hydroxides
- Applications for various uses
- Electron Microscopy
- Semiconductors
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## Subjects Taught in Previous Session

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1. Solid State Physics
2. Semiconductors
3. Engineering Physics/ Modern Physics to UG
4. Nanotechnology as Elective Course
5. Characterization methods for PG Students

## Details of References

S.	Name of Professor	Affiliation	E. Mail	Contact address
1	Prof. M. J. Zarabi Former Chairman, BOG	NIT Srinagar	<a href="mailto:zarabi@masamb.com">zarabi@masamb.com</a>	9810055795
2.	Prof. A. M. Wani First/Former Director	NIT Srinagar	<a href="mailto:amwani011@yahoo.co.uk">amwani011@yahoo.co.uk</a>	9419089786
3.	Prof. Kamak K Kar	IIT Kanpur	<a href="mailto:kamalkk@iitk.ac.in">kamalkk@iitk.ac.in</a>	9415081153
4.	Prof M S R Rao	IIT Madras	<a href="mailto:msrcrao@gmail.com">msrcrao@gmail.com</a>	9840130760
5.	Prof Jagdish Chennupati	President Australia Academy	Chennupati.Jagdish@anu.edu.au	

*Dr. Shah Mohammad Ashraf*

**Outreach Activities:-** Submitted Proposal to Govt. of Jammu and Kashmir for establishment of -**International Institute of Nanoscience (IIN)** Srinagar, which could be an Umbrella Institution for all higher and lower educational institutions.

**My strength:-** I am blessed with some unique leadership qualities, which include:

- I am an inspiring leader who has the proficiency to connect with and command the respect - of diverse people across any organization/institution/university/Corporate sector.
- I have a good hold on my subject, the emerging technology-Nanotechnology, which I have been teaching and preaching from around two decades.
- I am blessed with patience, highest degree of humility and on humanitarian grounds many complicated issues get resolved, which I believe.
- I have the capability to manage the volatile things single handedly and love to work in teams and head the diverse groups in different situations.

**My Philosophy:-**

I am fortunate to have two decades of continuous teaching experience, at National Institute of Technology Srinagar and in some of the most prestigious Universities of Middle East, which has enabled me to develop a teaching philosophy of my own. I

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believe that a personal touch is essential for a healthy teacher – student relationship. With the diversity of our community reflecting in our classroom (students from all parts of country), it is also critical to identify ways to reach out to each individual. I also believe, teaching is a challenging and onerous task and when it is well done, it is most satisfying. I believe that the students must be treated with respect and the classroom must be free from undue anxiety. Openness, honesty and ability to maintain trust are highly conducive to effective learning. I have found that, for higher degree students, it is particularly important to obtain feedbacks about their current preparedness and problems they face with learning. Finally, as a committed teacher, I am aware of my obligations and responsibilities to uphold the reputation of the Institution.

## My Associations:-

I am honoured many times as a visiting scientist in many prestigious institutions and have worked with the eminent personalities like Prof. C N R Rao, Prof Kamal K Kar, Dr. M J Zarabi, Prof. A M Wani, Prof. Rajat Gupta, Prof. K L Chopra, Prof. Kishan Lal and Prof. M S R Rao. I am being credited for many national and international initiatives at NIT Srinagar. While organizing mega scientific events single handedly, was drizzled with many compliments including Kohi-Noor of Kashmir/ One-man Army/ Nano-man/Stylish Shah.

*Dr. Shah Mohammad Ashraf*

## Invited/Special Lectures at Conferences/ Seminars/Workshops

- ❖ Delivered number of speeches and Lectures in 2023 (both online/Offline)
- ❖ Lecture on Science Marvels in Sonipat on 14<sup>th</sup> of March 2022 during a Science Conclave
- ❖ Delivered Lecture on National Science Day at Govt Degree Pampore on 28<sup>th</sup> Feb 2022
- ❖ Delivered Lecture in NIT Srinagar on International Science Day on 11 Nov 2021
- ❖ Delivered Lecture on Nanotechnology in Amity University, Amity
- ❖ College Delivered online lecture on” Nanotechnology for Better Life on 17<sup>th</sup> June 2021 in Chennai College.
- ❖ Delivered lecture on,” Nanomaterials in Agriculture” in SKUAST-K. in Feb 2021
- ❖ Invited talk delivered on Molecules to Materials to National Workshop in NIT Surat on 18<sup>th</sup> of Dec 2020.
- ❖ Changing World of Electron Microscopy delivered to Govt Institute of Technology Vellore on 4<sup>th</sup> Dec 2020.
- ❖ Resource Person for virtual lecture on, “Nanoscience for Better Life” on 7<sup>th</sup> July 2020. Received good response and was viewed by more than 6000 Scientists.
- ❖ As Chief Guest at SSM College of Engineering on Science Day on 5<sup>th</sup> March, 2020. The talk was on Alfred
- ❖ Invited Resource Person at UGC Academic Staff College of KU in a refresher Course in Feb 2020.

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- ❖ Invited speaker at Rasal Al Khima during IMWAM-20 from 22-25 Feb 2020.
- ❖ BITS Pillani Dubai Faculty on Impact of Nanotechnology across the Globe on 26<sup>th</sup> Feb 2020.
- ❖ Invited Lecture at Academic Staff College Kashmir University on 18-11-2019 on, “Size and Shape matters Invited Lecture at Gandhi Memorial College Srinagar in July 2019 during a National Workshop Nano.
- ❖ Invited Lecture at Central University Kashmir in May 2019 during a lecturer series organized by CU.
- ❖ Expert examiner of P.G Students at Dental College Srinagar and delivered a lecture on Graphene.
- ❖ Chief Guest and an Invited speaker on science day in IUST, Awantipora on 28 Feb 2018
- ❖ Invited speech in SSM College of Engineering with Hon’ble Chairman Dr. M. J. Zarabi.
- ❖ Invited speaker in Academic Staff College, Kashmir University on 24 Feb 2016.
- ❖ Key Note Speaker at the "First International Conference of Pharmacy and Health Science 2014 (ICPHS 2014)" to be held in the Faculty of Pharmacy and Health Sciences, Kuala Lumpur, Malaysia from March 8-10, 2016.
- ❖ Speaker in the annual meeting of INSPIRE Programme held in KIIT, Orissa from March 29-31, 2014.
- ❖ Mentor/ Speaker in the INSPIRE Programme held in the Nigeen Club by NIT Srinagar from March 2014.
- ❖ Invited Lecture on SMALL SCIENCE at Academic Staff College, KU Feb, 2014.
- ❖ Invited Lecture on Nanotechnology in day to day life at Academic Staff College, KU Feb, 2014.
- ❖ Mentor/ Speaker in the INSPIRE Programme held by NIT Srinagar from November 21-25, 2013.
- ❖ Invited Lecture on Technology at its limits, delivered in Academic Staff College, University of Kashmir.
- ❖ Mentor/ Speaker in the INSPIRE Programme on Arrival of New science in INSPIRE Programme from 26-30 August, 2012.
- ❖ Mentor/ Speaker Nanotechnology and New Generation in INSPIRE Programme from 17-21 March, 2012.
- ❖ Environmental summit, delivered in SKICC in 2011.
- ❖ Invited Lecture on A Tiny Revolution in Food Technology, Delivered in Food Technology, University of Kashmir on 15<sup>th</sup> Oct. 2011.
- ❖ Invited Lecture on Nanomaterials in Medicine, special lecture in Center of Excellence of Genomic Medicines, King Abdul Aziz University, Jeddah on 9<sup>th</sup> March, 2011.
- ❖ Invited Lecture on A novel route to prepare Fe<sub>3</sub>O<sub>4</sub> nanostructures for medical applications in 4<sup>th</sup> science conference in Taybah University, Al-Medina on 25<sup>th</sup> March, 2010.
- ❖ Delivered 10 lectures on “Faculty Development Programmes” in many institutions across country during Covid pandemic through online mode.

# Curriculum Vitae of Prof Shah @ NIT Srinagar

## Publications of Shah's Nano Group @ NIT Srinagar

Sr. No.	Title of Paper	Year	Index
1.	Yousuf, Mahvesh, Reyaz Ahmad, Asif Majeed, Malik Aalim, Arshid Mir, Aamir Sohail, Ab Mateen, and M. A. Shah. "Highly Ordered 1D NiCo <sub>2</sub> O <sub>4</sub> Nanorods: An Efficient Hybrid Material for Electrochemical Energy Storage Application." In <i>International Conference on Nanotechnology: Opportunities and Challenges</i> , pp. 195-200. Singapore: Springer Nature Singapore, 2022.	2023	WOS & Scopus
2.	Sohail A, Aalim M, Ahmad R, Mir A, Majeed A, Shah MA, Majid K. Enhanced Photocatalytic Performance of $\beta$ -Bi <sub>2</sub> O <sub>3</sub> Nanospheres Under Visible Light Irradiation. In <i>International Conference on Nanotechnology: Opportunities and Challenges 2022 Nov 28</i> (pp. 293-297). Singapore: Springer Nature Singapore.	2023	WOS & Scopus
3.	Ahmad R, Sohail A, Yousuf M, Majeed A, Mir A, Aalim M, Shah MA. P–N heterojunction NiO/ZnO nanowire based electrode for asymmetric supercapacitor applications. <i>Nanotechnology</i> . 2023 Nov 20;35(6):065401.	2023	WOS & Scopus
4.	Aalim M, Altaf U, Rashid A, Ahmad R, Sohail A, Mir A, Shah MA. Tin (Sn)-doped hematite ( $\alpha$ -Sn <sub>x</sub> Fe <sub>2-x</sub> O <sub>3</sub> ) nanostructures as high-performance electrodes for supercapacitor application. <i>Journal of Solid State Electrochemistry</i> . 2023 Aug 29:1-8.	2023	WOS & Scopus
5.	Ahmad, R., Sohail, A., Altaf, U., Farooq, J., Mir, A., Aalim, M., ... & Shah, M. A. (2023). Binary nickel cobalt oxide (Ni <sub>x</sub> Co <sub>3-x</sub> O <sub>4</sub> ) nanostructures as stable and high-energy density asymmetric supercapacitor electrode material. <i>Materials Chemistry and Physics</i> , 128195.	2023	WOS & Scopus
6.	Chitoria, A. K., Mir, A., & Shah, M. A. (2023). A review of ZrO <sub>2</sub> nanoparticles applications and recent advancements. <i>Ceramics International</i> .	2023	WOS & Scopus
7.	Aalim, M., Irshad, I., Tantray, A. M., Sohail, A., Want, B., & Shah, M. A. (2023). Effect of chromium (Cr)-doping on electrochemical performance of microwave synthesized hematite ( $\alpha$ -Cr <sub>x</sub> Fe <sub>2-x</sub> O <sub>3</sub> ) nanosheets for supercapacitor application. <i>Journal of Materials Science: Materials in Electronics</i> , 34(18), 1409.	2023	WOS & Scopus
8.	Hydrothermally Synthesised Novel $\alpha$ -Bi <sub>2</sub> O <sub>3</sub> -ZnO Heterostructures for High Performance Supercapacitor Application.	2023	WOS & Scopus
9.	Mir, Arshid, et al. "Microwave-Assisted Hydrothermal Synthesis of Fe-Doped TiO <sub>2</sub> Photoanode for Photocatalytic Hydrogen Evolution." <i>ECS Journal of Solid State Science and Technology</i> 12.2 (2023): 021007.(DOI 10.1149/2162-8777/acb8d8)	2023	WOS & Scopus
10.	Aalim, Malik, Arshid Mir, Jaffar Farooq Mir, Reyaz Ahmad, Aamir Suhail, and M. A. Shah. "Morphologically Tunable Fabrication of Hematite Nanostructures for Enhanced Photoelectrochemical Performance." <i>ECS Journal of Solid State Science and Technology</i> 12, no. 2 (2023): 021002.	2023	WOS & Scopus



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	(DOI 10.1149/2162-8777/acb667)		
11.	Mir, Arshid, Reyaz Ahmad, Malik Aalim, Aamir Sohail and MA Shah. "Photoelectrochemical Study of Ti <sup>3+</sup> self-doped Titania nanotubes array: A comparative study between chemical and Electrochemical reduction." Chemical Physics Letter 811(2023):140219. ( <a href="https://doi.org/10.1016/j.cplett.2022.140219">https://doi.org/10.1016/j.cplett.2022.140219</a> )	2023	WOS & Scopus
12.	WANI, AAMIR SOHAIL, M. A. Shah, and Kowsar Majid. "Ultrathin $\alpha$ -Bi <sub>2</sub> O <sub>3</sub> Nanosheets Prepared via Hydrothermal Method for Electrochemical Supercapacitor Applications." ECS Journal of Solid State Science and Technology (2023). (DOI 10.1149/2162-8777/acaf17)	2023	WOS & Scopus
13.	Aalim, Malik and M.A. Shah. "Role of oxygen vacancies and porosity in enhancing the electrochemical properties of Microwave synthesized hematite ( $\alpha$ -Fe <sub>2</sub> O <sub>3</sub> ) nanostructure for Super capacitor application. Vacuum 210(2023): 111903. ( <a href="https://doi.org/10.1016/j.vacuum.2023.111903">https://doi.org/10.1016/j.vacuum.2023.111903</a> )	2023	WOS & Scopus
14.	Ahmad, Reyaz, and M. A. Shah. "Hydrothermally synthesised nickel oxide nanostructures on nickel foam and nickel foil for supercapacitor application." Ceramics International 49, no. 4 (2023): 6470-6478. ( <a href="https://doi.org/10.1016/j.ceramint.2022.10.179">https://doi.org/10.1016/j.ceramint.2022.10.179</a> )	2023	WOS & Scopus
15.	Ahmad, Reyaz and M.A. Shah. "Nickel Oxide (NiO) nanoflakes prepared through the hydrothermal method and integration into acetone gas sensing application." Chemical Papers 77, no. 1 (2023):413-412. ( <a href="https://doi.org/10.1007/s11696-022-02488-x">https://doi.org/10.1007/s11696-022-02488-x</a> )	2023	WOS & Scopus
16.	Mir, Arshid, et al. "Effect of concentration of Fe-dopant on the photoelectrochemical properties of Titania nanotube arrays." Ceramics International 49.1 (2023): 677-682. ( <a href="https://doi.org/10.1016/j.ceramint.2022.09.037">https://doi.org/10.1016/j.ceramint.2022.09.037</a> )	2023	WOS & Scopus
17.	Mir, Arshid and M.A. Shah. "Fabrication of highly stable Titania Photoanode with enhanced photocurrent density." Applied Physics A 128.12(2022): 1105. ( <a href="https://doi.org/10.1007/s00339-022-06198-1">https://doi.org/10.1007/s00339-022-06198-1</a> )	2022	WOS & Scopus
18.	Aalim, Malik, and M. A. Shah. "Modulation of Magnetism and Optical Properties of Hematite ( $\alpha$ -Fe <sub>2</sub> O <sub>3</sub> ) Nanorods Fabricated via Thermal Conversion of Hydrothermally Synthesized Akaganeite ( $\beta$ -FeOOH)." ECS Journal of Solid State Science and Technology 11.9 (2022): 091008. (DOI 10.1149/2162-8777/ac90ea)	2022	WOS & Scopus
19.	Mir SA, Shah MA. Thermodynamics of Graphene beyond the Linear Approximation. Communications in Theoretical Physics. 2022 May 14. ( <a href="https://doi.org/10.1088/1572-9494/ac6fc1">https://doi.org/10.1088/1572-9494/ac6fc1</a> )	2022	WOS & Scopus
20.	Mir, A., & Shah, M. A. (2022). Cyclic voltammetry response of TiO <sub>2</sub> nanostructures prepared via fast and facile microwave irradiation. Bulletin of Materials Science, 45(3), 119.	2022	WOS & Scopus
21.	Noor, Nairah, et al. "Ferulic acid loaded pickering emulsions stabilized by resistant starch nanoparticles using ultrasonication: Characterisation, in vitro Release and nutraceutical potential." Ultrasonic Sonochemistry 84(2022): 105967. ( <a href="https://doi.org/10.1016/j.ultsonch.2022.105967">https://doi.org/10.1016/j.ultsonch.2022.105967</a> )	2022	WOS & Scopus
22.	Zahoor, Irfana, Jaffar Farooq Mir, and M. A. Shah. "Advanced Nanomaterials for Infectious Diseases Therapeutics." Nanotechnology for Infectious Diseases. Springer, Singapore, 2022. 85-102. (DOI:	2022	WOS & Scopus

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23.	Gulzar A, Ayoub N, Mir JF, Alanazi AM, Shah MA, Gulzar A. In vitro and in vivo MRI imaging and photothermal therapeutic properties of Hematite ( $\alpha$ -Fe <sub>2</sub> O <sub>3</sub> ) Nanorods. <i>Journal of Materials Science: Materials in Medicine</i> . 2022 Jan;33(1):1( <a href="https://doi.org/10.1007/s10856-021-06636-1">https://doi.org/10.1007/s10856-021-06636-1</a> )	2022	WOS & Scopus
24.	Najar, K. A., Ahmad, S. N., Shah, M. A., Mushtaq, Z., & Altaf, S. (2022). A dual-layer approach for enhancing the tribological and machining performance of carbide tools in dry turning of mild-steel alloy. <i>International Journal of Machining and Machinability of Materials</i> , 24(1-2), 132-148.	2022	WOS & Scopus
25.	Parveen, Shazia, et al. "Trichoderma Based Synthesis of Silver Oxide Nanoparticles, Their Characterisation and Assessment of Antifungal Activity." <i>International Journal of Nanobiotechnology</i> 7.2(2021):19-25	2021	WOS & Scopus
26.	Kumar, R., Mahajan, K., Igwegbe, C. A., Aggarwal, A. K., Shah, M. A., & Sangeetika, X. (2021). Chemical engineering of separation membrane, interfacial strategies, and mathematical modeling: a thorough analysis. <i>Journal of Integrated Science and Technology</i> , 9(2), 75-84.	2021	WOS & Scopus
27.	Devi H.S., Boda, M.A , Rubab S, Parveen S. Wani A.H. & Shah M A(2021). Biosynthesis and antifungal activities of CuO and Al <sub>2</sub> O <sub>3</sub> nanoparticle. In <i>Comprehensive Analytical Chemistry</i> (Vol. 94, pp. 553-546). Elsevier	2021	WOS & Scopus
28.	Maini, Anil, and Mohammad Ashraf Shah. "Investigation on physical properties of nanosized copper oxide (CuO) doped with cobalt (Co): A material for electronic device application." <i>International Journal of Ceramic Engineering &amp; Science</i> 3.4 (2021): 192-199. ( <a href="https://doi.org/10.1002/ces2.10097">https://doi.org/10.1002/ces2.10097</a> )	2021	WOS & Scopus
29.	.Gautam, Alok Sagar, et al. "Temporary reduction in air pollution due to anthropogenic activity switch-off during COVID-19 lockdown in northern parts of India." <i>Environment, Development and Sustainability</i> 23.6(2021): 8774-8797 192-199 ( <a href="https://doi.org/10.1007/s10668-020-00994-6">https://doi.org/10.1007/s10668-020-00994-6</a> )	2021	WOS & Scopus
30.	Maini, A., and M. A. Shah. "Sol-Gel Fabricated CuO Thin Film: Characterization for Device Application." (2021). (DOI: 10.21272/jnep.13(5).05018)	2021	WOS & Scopus
31.	Siraj A, Naqash F, Shah MA, Fayaz S, Majid D, Dar BN. Nanoemulsions: formation, stability and an account of dietary polyphenol encapsulation. <i>International Journal of Food Science &amp; Technology</i> . 2021 Sep;56(9):4193-205. ( <a href="https://doi.org/10.1111/ijfs.15228">https://doi.org/10.1111/ijfs.15228</a> )	2021	WOS & Scopus
32.	Tantray AM, Mir JF, Mir MA, Rather J, Shah MA. Random Oriented ZnO Nanorods Fabricated through Anodization of Zinc in KHCO <sub>3</sub> Electrolyte. <i>ECS Journal of Solid State Science and Technology</i> . 2021 Aug 5;10(8):081003. ( <a href="https://doi.org/10.1149/2162-8777/ac147a">https://doi.org/10.1149/2162-8777/ac147a</a> )	2021	WOS & Scopus
33.	Showkat M, Shah MA. Wave function of perturbed Hamiltonian in graphene. <i>International Journal of Geometric Methods in Modern Physics</i> . 2021 Feb 29;18(02):2150025. ( <a href="https://doi.org/10.1142/S0219887821500250">https://doi.org/10.1142/S0219887821500250</a> )	2021	WOS & Scopus
34.	Mir MA, Shah MA, Ganai PA. Dielectric study of nanoporous alumina fabricated by two-step anodization technique. <i>Chemical Papers</i> . 2021 Feb;75(2):503-13. ( <a href="https://doi.org/10.1007/s11696-020-01323-x">https://doi.org/10.1007/s11696-020-01323-x</a> )	2021	WOS & Scopus

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35.	Mishra A, Basumallick S, Lu A, Chiu H, Shah M.A, Shukla Y & Tiwari A. The healthier healthcare management models for COVID-19. Journal of infection and public Health, 14(7), 927-937	2021	WOS & Scopus
36.	Mir JF, Rubab S, Shah MA. Hematite ( $\alpha$ -Fe <sub>2</sub> O <sub>3</sub> ) nanosheets with enhanced photo-electrochemical ability fabricated via single step anodization. Chemical Physics Letters. 2020 Aug 16;753:137584.(https://doi.org/10.1016/j.cplett.2020.137584)	2020	WOS & Scopus
37.	Qayoom M, Bhat R, Asokan K, Shah MA, Dar GN. Unary doping effect of A <sub>2</sub> <sup>+</sup> (A= Zn, Co, Ni) on the structural, electrical and magnetic properties of substituted iron oxide nanostructures. Journal of Materials Science: Materials in Electronics. 2020 Jun;31(11):8268-82.(https://doi.org/10.1007/s10854-020-03362-2)	2020	WOS & Scopus
38.	Tantray AM, Shah MA. Photo electrochemical ability of dense and aligned ZnO nanowire arrays fabricated through electrochemical anodization. Chemical Physics Letters. 2020 Mar 13:137346.(https://doi.org/10.1016/j.cplett.2020.137346)	2020	WOS & Scopus
39.	Mir JF, Rubab S, Shah MA. Photo-electrochemical ability of Iron Oxide nanoflowers fabricated via electrochemical anodization. Chemical Physics Letters. 2020 Jan 7:137088.(https://doi.org/10.1016/j.cplett.2020.137088)	2020	WOS & Scopus
40.	Muzaffar Ahmad Boda, <b>M. A. Shah</b> , Matiullah Khan, ÇağrıCırak. Enhancement in photoelectrochemical ability via re-engineering the band gap of multi-podal titania nanotubes on functionalizing with copper oxide nano-cubes. Applied Surface Science (2019).(https://doi.org/10.1016/j.apsusc.2019.143965)	2019	WOS & Scopus
41.	Henam Sylvia Devi, Farooq Ahmad, <b>M.A. Shah</b> , Shazia Parveen, Abdul Hamid Wani. Microwave synthesis of nanoparticles and their antifungal activities (2019). Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy (https://doi.org/10.1016/j.saa.2019.01.071)	2019	WOS & Scopus
42.	K. A. Najar, N. A. Sheikh, M. Mursaleen Butt and <b>M. A. Shah</b> . Enhancing the wear resistance of WC–Co cutting inserts using synthetic diamond coatings, Industrial Lubrication and Tribology (2019), (https://doi.org/10.1108/ILT-04-2017-0089)	2019	WOS & Scopus
43.	Sofi, A. H. and <b>Shah, M. A.</b> Structural and Electrical Properties of Copper Doped In <sub>2</sub> O <sub>3</sub> Nanostructures Prepared by Citrate Gel Processes. Material Research Express 6, (2019), 045039, (https://doi.org/10.1088/2053-1591/aafc0b)	2019	WOS & Scopus
44.	M.A Mir and <b>Shah, M. A &amp; P A Ganai</b> . Effect of etching on Nanoporous anodic Alumina, Iranian Journal of science & Technology (https://doi.org/10.1007/s40995-019-00708-2)	2019	WOS & Scopus
45.	Kaleem Ahmad Najar, N. A. Sheikh, M. Mursaleen Butt, Shuhaib Mushtaq, M. A. Shah. Engineered Synthetic Diamond Film as a Protective Layer for Tribological and Machining Applications: A Review. Journal of Bio- and Tribo-Corrosion (2019). (https://doi.org/10.1007/s40735-019-0252-6)	2019	WOS & Scopus
46.	HS Devi, AH Sofi, TD Singh, MA Shah. Facile Hydrothermal Synthesis of Cu and Al Oxide Nanoparticles for Photodegradation of Chlorpyrifos. Journal of nanoscience and nanotechnology 19 1-7 (2019).(https://doi.org/10.1166/jnn.2019.16844)	2019	WOS & Scopus

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47.	Muzaffar Ahmad Boda, and <b>M. A. Shah</b> . "Fabrication of ZnFe <sub>2</sub> O <sub>4</sub> /TiO <sub>2</sub> nanotube array composite to harness the augmented photocurrent density under visible light." <i>Applied Physics A</i> 124.1 (2018): 55, ( <a href="https://doi.org/10.1007/s00339-017-1485-1">https://doi.org/10.1007/s00339-017-1485-1</a> )	2018	WOS & Scopus
48.	Dar, F. A., & <b>Shah, M. A.</b> (2018). Structural, morphological and dielectric properties of Li-doped Al <sub>2</sub> O <sub>3</sub> . <i>Applied Physics A</i> , 124(7), 513. ( <a href="https://doi.org/10.1007/s00339-018-1925-6">https://doi.org/10.1007/s00339-018-1925-6</a> )	2018	WOS & Scopus
49.	A. H. Sofi, M. A Shah and K Ashokan, Structural, optical and electrical properties of ITO thin films, <i>Journal of Electronic Materials</i> Vol. 47, 2 (2018, ( <a href="https://doi.org/10.1007/s11664-017-5915-9">https://doi.org/10.1007/s11664-017-5915-9</a> )	2018	WOS & Scopus
50.	Sofi, A. H., Shah, M. A., & Asokan, K. (2018, April). Effect on the properties of ITO thin films in Gamma environment. In <i>AIP Conference Proceedings</i> (Vol. 1942, No. 1, p. 080034). AIP Publishing LLC.	2018	WOS & Scopus
51.	Parveen S, Wani A.H, Shah M.A, Devi H S, Bhat M Y & Koka J.A (2018). Preparation, characterisation and antifungal activity of iron oxide nanoparticles. <i>Microbial Pathogenesis</i> , 115, 287-292	2018	WOS & Scopus
52.	Sajad Hussain Din, M. A. Shah, N. A. Sheikh, M. Mursaleen Butt. CVD Diamond. <i>Trans Indian Inst Met</i> (2018).( <a href="https://doi.org/10.1007/s12666-018-1454-1">https://doi.org/10.1007/s12666-018-1454-1</a> )	2018	WOS & Scopus
53.	Henam Sylvia Devi, Muzaffar Ahmad Boda, M. A. Shah, Shazia Parveen and Abdul Hamid Wani. Green synthesis of iron oxide nanoparticles using <i>Platanus orientalis</i> leaf extract for antifungal activity (2018). ( <a href="https://doi.org/10.1515/gps-2017-0145">https://doi.org/10.1515/gps-2017-0145</a> )	2018	WOS & Scopus
54.	Sofi, A. H. and Shah, M. A. Structural and Electrical Properties of Copper Doped In <sub>2</sub> O <sub>3</sub> Nanostructures Prepared by Citrate Gel Processes. <i>Materials Research Express</i> (2018, ( <a href="https://doi.org/10.1088/2053-1591/aafc0b">https://doi.org/10.1088/2053-1591/aafc0b</a> )	2018	WOS & Scopus
55.	Muzaffar Ahmad Boda, and M. A. Shah. "Enhanced photo-electrochemical efficiency by reducing recombination rate in branched TiO <sub>2</sub> nanotube array on functionalizing with ZnO micro crystals" <i>Materials Research Express</i> 4.7 (2018): 06400. ( <a href="https://doi.org/10.1088/2053-1591/aac925">https://doi.org/10.1088/2053-1591/aac925</a> )	2018	WOS & Scopus
56.	Muzaffar Ahmad Boda, and M. A. Shah. "Enhanced photo-electrochemical efficiency by reducing recombination rate in branched TiO <sub>2</sub> nanotube array on functionalizing with ZnO micro crystals" <i>Materials Research Express</i> 4.7 (2018): 06400. ( <a href="https://doi.org/10.1088/2053-1591/aac925">https://doi.org/10.1088/2053-1591/aac925</a> )	2018	WOS & Scopus
57.	K. A. Najar, N. A. Sheikh, M. Mursaleen Butt and M. A. Shah. Enhancing the Wear Resistance of WC–Co Cutting Inserts using Synthetic Diamond Coatings. <i>Industrial Lubrication and Tribology</i> , Emerald Publishing house. (2018), ( <a href="https://doi.org/10.1108/ILT-04-2017-0089">https://doi.org/10.1108/ILT-04-2017-0089</a> )	2018	WOS & Scopus
58.	S. H. Din, M. A. Shah, and N. A. Sheikh, "Tribological Performance of Titanium Alloy Ti–6Al–4V via CVD–diamond Coatings", <i>Journal of Superhard Materials</i> , Springer, 2018, Vol. 40, No. 1, pp. 1–14, ( <a href="https://doi.org/10.3103/S1063457618010057">https://doi.org/10.3103/S1063457618010057</a> )	2018	WOS & Scopus
59.	Muzffar Ahmad Boda and M.A Shah. "Enhanced photo-electrochemical potential of Fe <sub>2</sub> O <sub>3</sub> modified TiO <sub>2</sub> nanotube array with multiple legs." <i>Journal of Materials Science: Materials in Electronics</i> : 1-6(2017), ( <a href="https://doi.org/10.1007/s10854-017-8410-4">https://doi.org/10.1007/s10854-017-8410-4</a> )	2017	WOS & Scopus
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61.	Najar K A, Sheikh N A & Shah MA (2017). Enhancement in tribological and mechanical properties of cemented tungsten carbide substrate using CVD-diamond coating. <i>Tribology in industry</i> , 39(1), 20	2017	WOS & Scopus
62.	Akhood, S. A., Rubab, S., & Shah, M. A. (2017). Enhanced cycling properties and better rate capabilities of Al-doped LiMn <sub>2</sub> O <sub>4</sub> nanorods and nanospheres. <i>Materials Research Express</i> , 4(10), 105016.	2017	WOS & Scopus
63.	Najar, K. A., Sheikh, N. A., & Shah, M. A. A comparative investigation of mechanical and tribological properties of multilayered CVD-diamond coatings: effect of boron doping. <i>Advanced Materials Letters</i> . 2017, 8(9), 932-938 ( <a href="https://doi.org/10.5185/amlett.2017.6959">https://doi.org/10.5185/amlett.2017.6959</a> )	2017	WOS & Scopus
64.	Muzaffar Ahmad Boda, and M. A. Shah "Fabrication mechanism of compact TiO <sub>2</sub> nanotubes and their photo-electrochemical ability." <i>Materials Research Express</i> 4.7 (2017): 075908, ( <a href="https://doi.org/10.1088/2053-1591/aa7cd2">https://doi.org/10.1088/2053-1591/aa7cd2</a> )	2017	WOS & Scopus
65.	Din, S. H., Shah, M. A., & Sheikh, N. A. (2017). Deposition of dual-layer coating on Ti <sub>6</sub> Al <sub>4</sub> V. <i>Surface Topography: Metrology and Properties</i> , 5(1), 015002, ( <a href="https://doi.org/10.1088/2051-672X/aa5cd0">https://doi.org/10.1088/2051-672X/aa5cd0</a> )	2017	WOS & Scopus
66.	Malla, A. M., Dar, F. A., & Shah, M. A. Influence of Precursor Concentration on Structural, Morphological and Optical Properties of Hematite (α-Fe <sub>2</sub> O <sub>3</sub> ) Nanoparticles. <i>Current Nanomaterials-Benathem Publication</i> . Volume 2, Issue 1, 2017. ( <a href="https://doi.org/10.2174/2405461502666170405165916">https://doi.org/10.2174/2405461502666170405165916</a> )	2017	WOS & Scopus
67.	Akhood S A, Sofi AH, Rubab S & Shah M A . Enhanced structural and electrochemical properties LiMn <sub>2</sub> O <sub>4</sub> Nanocubes. <i>Journal of Electronic Material</i> , (2016)1-7. Springer, ( <a href="https://doi.org/10.1007/s11664-016-4741-9">https://doi.org/10.1007/s11664-016-4741-9</a> )	2016	WOS & Scopus
68.	Sofi, A. H., Abubakr, B., & Shah, M. A. Enhancement of figure of merit of thermoelectric materials: a new theoretical approach. <i>Thermophysics and Aeromechanics</i> , 23(2), (2016). 255-260. Springer, ( <a href="https://doi.org/10.1134/S0869864316020128">https://doi.org/10.1134/S0869864316020128</a> )	2016	WOS & Scopus
69.	Maini, A., Sofi, A. H., & Shah, M. A. (2016). Agglomerated Copper Oxide (CuO) Nanostructures and Their Growth Mechanism. <i>Advanced Science Letters</i> , 22(4), 1042-1044. ( <a href="https://doi.org/10.1166/asl.2016.6969">https://doi.org/10.1166/asl.2016.6969</a> )	2016	WOS & Scopus
70.	Sajad Hussain Din, M. A. Shah, N. A. Sheikh, K. A. Najar, K. Ramasubramanian, S. Balaji, M. S. Ramachandra Rao. Influence of boron doping on mechanical and tribological properties in multilayer CVD diamond coating system. <i>Bulletin of Materials Science</i> 39(7) · December 2016, ( <a href="https://doi.org/10.1007/s12034-016-1311-y">https://doi.org/10.1007/s12034-016-1311-y</a> )	2016	WOS & Scopus
71.	A. H. Sofi & M. A. Shah. <i>Nanotechnology: An Insight</i> . LAP Lambert Academic Publishing, Germany (2016). ISBN: 978-3-659-84978-7.	2016	WOS & Scopus
72.	Kaleem Ahmad Najar, Nazir Ahmad Sheikh, Sajad Din & Mohammad Ashraf Shah. Effect of CVD-diamond coatings on the tribological performance of cemented tungsten carbide substrates. <i>Jurnal Tribologi</i> , 9 (2016) 1-17 (DOI: 10.13140/RG.2.1.3610.5840).	2016	WOS & Scopus
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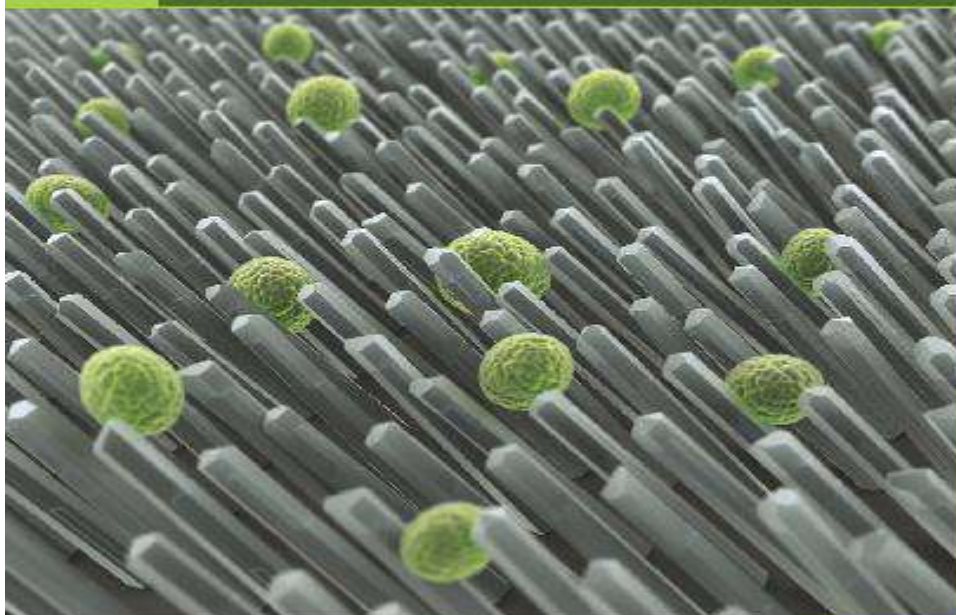
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## Dr. M J Zarabi, M.E., Ph.D.

FNAE, FNASc, FIETE

Consultant & Independent Director

Founder Chairman, Masamb Electronics

Independent Director, Dixon Technologies

Formerly, CMD, SCL, Mohali Punjab

Advisor (Technology), Samtel

Sr. Advisor, Infineon Technologies **Chairman, BOG, NIT, Srinagar**

**Letter of Recommendation**

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March 2, 2021

It has been my pleasure to know and interact with Prof.(Dr) M A Shah of the Department of Physics, National Institute of Technology, Srinagar during my tenure as Chairman, Board of Governors of the institute and thereafter. I have found Prof.Shah to be highly knowledgeable in his field of research and an exceptionally inspirational teacher. He has a very sound academic record and strong inclination towards pursuit of knowledge particularly Nanotechnology about which he is very passionate.

He is also a man of initiative and has greatly contributed in spearheading science education and research and widening the horizon of technological knowledge by taking up certain important Govt of India sponsored projects. Prof. Shah has tremendous organizational capabilities and has convened several National and International Conferences including important biennial conference on Nanotechnology in collaboration with IIT, Kanpur. He has also been the force behind organizing the INSPIRE program of DST, Govt of India in the region to motivate a large number of bright students to take up science education.

I have also known Prof Shah as an upright and diligent person infused with the ideas of cooperation. I wish him all success in his future endeavours.

Dr. M J Zarabi  
C 28, Pamposh Enclave  
New Delhi 110048,India  
Mobile # +919810055795

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INTERNATIONAL CONFERENCE  
**"Nanotechnology for Better Living"**

FROM: 7-11 APRIL 2019

Jointly Organized by NIT Srinagar & IIT Kharagpur



This special citation is presented to

**Dr. M A Shah**

as a token of appreciation for the outstanding services & accomplishments in organising the International Conference on Nanotechnology for Better Living- ICNBL-2019, from 7-11 April, 2019, a joint initiative of NIT Srinagar & IIT Kharagpur.

Your commitment, enthusiasm and management in ICNBL-19 is a source of inspiration for young generation. The Indian Institute of Technology Kharagpur expresses the gratitude for sincerity and dedication.

*We wish you a great future.*

Given this day, the 7 th of April 2019

*P. Banerji*  
Prof. P Banerji

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GOVERNOR  
JAMMU & KASHMIR



Dear Dr Shah,

RAJ BHAVAN  
SRINAGAR-190001  
Dt: 13<sup>th</sup> May, 2013  
No: PS/HQ/2013/365

Thank you for your letter of 1<sup>st</sup> May and for your kind good wishes.

I have since received the copy of your book on Nano Sciences and have asked Mr Vishesh Paul Mahajan, my Private Secretary, to consult with you and identify an appropriate time when this book could be formally released at Raj Bhavan.

With best wishes.

Yours sincerely,

  
(N.N. Vohra)

**Dr. M.A. Shah,**  
Convener, INSPIRE,  
Department of Physics,  
National Institute of Technology,  
Srinagar – 190 006.

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Worship is nothing but work