

Curriculum Vitae

Jaspal Parganram Bange

Phone (Mobile) : +91-9422782762; +91-9922998438
e-Mail: jaspal_bange@hotmail.com
jaspalbange@gmail.com



Objective: To excel in the area of research related to semiconductor and optical materials deposition and device fabrication.

Personal: **Age:** 45 year (DOB: 19th June 1976)
Nationality: Indian
Marital Status: Married
Gender: Male

Field of Research Interest: Optoelectronic, Dielectric, Semiconductor materials, Polymer waveguides.

Linguistic ability: English, Hindi, Punjabi, Marathi – Fluent
Japanese – Basic

Avocation: Reading, Drawing, Photography, Traveling and listening to music

Web: http://www.linkedin.com/profile/view?id=31310060&trk=tab_pro

Education:

Examination	University/ Board	Month & Year of Passing	Subjects SPL/Gen	% of Marks	Class/Div/ Grade awarded
Ph.D.	NMU*, Jalgaon	April 2008	Electronics	----	Awarded
Master's Degree	NMU*, Jalgaon	December 1999	Electronics	66.30	I st
Bachelor's Degree	NMU*, Jalgaon	June 1997	Electronics	64.16	I st
Higher Secondary	Pune	March 1993	Science	58.67	II nd
Matriculation SSC	Pune	March 1991	General	61.71	I st

* NMU: North Maharashtra University

Ph. D. Thesis Title:

Growth and Characterization of Doped and Undoped Films Deposited by Flame Hydrolysis.

Technical Experience/Skills:

Processing	<ul style="list-style-type: none"> ✿ Wafers Handling and Cleaning, ✿ Deposition of SiO₂, TiO₂ doped SiO₂, TiO₂, SiOC, Silicon Nitride, Silicon oxynitride, Ta₂O₅, ZnO films using <ul style="list-style-type: none"> • Thermal-CVD • Plasma Enhanced CVD • Atmospheric Plasma Enhanced CVD • Flame Hydrolysis Deposition system • Atmospheric Pressure Plasma Enhanced Chemical Vapor Deposition system (APPECVD) • Sputtering ✿ Spin coating of Optical photo resist, Glacia and PMMA. ✿ Photolithography technique. ✿ Etching of SiO₂ and doped SiO₂ films.
Thin Film Characterizations	<ul style="list-style-type: none"> ✿ Ellipsometry ✿ Optical Microscopy ✿ FTIR Spectroscopy ✿ Atomic Force Microscopy (AFM) ✿ Scanning Electron Microscopy (SEM) ✿ Four-Probe Measurements etc
Optical characterization	<ul style="list-style-type: none"> ✿ Photoluminescence measurement
Instrumentation Design and Fabrication	<ul style="list-style-type: none"> ✿ Flame Hydrolysis Deposition system (FHD) ✿ Thermal Chemical Vapor Deposition system ✿ Plasma Enhanced Chemical Vapor Deposition system (PECVD) ✿ Resistive furnaces ✿ Atmospheric Pressure Plasma Enhanced Chemical Vapor Deposition system (APPECVD) ✿ Spin Coating Machine, etc
Software	<ul style="list-style-type: none"> ✿ OptiBPM (BPM simulation tool)
Others	<ul style="list-style-type: none"> ✿ Planning and implementation of clean room for semiconductor material processing ✿ Work Experience in Class-10000 clean room

Professional Experience:		
Sr.	Post	Period
01	Assistant Professor (Contract basis) Department of Electronics, KBC North Maharashtra University, Jalgaon, India	01 st Oct. 2021 to 15 th June 2022
02	Assistant Professor (Contract basis) Department of Electronics, KBC North Maharashtra University, Jalgaon, India	07 th July 2021 to 25 th Sept. 2021
03	Assistant Professor (Contract basis) Department of Electronics, KBC North Maharashtra University, Jalgaon, India	03 rd Aug. 2020 to 02 nd July 2021
04	Assistant Professor (Contract basis) Department of Electronics, KBC North Maharashtra University, Jalgaon, India	18 th Aug. 2019 to 22 nd May 2020
05	Assistant Professor (Contract basis) Department of Electronics, North Maharashtra University, Jalgaon, India	02 nd July 2018 to 23 rd May 2019
06	Assistant Professor (Contract basis) Department of Electronics, North Maharashtra University, Jalgaon, India	18 th Aug. 2017 to 21 st May 2018
07	Assistant Professor (Contract basis) Department of Electronics, North Maharashtra University, Jalgaon, India	10 th Mar. 2017 to 31 st May 2017
08	Assistant Professor Department of Electronics, North Maharashtra University, Jalgaon, India	09 th Aug. 2012 to 08 th Jan. 2017
09	Senior Project Officer Lovely Professional University, Phagwara, Punjab, India	16 th Jan. 2012 to 02 nd Aug. 2012
10	Post-doc Fellow Advanced Technology Research Center (GU-A TEC), Gunma University, Gunma, Japan	16 th Feb. 2009 to 31 st March 2011
11	Research Associate in Council for Scientific and Industrial Research (CSIR) Sponsored project at DoE [†] , NMU [‡] , Jalgaon	20 th Feb. 2008 to 30 th June 2008
12	Research Scientist in Instrument Research and Development Establishment (IRDE) – Defense Research and Development Organization (DRDO) Sponsored project at DoE [†] , NMU [‡] , Jalgaon	1 st March 2005 to 28 th Feb. 2006
13	Project Associate in DST Sponsored project Phase-II-E at DoE [†] , NMU [‡] , Jalgaon	2 nd May 2002 to 1 st May 2004
14	Project Associate in Department of Science and Technology (DST) Sponsored project Phase-II at DoE [†] , NMU [‡] , Jalgaon	1 st Sept. 2001 to 28 th Feb. 2002

15	Project Assistant in Council for Scientific and Industrial Research (CSIR) Sponsored project at DoE [†] , NMU [‡] , Jalgaon	5 th July 2001 to 30 th Aug. 2001
16	Junior Research Fellow in All India Council for Technical Education (AICTE) Sponsored project at DoE [†] , NMU [‡] , Jalgaon	1 st Feb. 2000 to 31 st Jan. 2001

[†]DoE: Department of Electronics

[‡]NMU: North Maharashtra University

Publications:

Journal Articles:

Sr. No.	Title of Paper	Author(s)	Name & Vol. of Journal & Year	Page No.
01	Development of atmospheric pressure glow discharge plasma assisted CVD system for the deposition of SiO _x coatings	H. Pardeshi, P.P. Patil and J. Bange	Journal of Instrumentation, Vol. 14, 2019 1748-0221 1.415	x
02	Effect of film thickness on structural and optical properties of sol-gel spin coated aluminum doped zinc oxide (Al:ZnO) thin films	R K Pandey, Koushik Ghosh, Swati Mishra, Jaspal P Bange , P K Bajpai and D K Gautam	Materials Research Express, Volume 5, Number 8, 2018	x
03	Effect of cerium composition on optical and structural properties of cerium doped ZnO nanowires	Chetan K. Kasar, Jaspal P. Bange , D.S. Patil	J. Mater Sci.: Mater Electron, Vol. 28(11), 2017 (Impact Factor 1.569)	11217–11221
04	Blue Luminescence of Ba _{0.05} Zn _{0.95} O Nanostructure	Chetan K. Kasar, Ulhas S Sonawane, Jaspal P. Bange , D.S. Patil	J. Mater Sci.: Mater Electron, Vol. 27(8), 2016 (Impact Factor 1.569)	8126–8130
05	Optical and structural properties of nanoscale undoped and cerium doped ZnO with granular morphology	Chetan K. Kasar, Ulhas S Sonawane, Jaspal P. Bange , D.S. Patil	J. Mater Sci.: Mater Electron, Vol.27(11), 2016 (Impact Factor 1.569)	11885-11889
06	Design and construction of low cost keyboard operated propeller LED display.	Suraj C. Shinde, Jaspal Bange , D. K. Gautam	SPEED Journal of Research in Electronics, Vol. 1, issue 1, 2014 (Impact Factor 0.0)	31-39
07	Structural analysis of RF sputtered Er doped Ta ₂ O ₅ films	Jaspal Parganram Bange , Mayank Kumar Singh, Kazusa Kano, Kenta Miura and Osamu Hanaizumi	Journal of Key Engineering Materials, Vol. 459, 2011 (Impact Factor 0.340)	32-37

08	Effect of OMCTS flow rate on SiO ₂ films grown by flame Hydrolysis deposition	J. P. Bange , Lalit S. Patil and D. K. Gautam	Journal of Optoelectronics and Advanced Materials Rapid Communication , Vol. 4(4), 2010 (Impact Factor 0.304)	584-587
09	Influence of Titanium-tetra-isopropoxide flow in TiO ₂ doped SiO ₂ films for waveguide applications	Jaspal P. Bange , Lalit S. Patil and D. K. Gautam	Journal of Optoelectronics & Biomedical Materials Vol. 6 No.4, 2009 (Impact Factor 0.0)	319-324
10	Intense Photoluminescence from erbium-doped tantalum oxide thin films deposited by sputtering	Mayank Kumar Singh, Genjoh Fusegi, Kazusa Kano, Jaspal Parganram Bange , Kenta Miura and Osamu Hanaizumi	IEICE Electronics Express Vol. 6, No. 23, 2009 (Impact Factor 0.46)	1676-1682
11	Deposition of oriented nanocrystalline TiO ₂ films	Deepak R. Patil, Lalit S. Patil, Jaspal P. Bange , D. K. Gautam	Optoelectronics And Advanced Materials , Vol. 10, No. 12, 2008 (Impact Factor 0.457)	3251-3256
12	Growth and characterization of SiO ₂ films deposited by flame hydrolysis deposition system for photonics device application	J. P. Bange , L. S. Patil and D. K. Gautam	Progress In Electromagnetics Research M , Vol. 3, 2008 (Impact Factor 0.0)	165-175
13	Fabrication of one-dimensional photonic crystals using porous silicon layers	R. S. Dubey, L. S. Patil, J. P. Bange , D. K. Gautam	Optoelectronics And Advanced Materials – Rapid Communications , Vol. 1, No. 12, 2007 (Impact Factor 0.304)	655-658
14	TEOS-PECVD System for high growth rate deposition of SiO ₂ films.	A.M. Mahajan, L.S. Patil, J. P. Bange and D.K. Gautam	Journal ' <i>Vacuum</i> ', Vol. 79 (2005) (Impact Factor 1.317)	194-202
15	Effect of deposition temperature on the chemical properties of thermally deposited Silicon Nitride Films.	L. S. Patil, R. K. Pandey, Jaspal P. Bange , S. A. Gaikwad and D. K. Gautam	Journal of Optical Material , Vol. 27 (2005) (Impact Factor 2.023)	663-670
16	Growth and Characterization of Silicon Nitride films for optoelectronics application.	R. K. Pandey, L.S. Patil, J. P. Bange , D.K. Gautam.	Journal of Optical Material . Vol. 27 (2004) (Impact Factor 2.023)	139-146
17	Growth of SiO ₂ films by TEOS_PECVD system for microelectronics applications	A.M. Mahajan, L.S. Patil, J. P. Bange , D.K. Gautam	Journal of Surface Coatings & Technology , Vol. 183(2) (2004) (Impact Factor 1.867)	295-300
18	Growth and Characterization of SiON thin films by using thermal-CVD machine	R.K. Pandey, L.S. Patil, J. P. Bange , D.R. Patil, A.M. Mahajan D.S. Patil, D. K. Gautam	Journal of Optical Materials , Vol. 25(2004) (Impact Factor 2.023)	1-7
09	Growth and Characterization	A.M. Mahajan, L.S. Patil,	Journal of Optics ,	53-58

	of SiO ₂ films for the fabrication of Optical Waveguides	J. P. Bange , and D. K. Gautam	vol.31 (2), 2002 (Impact Factor 0.0)	
--	---	---------------------------------------	--	--

Articles in Books:

1	Growth of SiO ₂ films by Flame Hydrolysis Deposition System for Biosensor Application	Jaspal P. Bange , Lalit S. Patil and D. K. Gautam	Frontiers of Microwave and Optoelectronics, ISBN 978-81-89927-19-6 , 2008.	168-176
2	Effect of deposition temperature on the properties of Silicon nitride films grown by thermal CVD system	R. K. Pandey, L. S. Patil, J. P. Bange , R. S. Dubey, S. A. Gaikwad and D. K. Gautam	Frontiers of Microwave and Optoelectronics, ISBN 81-88342-44-0 , 2004.	298-302

Conference Papers:

01	Structural and Optical Properties of Single Crystalline Cerium Doped ZnO Thin Films	Chetan K. Kasar, Ulhas S. Sonawane, Jaspal P. Bange and D.S. Patil	Recent Trends in Materials and Devices, Springer Proceedings in Physics 178, DOI 10.1007/978-3-319-29096-6_32	237-241
02	Study of Varying Tubes in Carbon Nanotube FET Based Inverter	Shalaka V. Bhole, Ulhas S. Sonawane, Chetan K. Kasar, Jaspal P. Bange and D.S. Patil	Recent Trends in Materials and Devices, Springer Proceedings in Physics 178, DOI 10.1007/978-3-319-29096-6_69	535-542
03	Design and analysis of single mode polymer waveguide using PBW technique	Jaspal Parganram Bange , Yuki Machida, Masato Uehara, Amarachukwu Valentine Umenyi, Kenta Miura and Osamu Hanaizumi	Int. Conference on Advanced Micro-Device Engineering, AMDE-2010 , Japan	2P37
04	Comparison of TiO ₂ -Doped SiO ₂ Films from Two Organosilicon Precursors	Jaspal P. Bange , L.S. Patil and D. K. Gautam	Asia Communications and Photonics Conference and Exhibition, ACP2010 , Shanghai, China	P62
05	Effect of substrate temperature on properties of SiO ₂ films by Flame Hydrolysis	Jaspal P. Bange , L.S. Patil and D. K. Gautam	Int. conference on MEMS and Optoelectronics Technologies, ICMOT-2010 , India	50-52
06	Synthesis of TiO ₂ Films by Flame Hydrolysis Deposition System	Jaspal P. Bange , L.S. Patil and D. K. Gautam	International Conference on Nanotechnology and Biosensors, ICNB-2010 , India	82
07	Fabrication and optimization of green light emitting Er-Ta ₂ O ₅ films	Mayank Kumar Singh, Genjoh Fusegi, Kazusa Kano, Jaspal P. Bange , Kenta Miura and Osamu Hanaizumi	International conference on Advanced Micro-Device Engineering, AMDE-2009 , Japan	2P25 pp103

08	TiO ₂ -doped SiO ₂ films deposited by Flame Hydrolysis Deposition system for waveguide applications	Jaspal P. Bange , O. Hanaizumi, Lalit S. Patil and D. K. Gautam	International Conference on Optics and Photonics- ICOP 2009 , Chandigarh, India	B3.6
09	SiO ₂ -TiO ₂ Nano Composite Film by Flame Hydrolysis Deposition	Jaspal P. Bange , L. S. Patil and D. K. Gautam	Asia Communications and Photonics Conference and Exhibition, ACP2009 , Shanghai, China ISBN: 978-1-55752-877-3	THG3
10	Effect of titanium tetra-isopropoxide flow rate on SiO ₂ -TiO ₂ composite films by FHD	Jaspal P. Bange , L. S. Patil and D. K. Gautam	International Conf. on Advanced Materials, ICAM2009 , Rio de Janeiro, Brazil	A576
11	Effect of annealing on the films grown by Flame Hydrolysis Deposition system	Jaspal P. Bange , Lalit S. Patil and D. K. Gautam	Proceeding of Int. Conf. on Electronics and Photonics Materials, Devices and System EPMDS – 2006 , India	B39-B41
12	Automation of Flame Hydrolysis Deposition system for optical device fabrication	Jaspal P. Bange , L. S. Patil and D. K. Gautam	Proceeding of National Symposium on Instrumentation NSI – 30 , India	885-894
13	Monitoring and control of gas flow for the effective deposition of films in MOCVD for quantum well devices	V. P. Chavan, E. R. Khan, Rajdeep Gautam, M. P. Bhole, Jaspal P. Bange , D. S. Patil and D. K. Gautam	Proceeding of International Conference on Optoelectronics Technology, ICOT – 2004 , India	472-480
14	Automation of process parameters of indigenously developed FHD system	Jaspal P. Bange , Lalit S. Patil, Vinod Patil, D. Bhavar, Suchita Bhangale and D. K. Gautam	Proceeding of International Conference on Optoelectronics Technology, ICOT – 2004 , India	453-461
15	Effect of variation in O ₂ / TEOS flow ration on properties of SiO ₂ films deposited by PECVD	A. M. Mahajan, L. S. Patil, J. P. Bange and D. K. Gautam	Proc. of Int. Conf. on Optoelectronics, Fiber optics and Photonics, PHOTONICS – 2002 , Mumbai, India.	OMDP-17 pp. 286
16	Effect of Chamber Pressure Variation on Refractive Index of SiO ₂ Films Developed by PECVD	A. M. Mahajan, L. S. Patil, J. P. Bange and D. K. Gautam	Proc. of int. conference on Broad Band Optical Fiber Communication Technology, BBOFCT – 2001 , India	283-286
17	Technology development for the optical rib waveguide structures on silicon substrate	Chitrarekha Chaudhari, Dnyaneshwar S. Patil, L. S. Patil, J. P. Bange and D. K. Gautam	Proc. of international conference on fiber optics and photonics, PHOTONICS 2000 , India	786-788

Member of Professional Society:

- 1) Life member of Instrumentation society of India.
- 2) Life member of Material Research society of India.

Awards and Honors:

- 1) Satgur Prasad-Prag Parmeshwari Devi Memorial Award of The Optical Society of India for the best paper presented by an author aged below 30 years at the annual symposium of Optical Society of India on January 12 -14, 2004 held at Jalgaon.