

Faculty Profile

Faculty Name	Dr. (Mrs.). Vinay Khatri
Designation	Professor
Qualification	Ph.D., MPhil, M.Sc.(PHYSICS)
Email	Hod.ash@piet.co.in
Area of Interest	Nonlinear Optics
Work Experience (Total)	20 Years
• Teaching	20 years
• Research	Partially
• Industry	Nil
• Others	Nil
Courses taught at Diploma/ Post Diploma/ Under Graduate/ Post Graduate/ Post Graduate Diploma Level	<ul style="list-style-type: none"> • LASER TECHNOLOGY (FINAL YEAR) • ENGGINEERING PHYSICS • APPLIED PHYSICS • SEMICONDUCTOR PHYSICS • ELECTROMAGNETIN THEROY FOR B.TECH (FIRST YEAR)
Membership of Professional Bodies	<ul style="list-style-type: none"> • Life member of Semiconductor Society of India. • Life member of Indian Laser Association (ILA).
Research Publications	25
• Research Papers UGC-CARE	
• Research Papers SCOPUS	5
• Research Papers WoS/SCI/ABDC	
• List of Publications	<ol style="list-style-type: none"> 1. Vinay Kumari, Vinod Kumar, B. P. Malik, R. M. Mehra and Devendra Mohan. "Nonlinear Optical Properties of Erbium Doped Zinc Oxide (EZO) Thin Films"Optics Communication (Elsevier), 285, 2182-2188(2012). 2. Vinay Kumari, Vinod Kumar, Devendra Mohan, Purnima, B. P. Malik and R.M.Mehra. "Effect of Surface Roughness on Laser Induced Nonlinear

	<p>Optical Properties of Annealed ZnO Thin Films” Journal of Material Science and Technology (Elsevier), 28(6),506-511(2012).</p> <p>3. Vinay Kumari, Vinod Kumar, B.P.Malik, Devendra Mohan and R. M. Mehra. “Laser Induced Nonlinear Optical Properties of Zinc Oxide Thin Film Prepared by Sol-Gel Method”Journal of nano-electron.Physics,3, No 1,601-609 (2011).</p> <p>4. Devendra Mohan,Vinay Kumari,Purnima, “Sensor Protection using Nonlinear Properties of Erbium doped Zinc Oxide (EZO) thin film prepared by sol-gel method” IEEE XPLORE,DOI-10.1109/DSR.2011.6026855,2011.</p> <p>5. Vinay Kumari, Vinod Kumar, B. P. Malik, Devendra Mohan and Arun Gaur,”Two Photon Absorption and Refraction in Bulk OF Semiconducting Materials”Optics,AIP Conf.Proc.1391,694-696(2011),DOI:10.1063/1.3643652.</p>
Book and Chapter Publications	nil
• Books Authored published by International Publishers	
• Books Authored published by National Publishers	
• Publication of Chapter in Edited Books	
• Editor of Book by International Publishers	
• Editor of Book by National Publishers	
• Translation Work of Book	
• List of Book and Chapter Publications	
Patents	nil
• Published	

• List of published patent(s)	
• Filed	
• List of filed patent(s)	
PhD Guidance	nil
• Degree Awarded	
• Thesis Submitted	
M.Tech. Guidance	nil
• Degree Awarded	
• Thesis Submitted	
Research Project	nil
• List of Research project	
Consultancy	nil
• List of Consultancy	
Awards & Honours	nil
• List of Awards & Honours	<ul style="list-style-type: none"> ▪ Honoured with certificate of Appreciation for organising Entrepreneur Awareness camp and FDP in PIET in collaboration With ABES,Ghaziabad funded by DST from past 3 consecutive years. ▪ Honoured with certificate of Appreciation from DSW,M.D.U.(Rohtak) for upliftment of cultural activities among students during the Technical zone youth festival. ▪ Recipient of “Colour of the College” during graduation. ▪ National Social Service participant. ▪ Begged many meritorious certificates and awards in various extracurricular/cultural activities. ▪ National level scholarship-school ▪ Head Girl-school ▪ Captain “Laxmi Bai” House–school (10,11,12).
Invited lectures / Resource Person/ paper	Chaired a session (Physical Sciences) in International Conference on Intelligent

<p>presentation in Seminars/ Conferences/full paper in Conference</p>	<p>Systems: Approaches, Technologies and Networks (2019) sponsored by ICSSR, MHRD, NEW Delhi at PIET, Samalkha .</p>
<ul style="list-style-type: none"> • International (Abroad) 	<p>01 lecture</p>
<ul style="list-style-type: none"> • International (Within Country) 	<p>04- papers</p>
<ul style="list-style-type: none"> • National 	<p>12</p>
<ul style="list-style-type: none"> • List of published papers 	<p>(A) Journals</p> <ol style="list-style-type: none"> 1. Vinay Kumari, Vinod Kumar, B. P. Malik, R. M. Mehra and Devendra Mohan. "Nonlinear Optical Properties of Erbium Doped Zinc Oxide (EZO) Thin Films" Optics Communication (Elsevier), 285, 2182-2188(2012). 2. Vinay Kumari, Vinod Kumar, Devendra Mohan, Purnima, B. P. Malik and R.M.Mehra. "Effect of Surface Roughness on Laser Induced Nonlinear Optical Properties of Annealed ZnO Thin Films" Journal of Material Science and Technology (Elsevier), 28(6),506-511(2012). 3. Vinay Kumari, Vinod Kumar, B.P.Malik, Devendra Mohan and R. M. Mehra. "Laser Induced Nonlinear Optical Properties of Zinc Oxide Thin Film Prepared by Sol-Gel Method" Journal of nano-electron.Physics,3, No 1,601-609 (2011). 4. Devendra Mohan, Vinay Kumari, Purnima, "Sensor Protection using Nonlinear Properties of Erbium doped Zinc Oxide (EZO) thin film prepared by sol-gel method" IEEE XPLORE, DOI-10.1109/DSR.2011.6026855,2011. 5. Vinay Kumari, Vinod Kumar, B. P. Malik, Devendra Mohan and Arun Gaur,"Two Photon Absorption and Refraction in Bulk OF Semiconducting Materials" Optics, AIP Conf.Proc.1391,694-696(2011), DOI:10.1063/1.3643652. <p>(B) Conferences :(attended and paper presented)</p> <p>International:</p> <ol style="list-style-type: none"> 1. Vinay Kumari, Devendra Mohan; Optical society of India (OSI),

International Conference in advanced optics and Photonics, November 23-26, 2017 (ICAOP-2017).

2. Vinay Kumari, Devendra Mohan, B. P. Malik, R.M.Mehra “Optical limiting in Annealed ZnO Thin Films Developed by Sol-Gel Method” Indo–Japan International conference on Frontier Nanomaterial for Energy(FNE-2012) at Sharda University, Greater Noida,U.P.
3. Vinay Kumari, Vinod Kumar, B. P. Malik, R. M. Mehra and Devendra Mohan “Optical limiting in doped ZnO Thin Films” International Conference on Current Developments in Atomic, Molecular, Optical and Nano Physics (CDAMOP-2011), North campus, Delhi University, New Delhi.

National:

1. Vinay Kumari, Devendra Mohan, “Temperature Dependent Nonlinear Absorption in Scandium doped ZnO Thin Films” National Conference on Photonics & Materials Science organized by Department of Applied Physics, Hisar, Haryana, November 18-19, 2015.
2. .Vinay Kumari, Devendra Mohan, B.P.Malik, ”Effect of Post Growth Annealing Treatment on Band Gap of Scandium Doped ZnO Thin films” National Conference on Material Science, Nanotechnology, Lasers and Ultrasonic Interferometry " Sponsored by Director General Higher Education at Hindu College Sonipat, Haryana , November 18, 2015 .
3. Vinay Kumari, Devendra Mohan, B. P. Malik ,“ Third order Nonlinearities induced by scandium in ZnO Thin Films” National Conference on Photonics & Materials Science

	<p>(NCPMS-2014) Organized By Department of Applied Physics, GJUS&T, Hisar-125001.</p> <ol style="list-style-type: none"> 4. Vinay Kumari, Devendra Mohan, B. P. Malik ,“ Effect of Annealing Temperature on Nonlinear Optical Properties of Erbium doped ZnO (EZO) Thin Films” National Symposium on Electroceramics- Materials and Devices (NSE-MD-2014) organized by GVM Girls College, Sonapat. 5. Vinay Kumari, Devendra Mohan, B. P. Malik ,”Laser Induced Nonlinearities in Sc doped ZnO (SZO) Thin Films” National Conference on Physics of Engineering Materials (NCPem-2013) at Department Of Physics, Deenbandhu Chhotu Ram University of Science and Technology, Murthal (Sonapat). 6. Vinay Kumari, Devendra Mohan, B. P. Malik ,“Structural and Optical Properties of doped Zinc Oxide Thin Films” National conference on Recent Advances in Material Science, NCARNS-2012 at Department of Physics, Dyal Singh College, Karnal ,Haryana. 7. Vinay Kumari, Devendra Mohan, B. P. Malik ,“Effect of thickness on Nonlinear Optical Properties of erbium doped Zinc Oxide Thin Films” National Conference on Functional Materials (NCFM-2012) at G.V.M. Girls College, Sonapat. 8. Vinay Kumari, Vinod Kumar, B. P. Malik, Devendra Mohan and R. M. Mehra. “Band gap widening in Erbium doped Zinc Oxide thin films prepared by sol-gel method” National conference on Advancements and Futuristic Trends in Material Science(AFTMS-2011), Bareilly,U.P.. 9. Vinay Kumari, B. P.Malik, Devendra Mohan ,“Red Shift in Optical Band Gap of Annealed ZnO Thin Films” National Seminar on Advanced
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	<p>Materials and Devices NSAMD-2011, G.V.M. Girls College, Sonapat.</p> <p>10. Vinay Kumari, Vinod Kumar, Devendra Mohan, and B. P. Malik “Third order Nonlinear Optical Properties of annealed Zinc Oxide Thin Films” National Seminar on Recent Trends in Micro and Macro Physics, NSRTMMP-2011 at Gopeshwar, Chamoli, Uttarakhand.</p> <p>Conferences: (attended)</p> <ol style="list-style-type: none"> 1. National Conference on Photonics and Materials Science (NCPMS-2008) Organized by Dept. of Applied Sciences, GJUS&T. 2. International Symposium on Microwave and Optical Technology (ISMOT-2009) Organized by Dept of Electronic Sciences, south campus, D.U. 3. National Laser Symposium (NLS-19), 2010, Organized by RRCAT, Indore. 4. National Conference on Progress in Photovoltaic’s (NC-PPV-2010) Organized by semiconductor Society (India) and Sharda University.
Organizing National Conference	<ul style="list-style-type: none"> • National Seminar on Recent Trends in Micro and Macro Physics (NSRTMMP-2011) at Gopeshwar, Chamoli, Uttarakhand. • Virtual symposium at PIET, 2020, “Photonics: State of the Art”
International Conference/ FDP/STTP	<ul style="list-style-type: none"> • Co-convener of international conference “ISATN 2019” at PIET.
<ul style="list-style-type: none"> • List of Conference/FDP/STTP committee 	<ul style="list-style-type: none"> • Coordinated 2 weeks Faculty Development Program on Entrepreneurship in June 2017 sponsored by DST.
<ul style="list-style-type: none"> • 	<p>Attended the following</p> <ul style="list-style-type: none"> • FDP on “I Am Accountable” on 28TH July conducted by CONFLUENCE. • One week short term course (21.05.18-25.05.18) on Modelling and Simulation using MATLAB through ICT

	<p>recognised by AICTE.</p> <ul style="list-style-type: none"> • Four weeks Orientation Programme (03/05/2012-31/05/2012), UGC-ASC, B.P.S. Mahila Vishwavidyalaya, Khanpur Kalan (Sonepat). • One day National Workshop on “Trends in Optical Coatings for Head-up Display and High Laser Damage Threshold “ Organized by Dept. of Applied Sciences, GJUS&T, June 2011. • Three week Refresher Course in Physics and Electronics (23/12/2010-13/01/2010), UGC-ASC, CPDHE-ILL, D.U. • One week workshop on “High Impact Teaching Skills” under MISSION 10X Programme conducted by Wipro. • One week course (07/06/2010-11/06/2010) on “Innovation & Creativity Development in Teachers and Students” from NITTTR, Chandigarh. • One week course (18/01/2010-22/01/2010) on “Repair and Maintenance of Test and Measuring Equipments” from NITTTR, Chandigarh. • One week course (11/01/2010-18/01/2010) on “2D-3D Animation” from NITTTR, Chandigarh.
<p>Social Contributions and Sports</p>	
<ul style="list-style-type: none"> • List of Social Contributions and Sports 	<ul style="list-style-type: none"> • Captain of kho kho team during schooling only • National Social Service participant. • Convener of various events for spreading awareness in the society like Women’s day, no tobacco day etc.. • Organized various camps and FDP ON Entrepreneur Awareness sponsored by DST.