Curriculum Vitae

1. Name — Dr Mainuddin
2. Designation: — Professor
3. Office Address: — Department of Electronics & Communication Engineering, Faculty of Engineering & Technology, Jamia Millia Islamia, Jamia Nagar, New Delhi-110025
4. Telephone (Direct) (Optional): — 011-26981284, Mobile: 9868954875
5. Email — (Primary): mainuddin@jmi.ac.in (Secondary) :moin_s1@rediffmail.com
6. Field(s) of Specialization: — Opto-Electronics, Optical Diagnostics, Sensors & Instrumentation, Antenna Design, Data Mining and High Power Lasers

7. Employment Profile

Job Title	Employer	From	To
Professor	Jamia Millia Islamia, New Delhi	23rd April' 2013	Till date
Scientist-E	Laser Science & Technology Centre, DRDO, Metcalfe House, Delhi-110054	1st July' 2009	22nd April'2013
Scientist-D	Laser Science & Technology Centre, DRDO, Metcalfe House, Delhi-110054	1st July' 2004	30th June'2009
Scientist-C	Laser Science & Technology Centre, DRDO, Metcalfe House, Delhi-110054	1st July' 1999	30th June'2004
Scientist-B	Laser Science & Technology Centre, DRDO, Metcalfe House, Delhi-110054	1st July' 1996	30th June'1999

8. Academic Qualifications (From Highest Degree to High School):

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D.	Jamia Millia Islamia, New Delhi	2008	---	In the field of Chemical Oxygen Iodine Laser
M.E.	Delhi College of Engineering, Delhi University, Delhi	2003	86.16% 1st Position with Hons.	Electronics & Communication Engineering
BSc(Engg)	Jamia Millia Islamia, New Delhi	1994	96.49% (CPI) 1st Position with Hons.	Electronics & Communication Engineering
Intermediate	UP Board	1989	81% 1st Division with Hons.	Hindi, English, Physics, Chemistry, Math
High School	UP Board	1987	80.67% 1st Division with Hons.	Hindi, English, Math, Science, Biology, Social Science

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Head of the Department	Electronics & Communication Engineering	2nd November 2014	1st November 2017
Coordinator BE (Evening) Program	Electronics & Communication Engineering	1st March 2014	30th October 2014
Coordinator BE (Evening) Program	Electronics & Communication Engineering	2nd November, 2017	31st December 2019

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To
Convener, The Sixth International Abilympics, New Delhi	National Abilympic Association of India, Delhi	23rd Nov' 2003	29th Nov' 2003

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2001	DRDO Technology Group Award	Defence Research & Development Organization (LASTEC), Delhi-110054

2002	DRDO Laboratory Scientist of the Year Award	Defence Research & Development Organization (LASTEC), Delhi-110054
2006	DRDO Technology Group Award	Defence Research & Development Organization (LASTEC), Delhi-110054
2007	Commendation Certificate	Defence Research & Development Organization (LASTEC), Delhi-110054
2010	Commendation Certificate	Defence Research & Development Organization (LASTEC), Delhi-110054
2010	Best Alumnus Award	Jamia Engineering Alumni Association(JEAA), Delhi-110025

12. Details of Academic Work

(i) Curriculum Development: Introduced state of the art Optoelectronics & Optical Communication Laboratory. Started new courses on Digital Communication and Data Communication & Computer Networks in BE (Evening) program

(ii) Courses taught at Postgraduate and Undergraduate levels :

- ✓ Wireless Communication (UG)
- ✓ Optical Fiber Communication (UG)
- ✓ Digital Communication (UG)
- ✓ Data Communication and Computer Networks (UG)
- ✓ Signal and Systems (UG)
- ✓ Telecommunication Switching and Networks (PG)

13. Acted/Acting as Reviewer (on invitation from the Editors) for:

- ✓ IEEE Transactions on Instrumentation and Measurement (USA)
- ✓ Journal of Instrumentation Science and Technology
- ✓ Journal of Optics and Laser Technology
- ✓ Defence Science Journal

14. Details of Major R&D Projects:

Worked in DRDO for more than 16 years on R&D Projects of high budget value in various capacities including as a Team Leader. Area of my research field in DRDO includes High Power Gas Lasers, Optoelectronics, Optical Diagnostics and Data Acquisition Systems.

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Feasibility study and demonstration of optical sensors for water pollutants (LSRB-393)	Life Science Research Board (LSRB), DRDO, Delhi Research Grant: Rs 93.75 Lakhs	2nd November 2022	1st November 2025	Ongoing

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award
Mohd Ashraf	Design and Performance Analysis of Optical Sensors	Supervisor	2024
Amber Khan	Analysis of QoS parameters of Wireless Body Area Networks (WBAN)	Supervisor	2023
Rajeev Kumar Dohare	Investigation on novel processes in flowing medium lasers using customized acquisition and analysis system	Supervisor	2023
Anuj Kumar Varshney	Investigations of Fluid Medium Lasers and Their Scalability Aspects	Supervisor	2023
Mukesh Kumar Jindal	Acquisition, Processing & Analysis of LIDAR Signal for Detection of Species into Atmosphere	Supervisor	2023
Fahim	Development of Surface Acoustic Wave (SAW) based Sensors	Supervisor	2021
Mohd Yousuf Ansari	Development of Novel Clustering Approaches for Spatiotemporal Database	Supervisor	2020
Maksud Alam	Design an Analysis of Microstrip Antenna for Wireless Applications	Supervisor	2021
Sandeep Kumar	Microstrip Patch	Supevisor	2021

	Antenna with Defected Ground Structure for Wireless Applications		
Zainab Haseeb	Realization of Immittences using modern active building blocks and their applications	Co-Supervisor	2021
Neeta Singh	Design an Analysis of Rectenna for Energy Harvesting Applications	Co-Supervisor	2020
Harris	Design and Simulation of High Performance III-IV Compound Based Semiconductor Devices	Co-Supervisor	2020
Laxya	Carbon Nanotube FETs based Current -Mode Voltage-Mode Modern Active Building Blocks and Their Applications	Co-Supervisor	2019
Ammar Abdul-Hamed Khader	Radio Resource Management in Wireless Networks	Co-Supervisor	2015

16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue
8-10 Dec' 1999	Organizing Committee Member	International conference on Laser Materials and Devices	1. Member, Organizing Committee 2. Paper Presenter	Laser Science & Technology Centre, DRDO	LASTEC, DRDO, Metcalfe House, Delhi-

		(ICLMD-1999)			110054

17. Invited Talks delivered

Topic	Date	Inviting Organization
Awareness about NBA Accreditation	22 May 2024	Department of Mechanical Engineering, Jamia Millia Islamia, New Delhi
Optical Fiber Sensors and Pllications	23 February 2024	Workshop on Recent Advances in Optics and Metamaterials (WROM) 22-24 February 2024, JIIT, Noida
Design of Optical Fiber Sensors	4 March 2024	Department of Electronics, University of Jammu, Jammu
Lasers and Applications	16 April 2023	JIIT Student Chapter Conference on Optics and Photonics (JSCOP-2023) 15-16 April 2023
Laser Based Systems for Standoff Detection of CWA	17 November 2022	National Conference on Chem-Bio Defence: Futuristic Tools & Technologies 16-18 Nov, 2022 DRDE, DRDO, Gwalior
Recent Trends in Lasers and Applications	9 November 2022	International Conference on Electronics and Computational Multidisciplinary Advances (ICECMA-2022) , S P College, Cluster University, Srinagar, 9-10 November 2022
Recent Trends in Lasers and its Applications (including Optical Sensors)	4 January 2022	AICTE SPONSORED FACULTY DEVELOPMENT PROGRAMME "Advanced Sensor Technology for Efficient Biomedical and Energy Management in Smart Cities", 3-7 January 2022, Jaipur Engineering College and Research Centre, Jaipur
Latest trends in Lasers	15 October 2019	Department of Electronics & Communication Engineering, Galgotias College of Engineering and Technology, Greater Noida, UP
Lasers and its Applications	11 January 2018	Department of Electronics, University of Jammu, Jammu
SAW Based Gas Sensor Systems	4 December 2017	Department of Electronics, University of Jammu, Jammu
Lasers for Communication	31 March 2017	RK Goyal Engineering College, Ghaziabad
Real Time DACS	23 November 2016	Defence Terrain Research

		Laboratory(DTRL), DRDO, Delhi
Real Time Data Acquisition and Control Systems	27 October 2016	AK Gerg Engineering College, Dasna, Ghaziabad
Advances in Data Acquisition Systems and its implementation	15 March 2015	10th JK Science congress held in the University of Jammu, Jammu
Role of Data Acquisition in Automation in FDP on "Machatronics & Robotics in Manufacturing Industries"	12 March' 2015	Department of Mechanical Engineering, Jamia Millia Islamia, New Delhi
Electrical Safety and Interlocks	4 December' 2014	Solid State Physics Laboratory, DRDO, Delhi
Advances in Data Acquisition & Control	5 September' 2012	Defence Laboratory, DRDO, Jodhpur
Fundamentals of Data Communication and Networking	5 September' 2012	Defence Laboratory, DRDO, Jodhpur
DACS for Chemical Oxygen Iodine Laser	13 March' 2012	Laser Science and Technology centre, DRDO, Delhi
Data Acquisition and Control System for High Power Lasers	1 November' 2011	Laser Science and Technology centre, DRDO, Delhi
PC Based Measurement and Control	12 September' 2008	Laser Science and Technology centre, DRDO, Delhi
Advances in Data Acquisition and Control	25 January' 2008	Defence Laboratory, DRDO, Jodhpur
Latest Trends in Data Acquisition and Control	25 September' 2007	Laser Science and Technology centre, DRDO, Delhi
Data Acquisition and Control System for COIL	8 November' 2006	Laser Science and Technology centre, DRDO, Delhi
Data Acquisition and Control System	10 March' 2006	Laser Science and Technology centre, DRDO, Delhi
Measurement and Control for COIL	8 December' 2005	Laser Science and Technology centre, DRDO, Delhi
Radio Frequencies	27 January' 2002	AIT, Mahrauli, Delhi, AICTE Sponsored training programme for teachers
RF Electronics	25 January' 1999	Laser Science and Technology centre, DRDO, Delhi

18. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date
Life Member, Indian Laser Association	Indian Laser Association, RRCAT, Indore	LM-408
Life Member, IETE	Institute of Electronics and Telecommunication Engineers, Delhi	M-116474

19. Foreign Visits

Country	Duration of Visit	Institute/Organization
Russia	10 April- 16 April' 2001 (7 days)	ILTT, Saint Petersburg, Russia
Russia	23 July- 27 July' 2007 (5 days)	LSL, Saint Petersburg, Russia
Russia	28 April – 8 May' 2008 (8 days)	LSL, Saint Petersburg, Russia
Glasgow, Scotland, UK	29 October – 1 November 2017	IEEE Sensors 2017 Conference, Scottish Event Centre (SEC), Glasgow, Scotland, UK

20. Publications

(A) Refereed Research Journals:

S. No.	Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal
1.	A.K. Varshney, **Mainuddin**, Gaurav Singhal, J. Nayak	High power lasers for directed energy applications: Developments and challenges	*Infrared Physics & Technology*	Volume 136	p 105064 ISSN 1350-4495 https://doi.org/10.1016/j.infrared.2023.105064	2024	2.997
2.	Maidul Islam, Anshul Bhardwaj, **Mainuddin**, Gagan Kumar	Planar terahertz multi-resonator meta-waveguide based upon strongly coupled nested split-ring resonator	Optik	Volume 302	p 171712 ISSN 0030-4026 https://doi.org/10.1016/j.ijleo.2024.171712	2024	3.1
3.	M. Ashraf, Mainuddin, M.	Sensitivity Enhancement in U-	*IEEE Sensors Journal,*	23(10)	pp 10444-10451	2023	4.325

	T. Beg, F. Moin, R. Rajesh and G. Singhal	Shaped Evanescent Wave Fiber Sensor	ISSN: 1558-1748		doi: 10.1109/JSEN.2023.3262864.		
4.	A.K. Varshney, Mainuddin Mainuddin, Sanjeev Kumar, VK Singh, Veerendra Kumar, A C Verma, Ashwani Kumar, Gaurav Singhal	Laser Diode Array Pumped Circulating Nd3+:POCl3:SnCl4 Liquid Laser.	*Optics and Laser Technology* *ISSN 0030-3992*	167	109811 https://doi.org/10.1016/j.optlastec.2023.109811	2023	4.939
5.	Rajeev Kumar Dohare, Mainuddin, Gaurav Singhal	Acquisition and Control System for Flowing Liquid Laser	Optoelectronics, Instrumentation and Data Processing	59	510-519 https://doi.org/10.3103/S8756699023040131	2023	0.5
6.	Mohd Ashraf, Mainuddin Mainuddin, Mirza Tariq Beg, Fiza Moin, Ananta Saikia, Sanjaik Dwivedi, Gagan Kumar	Comparison of U and coil-shaped fiber sensors for fuoride detection in water	*Optical and Quantum Electronics* 1572-817X	56(273)	1-12 https://doi.org/10.1007/s11082-023-05966-4	2024	3.3
7.	M. K. Jindal, Mainuddin, and S. Veerabuthiran	Differential Absorption LIDAR data acquisition and control system for remote detection of trace chemicals including methane and thiodiglycol	*Review of Scientific Instruments*, AIP Publishing ISSN 0034-6748	94(2)	024705 https://doi.org/10.1063/5.0129693	2023	1.859
8.	M. K. Jindal, Mainuddin, S. Veerabuthiran, and A. Kumar	Design analysis of Mid IR DIAL system for detection of hazardous chemical species	*Defence Science Journal, DESIDOC* ISSN 0976464X	73(6)	712-721 ISSN: 0011-748X	2023	0.730

			(Accepted for publication)		DOI : 10.14429/dsj.73.6.18829		
9.	M. Ashraf, Mainuddin, M. T. Beg, F. Moin, R. Rajesh and G. Singhal	U-Bent Plastic Optical Fiber Sensor for Iron in Iron Supplements	*IEEE Sensors Journal,* IEEE ISSN: 1558-1748	42(15)	14921-14928 DOI: 10.1109/JSEN.2022.3187829	2022	4.325
10.	Rajeev Kumar Dohare, Mainuddin, Avinash Chander Verma & Gaurav Singhal	Uncertainty evaluation of Data Acquisition and Analysis System relevant to Infrared Flowing Medium laser	Nature- Springer Journal of Scientific Reports ISSN 2045-2322	12	17924	2022	4.99
11.	A. K. Varshney, Mainuddin, Gaurav Singhal, J. Nayak	Two-Dimensional Small-Signal Gain Measurements in a Laser Diode-Pumped Flowing Nd^{3+}:$POCl_3$:$SnCl_4$ Liquid Medium	*Infrared Physics & Technology*, *Elsevier Inc.* ISSN 1350-4495	125	104265 doi.org/10.1016/j.infrared.2022.104265.	2022	2.997
12.	A. K. Varshney, Mainuddin, Sanjeev Kumar, Ashwani Kumar, Gaurav Singhal, Mohini Gupta, G. V. Prakash	Optical and Thermal Studies of Nd^{3+} Doped Inorganic Liquid Medium for Scalable Laser Source	*Journal of Optics and Laser Technology, Elsevier Inc.* ISSN 0030-3992	148	107740 doi.org/10.1016/j.optlastec.2021.107740.	2022	4.939
13.	Rajeev Kumar Dohare, Mainuddin & Gaurav Singhal	Real time flow control system for precise gas feed in COIL	*Defence Science Journal, DESIDOC* ISSN 0976464X	72(1)	91-97	2022	0.730
14.	Amber Khan, Mainuddin, M.	A Novel UWB Compact Elliptical-	International Journal of	13(6)	523-533	2021	CiteScore = 0.5

	Uddin, P. Vasisht	Patch Antenna for Early Detection of Breast Cancer in Women with High Mammographic Density	Medical Engineering and Informatics, Indersciences Publishers (SCOPUS)	**DOI**: 10.1504/IJMEI.2020.10033528			
15.	Fahim, Mainuddin, Pooja Rajput, Jitender Kumar, A.T. Nimal	A simple and novel SAW magnetic sensor with PVA bound magnetostrictive nanopowder film	*Sensors and Actuators A: Physical, Elsevier Inc.* ISSN 0924-4247	331 https://doi.org/10.1016/j.sna.2021.112926	112926	2021	4.291
16.	Mukesh Kumar Jindal, S. Veerabuthiran, Mainuddin **Mainuddin**, Anil Kumar Razdan	Integrated path DIAL for standoff detection of acetone vapors under topographic target condition	*Journal of Optics and Laser Technology, Elsevier Inc.* ISSN 0030-3992	143, https://doi.org/10.1016/j.optlastec.2021.107299.	107299	2021	4.939
17.	Mohd Yousuf Ansari, **Mainuddin**, Amir Ahmad, Gopal Bhushan	Spatiotemporal trajectory clustering: A clustering algorithm for spatiotemporal data	*Expert Systems with Applications, Elsevier Inc.*	178	115048	2021	8.665
18.	F. Fahim, M. **Mainuddin**, U. Mittal, J. Kumar and A. T. Nimal	Novel SAW CWA Detector Using Temperature Programmed Desorption	*IEEE Sensors Journal*	21(5)	5914-5922	2021	4.325
19.	Rajeev Kumar Dohare, **Mainuddin**, Sanjeev Kumar & Gaurav Singhal	Data Acquisition System for chemical iodine generation suitable for flowing medium chemical oxygen iodine laser	*Defence Science Journal, DESIDOC* ISSN 0976464X	71(6) **DOI:** https://doi.org/10.14429/dsj.71.17026	798-806	2021	0.730
20.	M.Y. Ansari, A. Ahmad, S.S. Khan, G. Bhushan,	Spatiotemporal clustering: a review	*Artificial Intelligence Review Elsevier Inc.*	53	2381-2423	2020	9.588

	Mainuddin						
21.	Mukesh Kumar Jindal, Mainuddin **Mainuddin**, S. Veerabuthiran, and Anil Kumar Razdan	Laser-Based Systems for Standoff Detection of CWA: A Short Review	*IEEE Sensors Journal*	21(4)	4085-4096	2020	4.325
22.	Aijaz M. Zaidi, M T Beg, B. K. Kanaujia, **Mainuddin**, K Rambabu	Compact Dual Band Out of Phase Power Divider having microstrip Compatibility	*IEEE Transaction on Circuit and Systems-II Express Briefs*	67(12)	2998-3002	2020	3.691
23.	Neeta Singh, Sachin Kumar, Binod Kumar Kanaujia, Mirza Tariq Beg, **Mainuddin**, Sandeep Kumar	A compact and efficient graphene FET based RF energy harvester for green communication,	*International Journal of Electronics Communication (AEÜ)*	115	153059–153066	2020	3.169
24.	Fahim Durani, **Mainuddin**, Upendra Mittal, Jitender Kumar, A T Nimal	Use of Surface Acoustic Wave (SAW) for Thermal Conductivity Sensing of Gases- A Review	*IETE Technical Review, Taylor & Francis Inc.*	DOI: 10.1080/02564602.2020.1819888		2020	1.932
25.	Sandeep Sharma, **Mainuddin**, Binod Kumar Kanaujia, and Mukesh Kumar Khandelwal	Implementation of four port MIMO diversity microstrip antenna with suppressed mutual coupling and cross polarized radiations	*Microsystem Technologies. Springer Science*	26(3)	993-1000	2020	2.21
26.	M. Haris, S. A. Loan, **Mainuddin**	Pseudo Split Gate $InGa_{0.53}As_{0.47}$/InP Hetero-Junction Tunnel FET: Design and Analysis",	*International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, Wiley*	34(2) DOI: 10.1002/jnm.2826		2020	1.753
27.	Mohd Haris, Sajad A. Loan, **Mainuddin,** Abdulrahman	Laterally asymmetric channel-based tunnel field effect transistors:	*International Journal of Electronics, Taylor & Francis*	108(2)	284-304	2020	1.457

	M. Alamoud	design and investigation	*Inc.*				
28.	Sandeep Sharma, **Mainuddin**, Binod Kumar Kanaujia, and Mukesh Kumar Khandelwal	Theoretical Analysis and Design of High Stable gain antenna with ultrawide band Capabilities and suppressed back radiations	*Wireless Personal Communications, Springer Inc.*	112(1)	1-19	2020	2.017
29.	Sandeep Sharma, **Mainuddin**, Binod Kumar Kanaujia, and Mukesh Kumar Khandelwal	Analysis and Design of Single and Dual element bowtie microstrip antenna embedded with planar long wire for 5G wireless applications	*Microwave and Optical Technology Letters, Wiley*	62(3)	1281-1290	2020	1.778
30.	Fahim Durani, **Mainuddin**, U Mittal, J Kumar,D Barlewar, A T Nimal	Field Programmable Gate Array-based Readout for Surface Acoustic Wave Portable Gas Detector	*Defence Science Journal, DESIDOC*	70(5)	498-504	2020	0.730
31.	M. Alam, **Mainuddin**, B. K. Kanaujia, M. T. Beg, S. Kumar	Compact circularly polarized metaresonator-enabled deca-band antenna	*Microwave and Optical Technology Letters, Wiley*	62(2)	726-736	2020	1.778
32.	M. Alam, Amber Khan, **Mainuddin**, B. K. Kanaujia, M. T. Beg	Highly Efficient Artificial Magnetic Conductor Enabled CPW Fed Compact Antenna for BAN Wearable Applications	*Frequenz Journal of RF-Engineering and Telecommunication*	75(3-4)	101-108	2020	1.072
33.	Neeta Singh, B K Kanaujia, M T Beg, **Mainuddin**, S. Kumar	A Compact Broadband GFET Based Rectenna for RF Energy Harvesting Applications	*Microsystem Technologies, Springer Inc.*	26	1881-1888	2020	2.21
34.	Rajeev K. Dohare, **Mainuddin**, Gaurav Singhal	Hybrid Data Acquisition and Analysis System for Flowing Medium Lasers	*Defece Science Journal, DESIDOC* ISSN 0976464X	70(3)	285-291	2020	0.730
35.	Neeta Singh, B	A Compact and	*International*	115	153059-	2019	3.169

	K Kanaujia, M T Beg, **Mainuddin**, S. Kumar	Efficient Graphene FET Based RF Energy Harvester for Green Communications	*Journal of Electronics Communications (AEU), Elsevier Inc.*		153066		
36.	Neeta Singh, B K Kanaujia, M T Beg, **Mainuddin**, S. Kumar	A tripled band circularly polarized rectinna for RF energy harvesting	*Electromagnetism, Taylor & Francis Inc.*	39(7)	481-490	2019	1.095
37.	Neeta Singh, B K Kanaujia, M T Beg, **Mainuddin**, S. Kumar, Hyun Chul Choi, Kang Wook Kim	Low profile multiband rectenna for efficient energy harvesting at microwave frequencies	*International Journal of Electronics, Taylor & Francis Inc.*	106(12)	2057-2071	2019	1.457
38.	M. Alam, **Mainuddin**, B. K. Kanaujia, M. T. Beg, S. Kumar and K. Rambabu	A hexa-band dual-sense circularly polarized antenna for WLAN/Wi-MAX/SDARS and C-band applications	*International Journal of RF Microwave and Computer Aided Engineering* *Wiley*	29(4)	21599	2019	1.987
39.	M. Alam, **Mainuddin**, B. K. Kanaujia, M. T. Beg, S. Kumar and K. Rambabu	Meta-surface enabled hepta-band compact antenna for wearable applications	*IET Microwave Antennas Propagation*	13(13)	2372-2379	2019	2.01
40.	A K Varshney, Rajeev K Dohare, Gaurav Singhal, **Mainuddin**	Resonator for Laser Cavity Decoupling Interface for Chemical Oxygen Iodine Laser	*Defence Science Journal, DESIDOC*	69(3) doi.10.14429/dsj.69.12976.	298-302	2019	0.750
41.	M. Haris, S. A. Loan, **Mainuddin**	Si/GaAs Hetero Junction Tunnel FET: Design and Investigation	*Journal of Nanoelectronics Optoelectronics* **DOI: 10.1166/jno.2019.2575**	14(10)	1434-1444	2019	0.697
42.	Laxya, Dinesh Prasad, **Mainuddin**, S. S. Islam	Current mode biquad filter using CNTFET based ZC-CITA	*Indian journal of Pure & Applied Physics*	57	90-94	2019	0.923

43.	Dinesh Prasad, Zainab Haseeb, **Mainuddin**, Md. W. Akram	Realization of resistorless floating inductor using modified CDTA	*Indian Journal of Pure and Applied Physics*	57	29-32	2019	0.923
44.	Mohd Yousuf Ansari, Anand Prakash, **Mainuddin**	Application of Spaciotemporal Fuzzy C-Means Clustering for Crime Spot Detection	*Defence Science Journal, DESIDOC*	68(4)	374-380	2018	0.730
45.	Neeta Singh, B K Kanaujia, M TBeg, **Mainuddin**, T Khan, Sachin Kumar	A dual polarized multiband rectenna for RF energy harvesting	*International Journal of Electronics and Communications (AEU), Elsevier Inc.*	93	123-131	2018	3.169
46.	Neeta Singh, B K Kanaujia, M TBeg, **Mainuddin**, S. Kumar, M K Khandelwal	A dual band rectifying antenna for RF energy harvesting	*Journal of Computational Electronics, Springer Inc*.	17	1748-1755	2018	1.983
47.	Sandeep Sharma, **Mainuddin** B K Kanaujia, M K Khandelwal, S. Kumar	Design of 4-element microstrip array of wideband reflector antenna with stable high gain characteristics	*Microsystem Technologies, Springer Inc.*	25	1-8	2018	2.21
48.	Laxya, Dinesh Prasad, **Mainuddin**, S. S. Islam	Low Power Low Voltage CNTFET-based VDIBA and its Application as Biquad Filter	*Journal of Engineering and Technology*	7	383-393	2018	0.69
49.	Gaurav Singhal, PMV Subbarao, **Mainuddin**, R.K. Tyagi, A. L. Dawar	Performance comparison of supersonic ejectors with different motive gas injection schemes applicable for flowing medium gas lasers	*Journal of Thermo Physics And Aeromechanics*	24 (3)	461-472	2017	1.071
50.	Gaurav Singhal, **Mainuddin**, R. Rajesh, M. T. Beg, R.K. Tyagi, A. L. Dawar	Overview of Optical Techniques for Characterization of High-Power Infrared Gas Lasers	*IEEE Sensors Journal*	15(8)	4165-4173	2015	4.325

51.	**Mainuddin**, Gaurav Singhal, R.K. Tyagi, A.K. Maini	Development of safe infrared gas lasers	*Journal of Optics and Laser Technology, Elsevier Inc.*	47	56–63	2013	4.939
52.	**Mainuddin**, Gaurav Singhal, R. K. Tyagi, and A. K. Maini	Diagnostics and data acquisition for chemical oxygen iodine laser	*IEEE Transactions on Instrumentation and Measurement*	61(6)	1747-1756	2012	5.332
53.	Vidya Sagar, Chhaya Ravikant, **Mainuddin** Manish Borkar, Alok P Mittal	Data acquisition system for arc driven HF/DF chemical lasers	*Journal of Instrumentation Science and Technology, Taylor & Francis Inc.*	40	262-274	2012	1.509
54.	Gaurav Singhal, **Mainuddin**, R. K. Tyagi	Study of different nozzle configurations for supersonic COIL system	*Journal of Applied Mechanics and Materials, Trans Tech Publishers, Switzerland*	110(116)	5301-5307	2012	H-Index 11
55.	Vidya Sagar, Chhaya Ravikant, Gaurav Singhal, **Mainuddin**, Alok P Mittal	Performance and control of 50kW Arc heater for Chemical lasers	*Journal of Advanced Physics, American Scientific Publishers, California, USA*	1	1-8	2012	
56.	Gaurav Singhal, **Mainuddin**, R. Rajesh, A.K. Varshney, R.K. Dohare, Sanjeev Kumar, V.K. Singh, Ashwani Kumar. Avinash C Verma, B.S. Arora, M.K. Chaturvedi, James Sudhir, R.K. Tyagi, A.L. Dawar	Test bed for a high throughput supersonic chemical oxygen-iodine laser	*Journal of Quantum Electronics, Turpion Inc*.	41(5)	430-432	2011	1.32
57.	Gaurav	Numerical	*International*	37 (6)	491-505	2010	CiteScore:

	Singhal, P.M.V. Subbarao, **Mainuddin**, A.L. Dawar	investigation of a winglet nozzle configuration suitable for a supersonic COIL medium	*Journal of Fluid Mechanics Research, Begel House Inc.* ISSN: 21525102				2.4
58.	Gaurav Singhal, **Mainuddin**, R. K. Tyagi, A. L. Dawar, P. M. V. Subbaroa	Pressure recovery studies on a supersonic COIL with central ejector configuration	*Journal of Optics and Laser Technology, Elsevier Inc.*	42 (7)	1145-1153	2010	4.939
59.	R. Rajesh, Gaurav Singhal, **Mainuddin**, R. K. Tyagi, A. L. Dawar	High throughput jet singlet oxygen generator for multi kilowatt SCOIL	*Journal of Optics and Laser Technology Elsevier Inc.*	42 (4)	580-585	2010	4.939
60.	Gaurav Singhal, **Mainuddin**, R. Rajesh, R. K. Tyagi, A. L. Dawar	Supersonic Diffuser for compact chemical oxygen iodine laser	*Journal of Optics and Laser Technology, Elsevier Inc.*	42	219-224	2010	4.939
61.	R. Rajesh, Gaurav Singhal, P. M. V. Subbarao, **Mainuddin**, R. K. Tyagi, A. L. Dawar	Chemical-Oxygen Iodine Laser-Current Development Status and Applications	*Journal of Optics Research, Nova Science Inc.*	10 (3/4),	191-279	2008	
62.	Gaurav Singhal, P. M. V. Subbarao, R.Rajesh, **Mainuddin**, R. K. Tyagi, A. L. Dawar	Realization of an advanced nozzle concept for compact chemical oxygen iodine laser	*Journal of Optics and Laser Technology, Elsevier Inc.*	39(3)	577-585	2007	4.939
63.	Gaurav Singhal, R.Rajesh, **Mainuddin**, R. K. Tyagi, A. L. Dawar, P. M. V. Subbarao and M. Endo	Two stage Ejector based pressure recovery system for small scale SCOIL	*Journal of Experimental Thermal and Fluid Science, Elsevier Inc.*	30(5)	415-426	2006	3.37
64.	**Mainuddin**, M. T. Beg, Moinuddin, R.	Real time gas flow control and analysis for high power	*International Journal of Infrared and*	26(1)	91-105	2005	2.647

	K. Tyagi, R. Rajesh, Gaurav Singhal, A.L. Dawar	infrared gas lasers	*Millimeter Waves, Springer Inc.*				
65.	**Mainuddin**, M. T. Beg, Moinuddin, R. K. Tyagi, R. Rajesh, Gaurav Singhal and A. L. Dawar	Optical spectroscopic based In-line iodine flow measurement system-an application to COIL	*Journal of Sensors and Actuators: B, Elsevier Inc*.	109(2)	375-380	2005	9.221
66.	R. Rajesh, M. Hussain, Z. H. Zaidi, R. K. Tyagi, Gaurav Singhal, **Mainuddin**, A. L. Dawar and M. Endo,	Characterization and studies on hydro dynamically stable operation of an angular jet SOG for COIL	*International Journal of Infrared and Millimeter Waves, Springer Inc.*	25(9)	1361-1381	2004	2.647
67.	R. K. Tyagi, R. Rajesh, Gaurav Singhal, **Mainuddin**, A. L. Dawar and M. Endo	Supersonic COIL with Angular Jet Singlet Oxygen Generator	*Journal of Optics and Laser Technology, Elsevier Inc.*	35	395-399	2003	4.939
68.	R. K. Tyagi, R. Rajesh, Gaurav Singhal, **Mainuddin**, A.L. Dawar and M. Endo,	Parametric studies of a Supersonic COIL with Angular Jet Singlet Oxygen Generator	*Journal of Infrared Physics and Technology, Elsevier Inc.*	44	271-279	2003	2.997
69.	**Mainuddin**, R. K. Tyagi, R. Rajesh, Gaurav Singhal and A. L. Dawar	Real-time data acquisition and control system for a chemical oxygen-iodine laser	*Journal of Measurement Science and Technology, IOP, UK*	14	1364-1372	2003	2.398
70.	K. K. Sharma and **Mainuddin**	Quantum Devices-Future Electronics Devices	*Journal of Defence Science Centre (ISSN 0972-0928) Metcalfe House, Delhi*		12, 27-28,	1998	

(B) International Conferences/Workshops/Symposia Proceedings

S. No.	Paper
1	,"Detection of Phosphate using Different Geometries of Optical Fiber Sensor", Mohd.Ashraf, Mainuddin, M.T.Beg, Fiza Moin, R Rajesh, XLVI OSI Symposium ,International Conference on Optics, Photonics & Quantum Information OPTIQ2023, CUSAT, Cochin, Kerala, FIB113, 1315-1319, 13(4), December 11-13, 2023
2	M. Ashraf, Mainuddin, M T Beg, Fiza Moin, Ananta Saikia, Sanjai K Dwivedi, Gagan Kumar, "Effect of Material Deformation on U-shaped Optical Fiber Sensor", International Conference on Micro-Electronics and Telecommunication Engineering (***ICMETE 2023***), 22 - 23 September, 2023, Springer
3	"Wireless interface based acquisition, analysis and control system using Master-Slave approach for chemical laser", Rajeev Kumar Dohare, Mainuddin & Gaurav Singhal,. 5th International Conference on Inventive Material Science and Applications, ICIMA 2022, Springer
4	"Simulation of Optical FBG Based Sensor for Measurement of Temperature, Strain and Salinity", Mohd Ashraf, Mainuddin, International Conference on Optical and Wireless Technologies: Proceedings of OWT 2021, pp 17-25, 2021, In: Tiwari, M., Ismail, Y., Verma, K., Garg, A.K. (eds) Optical and Wireless Technologies. OWT 2021. Lecture Notes in Electrical Engineering, vol 892. Springer, Singapore. https://doi.org/10.1007/978-981-19-1645-8_3
5	"Pulse Width Modulation controller based Thermal Stabilization for Iodine evaporation in flowing chemical laser ", Rajeev Kumar Dohare, Mainuddin & Gaurav Singhal,. IEEE International conference on Signal Processing and Integrated Networks, Published: IEEE Explore, (2021, Oct.).
6	"Impact of Gate Oxide Traps and $In_{0.53}Ga_{0.47}As$/BOX traps on the Performance of $In_{0.53}Ga_{0.47}As$ on insulator TFET and its Mitigation", M. Haris, S. A. Loan, **Mainuddin**, 2019 EEE SOI-3D-Subthreshold Microelectronics Technology Unified Conference IEEE S3S), San Jose, CA, USA
7	"A Dual Band Gysel Power Divider with Wide Band Ratio"Aijaz. M. Zaidi, B. K. Kanaujia, M. T. Beg, V. Kaim, **Mainuddin**", 2019 IEEE Asia-Pacific Microwave Conference (APMC), Singapore, Singapore, 2019, pp. 291-293, doi: 10.1109/APMC46564.2019.9038792
8	"A Low Profile Ultrawide Band Antenna for WLAN/Wi-Max/C-Band Wireless applications", M. Alam, **Mainuddin**, B. K. Kanaujia, M. T. Beg and S. Kumar, 2019 International Conference on Computing, Power and Communication Technologies (GUCON), NCR New Delhi, India, 2019, pp. 563-565
9	"Theoretical performance evaluation of Differential Absorption LIDAR for Detection of Chemicals", Mukesh Jindal, **Mainuddin**, S Veerabuthiran, A K Razdan, LS-16, pp. 105-106, 2019 Proceedings of International Conference on Atomic, Molecular, Optical and Nano Physics with Applications (CAMNP-19), 18-20 December 2019, DTU, Delhi
10	"Passive SAW Temperature Sensor for Remote Applications", Fahim, **Mainuddin**, Upendra Mittal, Devendra Barlewar, Jitender Kumar and A.T.nimal, International Conference on Defence and Space Technologies, ICDST, 2019

11 "Zigbee based wireless sensor Networking (WSN) for saw vapour sensor", Fahim, **Mainuddin**, P. Tripathi, U Mittal, J Kumar, Devendra B., AT Nimal, *International Conference on Electrical, Electronics, Computers, Communication, Mechanical and Computing (EECCMC)*, Priyadarshini Engineering College, Chettiyappanur, Vaniyambadi - 635751, Vellore District, Tamil Nadu, India, 28-29 Jan 2018, pp. 134-137, 2018 (ISBN No 978-1-5386-4304-4, IEEE)

12 "Low Power low voltage CNFETbased Current Differencing Buffered Amplifier", Dinesh Prasad, Laxya, **Mainuddin** and S.S. Islam, *4th International conference on Signal Processing and Integrated Networks (SPIN-2017)*, Amity university, Noida, 2017, pp. 115-120, 2017, (ISBN No. 978-1-5090-2797-2/17, IEEE)

13 "CNFET Based Voltage Differencing Transconductance Amplifier", Laxya, Dinesh Prasad, **Mainuddin**, and S. S. Islam, *IOP Conference Series: Materials Science and Engineering (3-4 July 20-17, ICMAEM-2017)*, Narsimha Reddy Engineering College, India IOP Conf. Ser.: Mater. Sci. Eng. 225 012253, pp. 1-7, 2017

14 "Theoretical foundation of relevance frequency for text categorization", Amir Ahmad, **Mainuddin**, Santosh Kumar Ray, *International Conference on Intelligent Computing, Instrumentation and Control Technologies (ICICICT-2017)*, Vimal Jyothi Engineering College Jyothi Nagar, Chemperi Kannur-670632 Kerala,India (ISBN No. 978-1-5090-6106-8/17, IEEE), pp. 1-4, 2017

15 "Modeling of a Transversely Pumped Aprotic Liquid Laser", A K Varshnly, A. L Verma, Gaurav Singhal, **Mainuddin**, R K Tyagi, Advance in Optical Science Engineering, Springer Proceeding in Physics, pp. 241-248, (ISBN No. 978-981-10-397-02, Springer), 2017

16 "Single Chip readout Electronics for SAW based Gas Sensor System", Fahim, **Mainuddin**, U. Mittal, Jitender Kumar, AT Nimal and M U Sharma, *IEEE Sensors 2017 Conference*, 29th October- 1st November 2017, Glasgow, UK, (ISBN No. 978-1-5090-1012-7, IEEE), 2017

17 "Dual material gate dopingless InAs TFET for low power applications", M. Haris, S. A. Loan, **Mainuddin**, *2017 International Conference on Multimedia, Signal Processing and Communication Technologies (IMPACT)*, Aligarh, pp. 114-117, 2017

18 "An ambipolar immune Si/GaAs hetro-junction doping-less TFET", M. Haris, S. A. Loan, **Mainuddin**, *2017 International conference on Microelectronic Devices, Circuits and Systems (ICMDCS)*, pp. 1-4, (ISBN No. 978-1-5386-1716-8, IEEE), 2017

19 "Transversely Pumped Inorganic Aprotic Liquid Laser", A. K. Varshney, Avinash C. Verma, Gaurav Singhal, Mainuddin and R. K. Tyagi, in 3rd International Conference on Opto-Electronics and Applied Optics (OPTRONIX-2016), UEM, Kolkata, 2016

20 "Cooperative Spectrum Sensing Improvement Based on Fuzzy Logic System", Ammar Abdul Hamed khader, Ahmad Hameed Reja, Arkan Ahmed Hussein, M. T. Beg, **Mainuddin**, *Second International Symposium on Computer Vision and the Internet (VisionNet'15)*, 58, pp. 34-41, 2015 (ISBN No. 1877-0509, Procedia Computer Science, Elsevier' 2015)

21 "Computational analysis of supersonic ejector geometries for supersonic COIL", Gaurav Singhal, **Mainuddin**, R. K. Tyagi, *Proceedings of 3rd International conference on recent Trends in Engineering & Technology (ICRTET-2014)*, pp. 814-820, 28-30 March, 2014, Chandwad, India (ISBN No. 978-93-5107-221-8, Elsevier Publishers'2014)

22 "Optical detection of Chlorine for Chemical Oxygen Iodine Laser", **Mainuddin**, Gaurav Singhal, A.K. Varshney, R.K. Tyagi, A.K. Maini, Proceedings of International Conference on Communications and Electronics (ICCE-2012), pp. 209-213, 2012, KIET, Ghaziabad, India (ISBN: 978-93-81583-69-2)

23 "Implementation of safety measures for chemical oxygen iodine laser", **Mainuddin**, Gaurav Singhal, A. K. Varshney, R. K. Tyagi, A. K. Maini, Proceeding of the DRDO sponsored eighth Control Instrumentation System Conference *CISCON-2011*(An International Conference), Nov 3-6, 2011, pp. 212-216, 2011, Manipal, Karnataka, India

24 "Optical Diagnostics of Singlet Oxygen for Chemical Oxygen Iodine Laser", **Mainuddin**, Gaurav Singhal, A. K. Varshney, R. Dohare, R. K. Tyagi, Proceedings of 3rd international conference on current developments in atomic, molecular, optical and nano physics (*CDAMOP-2011*), Dec 14-16, 2011, pp. 191-192, ISBN No. 978-93-81361-65-8, University of Delhi, India

25 "Development of Laser Cavity and Resonator for 20kW COIL", A. K. Varshney, Ashwani Kumar, Gaurav Singhal, **Mainuddin**, R. K. Tyagi, Proceedings of 3rd international conference on current developments in atomic, molecular, optical and nano physics (*CDAMOP-2011*), Dec 14-16, 2011, pp. 119-120, ISBN No. 978-93-81361-65-8, University of Delhi, India

26 "Study on liquid fuel for generation of Singlet Oxygen for Chemical Oxygen Iodine Laser", S. Kumar. A. C. Verma, V. Kumar, **Mainuddin**, R. K. Tyagi, Proceedings of 3rd international conference on current developments in atomic, molecular, optical and nano physics (*CDAMOP-2011*), Dec 14-16, 2011, pp. 200-201, ISBN No. 978-93-81361-65-8, University of Delhi, India

27 "Study of different nozzle configurations for supersonic COIL system", Gaurav Singhal, **Mainuddin**, R. K. Tyagi, Proceeding of IEEE international conference on Mechanical and Aerospace Engineering (*CMAE 2011*), 2011, pp. 301-304, IEEE ISBN No. 978-1-4244-9506 -1 Delhi, India

28 "Model for electromagnetic wave propagation in two dimensional arrays of carbon nanotubes", Amir Ahmad, **Mainuddin**, 5th international multi-conference on intelligent systems, sustainable, new and renewable energy technology & nanotechnology (IISN-2011), Feb 18-20, 2011, Klawad, Yamuna nagar, Haryana

29 "Design and Realization of an Ejector Nozzle for High pressure COIL", Gaurav Singhal, P. M. V. Subbarao, R. Rajesh, **Mainuddin**, R. K. Tyagi, A. L. Dawar, *7th ISHMT- ASME, HMTC-277*, 2006, IIT Guwahati.

30 "Liquid Fuel Characterization of a Jet Singlet oxygen Generator: An ideal pumping source for Chemical Oxygen Iodine Laser", R Rajesh, Vinod K. Singh, Gaurav singhal, **Mainuddin**, R K Tyagi and Anil Kumar, Proceedings of second *International Conference on current developments in the atomic, molecular and optical physics with applications (CDAMOP-2006)*, pp. 135, DU, Delhi, India

31 "Two stage Ejector based pressure recovery system for small scale SCOIL: Preliminary Studies", Gaurav Singhal, R.Rajesh, **Mainuddin**, R. K. Tyagi, A.L. Dawar, P.M.V. Subbarao and M. Endo, *AIAA paper - 5171*, 2005.

32 "Development of compact high-pressure COIL", Gaurav Singhal, R. Rajesh, **Mainuddin**, R. K. Tyagi, A. L. Dawar, P. M. V. Subbarao and M. Endo, *SPIE*, Vol. 59581D, 2005.

33 "Optical measurement system for Iodine Concentration relevant to Chemical Oxy-Iodine Laser", **Mainuddin**, M. T. Beg, Moinuddin, R. K. Tyagi, R. Rajesh, Gaurav Singhal and A. L. Dawar, Proceedings of *International Conference on Photonics*, 2004, Cochin

34 "Real time Control, Acquisition and Analysis System for High Power Gas Lasers", **Mainuddin**, M. T. Beg, Moinuddin, R. K. Tyagi, R. Rajesh, Gaurav Singhal and A. L. Dawar, Proceedings of *International conference on sub-millimeter science and technology* (ICSST), 2004, at PRL, Ahmedabad.

35 "COIL: A potential high power laser source for defense applications", R. Rajesh, M. Hussain, Z. H. Zaidi, R. K. Tyagi, Gaurav Singhal, **Mainuddin**, A. L. Dawar, Proceedings of *International conference on sub-millimeter science and technology* (ICSST), 2004, PRL, Ahmedabad.

36 "Design and realization of a 500W class Jet type Singlet Oxygen Generator with angular exit", R. K. Tyagi, R. Rajesh, Gaurav Singhal, **Mainuddin**, A.L.Dawar and M. Endo, *SPIE*, Vol. 4971, 2003

37 "Development of an efficient jet singlet oxygen generator for a 500W class COIL", R. Rajesh, M. Hussain, Z. H. Zaidi, R. K. Tyagi, G. Singhal, **Mainuddin**, A. L. Dawar, Proceedings of *International conference on Laser applications and Optical Metrology* ICLAOM, 2003, IIT Delhi.

38 "Perfornance Characteristics of Indigenous Sealed-Off Slab Waveguide CO_2 Laser for Industry/ Medical Applications", N. R. Das, **Mainuddin**, K. K. Sharma, B. S. Patel and A. Mallik, *International Conference on Laser materials and Devices* (ICLMD-1999), Laser Science and Technology Centre, 8-10 Dec, 1999, Delhi.

39 "Development of 7-25 Watts RF Excited CO_2 Slab Laser at Defence Science Centre", K. K. Sharma, N. R. Das, **Mainuddin** and A. Mallik, *International Conference on Fibre Optics and Photonics* (PHOTONICS-98), 14-18 Dec, 1998, pp. 404-406, IIT Delhi.

40 "Wide Band 300 Watts Matched RF source for slab Waveguide CO_2 Laser", **Mainuddin**, B. S. Arora and K. K. Sharma, *International Conference on Optics and Opto-electronics*, 9-12 Dec 1998, pp. 1047-48, IRDE, Dehradun.

(C) National Conferences/Workshops/Symposia Proceedings

S. No. **Paper**

1 "Studies on Background and Detector Noise Contributions in Estimating the LIDAR Performance", M K Jindal, **Mainuddin**, S Veerabuthiran, A K Razdan,

28th DAE - BRNS NATIONAL LASER SYMPOSIUM (NLS - 28), January 8-11, 2020, pp. 145, CP-12-02, 2020, Vellore Institute of Technology, Chennai - 600127, Tamilnadu

2 "Power Extraction Scheme for Aprotic Liquid Laser", A. K. Varshney, Vinod Kumar Singh, Avinash C. Verma, Gaurav Singhal, **Mainuddin**, R. K. Tyagi, *National Laser Symposium (NLS)- 2016*, pp. 20-23 December 2016, KIIT, Bhubneshwar, ISBN: 978-81-903321-7-0 NLS-25 Identifier: CP-1.50, 2016

3 "Design Methodology of Data Acquisition System for Gas Lasers", **Mainuddin**, Gaurav Singhal, Proceedings of *Emerging Trends in Electrical and Electronics Engineering*, pp. 182-190, 2015, JMI, New Delhi (ISBN No. 978-93-84869-25-0)

4 "Development of laser resonator and cavity for high energy chemical oxygen iodine laser Liquid Oxygen Laser", A.K. Varshney, **Mainuddin**, R. K. Tyagi, National Symposium in Hindi *Akhil Bharatiya Sanyukta Rajbhsha Vaigyanik/Techniki Sangoshathi*, pp. 103-106, 2012, published by Defence Research and Development Organization (DRDO), Metcalfe House, Delhi

5 "Liquid Oxygen Laser- A new competitor for Directed Energy Weapon", A.K. Varshney, A. Pratap, G. Singhal, R. Rajesh, **Mainuddin**, R. K. Tyagi, National Symposium in Hindi *Akhil Bharatiya Sanyukta Rajbhsha Vaigyanik/Techniki Sangoshathi*, pp. 57-61, 2011, published by Defence Scientific Information and Documentation Centre (DESIDOC), DRDO, Metcalfe House, Delhi

6 "Serial communication-based data acquisition and control system for PRS of COIL" Mainuddin, Gaurav Singhal, R. Rajesh and R. K. Tyagi, National Laser Symposium *NLS-6*, 5-8 Dec'2006, pp. 55-56, RRCAT, Indore

7 "Mach number diagnostics for COIL", **Mainuddin**, M. T. Beg, Moinuddin, R. K. Tyagi, Gaurav Singhal, R. Rajesh and A. L. Dawar, *NLS-4*, 10-13 Jan'2005, pp. 813-814, BARC, Mumbai

8 "Critical issues for the development of a high power 20kW class efficient chemical oxygen iodine laser" R. K. Tyagi, R. Rajesh, **Mainuddin**, Gaurav Singhal, and A. L. Dawar, *NLS-4*, 10-13 Jan'2005, pp. 820-821, BARC, Mumbai

9 "Design and development of a high-capacity jet singlet oxygen generator suitable for 10kW supersonic COIL" R. Rajesh, R. K. Tyagi, Gaurav Singhal, **Mainuddin**, and A. L. Dawar, *NLS-4*, 10-13 Jan'2005, pp. 818-819, BARC, Mumbai

10 "Design and realization of a low-pressure ejector stage for pressure recovery in SCOIL", Gaurav Singhal, R. K. Tyagi, **Mainuddin**, R. Rajesh, A. L. Dawar and P. M. V. Subbarao, *NLS-4*, 10-13 Jan'2005, pp. 805-806, BARC, Mumbai

11 "Design methodology of cooling system for high power(20kW) COIL application", Nidhi Bansal, Gaurav Singhal, R. K. Tyagi, **Mainuddin**, R. Rajesh and A. L. Dawar, *National Laser Symposium, NLS-4*, 10-13 Jan'2005, pp. 815-816, BARC, Mumbai

12 "Radio Frequencies- Environmental Vardaan or Abhishap", M Kulkarni, **Mainuddin**, M T Beg, D R Bhasker, Moinuddin, National conference on *Innovative Approaches in the management of Environment (IAME-2003*), pp. 36-37, Delhi College of Engineering Delhi, 2003

13 "Real time operational control and data acquisition of gas feed system for COIL", **Mainuddin**, M. T. Beg, Moinuddin, R. K. Dohare, R. Rajesh, G. Singhal, R. K. Tyagi, and A. L. Dawar, *National Laser Symposium, NLS*-3 Dec'2003, pp. 165-166, IIT, Kharagpur

14 "Design of unstable resonator for Chemical Oxygen Iodine laser", R. K. Tyagi, M. P. Singh, R. Rajesh, Gaurav Singhal, **Mainuddin** and A. L. Dawar, Proceedings of *National Laser Symposium NLS*-3, pp. 157-158, Dec'2003 at IIT, Kharagpur

15 "Pressure recovery scheme in COIL", Gaurav Singhal, P. M. V Subba Rao, R. K. Tyagi, R. Rajesh, **Mainuddin** and A.L. Dawar, *NLS-3,* Dec'2003, pp. 159-160, IIT, Kharagpur

16 "Study of Helium Buffer gas mixing in jet type Singlet oxygen generator of 500W class COIL System", R. Rajesh, M. Hussain, Z. H. Zaidi, Gaurav Singhal, R. K. Tyagi, **Mainuddin** and A.L. Dawar, *National Laser Symposium, NLS-3* in Dec'2003, pp. 161-162, IIT, Kharagpur

17 "Development of an ejector nozzle based 500 W Class COIL system", Gaurav Singhal, P. M. V Subba Rao, R. K. Tyagi, R. Rajesh, **Mainuddin** and A. L. Dawar, *National Laser Symposium, NLS*-3 Dec'2003, pp. 163-164, IIT, Kharagpur

18 "Real Time Data Acquisition and Control System for High Power Chemical Oxy-Iodine Laser", **Mainuddin**, R. Rajesh, M. Kulkarni, Gaurav Singhal, R. K. Tyagi and A. L. Dawar, published in *COPE'2003*, 4- 8 Jan, 2003 at Netaji Subhash Institute of Technology, Delhi.

19 "Automatic control unit of chlorine sensor for COIL", **Mainuddin**, R. K. Tyagi, R. Rajesh, V. Sagar and A. L. Dawar, published in *National Conference on Sensor Technology* (NCST-2002)', pp.475-477, Sept 26th to Sept 27th, 2002 at CEES, Metcalfe House, Delhi.

20 "Safety measures for COIL System", MP Singh, **Mainuddin**, V Sagar, J Sudhir, R. Rajesh, G. Singhal, and R. K. Tyagi, *NLS-2*, pp.85-86, 14-16 Nov'2002 at Shri Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram.

21 "Evacuation System for COIL", Gaurav Singhal, R. K. Amba, R. Rajesh, **Mainuddin** and R. K. Tyagi, *NLS-2*, pp.83-84, 14-16 Nov'2002, Shri Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram.

22 "Gain measurement scheme in Chemical Oxy Iodine laser", R. K. Tyagi, R. Rajesh, **Mainuddin**, Gaurav, M. P. Singh, *NLS-2*, pp.79-80, 14-16 Nov'2002, Shri Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram.

23 "Effect of BHP temperature on the operational performance of a Jet type Singlet Oxygen Generator", R. Rajesh, M. Hussain, Z. H. Zaidi, Gaurav Singhal, R. K. Tyagi, **Mainuddin**, *NLS-2*, pp.81-82, 14-16 Nov'2002 at Shri Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram.

24 "RF Electronics and Impedance Matching Networks for Waveguide CO_2 Laser" **Mainuddin**, *NLS-2*, pp.202-203, 14-16 Nov'2002, Shri Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram.

25 "Data Acquisition and Control System (DACS) for High Power COIL", **Mainuddin**, Kiran Chugh, R. K. Tyagi and A. L. Dawar, Proc. of *National workshop on High Power Laser and Directed Energy Applications HPL –WS'* pp. 195, 2002, LASTEC, Delh

26 "An efficient trap design for KW level COIL", Gaurav Singhal, R. Rajesh, M. Nanda, **Mainuddin**, R. K. Tyagi and A.L. Dawar, *NLS-1*, pp. 93-94, 19-21 Dec'2001 at CAT, Indore.

27 "Power Extraction Scheme for COIL", R. K. Tyagi, M. P. Singh, R. Rajesh, Gaurav Singhal, **Mainuddin**, A. L. Dawar and A. Mallik, *NLS-1*, pp. 89-90, 19-21 Dec'2001 at CAT, Indore.

28 "Data Acquisition and Control System (DACS) for COIL", **Mainuddin**, R. Rajesh, Gaurav Singhal, R. K. Tyagi and A. L. Dawar, *NLS-1*, pp. 197-198, 19-21 Dec'2001 at CAT, Indore.

29 "Design of a 500W Jet Singlet Oxygen Generator for COIL", A. Mallik, R. K. Tyagi, R. Rajesh, **Mainuddin**, Gaurav Singhal, M. P. Singh and A. L. Dawar", *NLS-1*, pp. 91-92, 19- 21 Dec'2001 at CAT, Indore.

30 "Design Consideration and Matching Networks of a Varaible high gain MOSFET Based 500 W RF Power Source for CO_2 Laser", B. S. Patel, K. K. Sharma, **Mainuddin**, N.R. Das and B. S. Arora, NLS-*2000*, pp. 299-300, Dec, 2000, Laser Science and Technology Centre, Delhi.

31 "Coherent CW CO_2 Laser based Doppler System for short range moving target detection", B. S. Patel, K. K. Sharma, N. R. Das, **Mainuddin** and B. S. Arora, *NLS-2000*, pp. 287-289, Dec, 2000, Laser Science and Technology Centre, Delhi.

32 "Design and Development of precision crystal-controlled RF oscillator-amplifier for CO_2 slab waveguide laser", **Mainuddin**, N. R. Das, B. S. Arora and K. K. Sharma, *NLS-99*, pp. 39-40, 15-17 Dec, 1999, Hydrabad.

33 "Operational Performance of 14 Watts CW CO_2 slab Laser with Stable Resonator Configuration", K. K. Sharma, N. R. Das and **Mainuddin**, *NLS-98*, pp.29-30, 14-18 Dec, 1998, IIT Kanpur.

34 "Design and Development of Indigenous, Low cost and compact RF Power source for Excitation of CO_2 Waveguide Laser", **Mainuddin**, S. Wadhwa, B. S. Arora, R. Deepanshu, N. R. Das and K. K. Sharma, *National Symposium in Advances in Microwave and Lightwaves*, 2-4 March 1998, pp. 64-65, South Campus, Delhi University.

35 "FM-CW CO_2 Laser Range Finder and Radar Development Activities and Scope at Defence Science Centre", K. K. Sharma, S. Wadhwa, R. Deepanshu, N. R. Das, **Mainuddin** and B. S. Arora, *National Symposium in Advances in Microwave and Lightwaves*, 2-4 March 1998, pp. 62-63, South Campus, Delhi University.

36 "Compact CO_2 Waveguide Laser Source for Cervical, Cancer and other medical treatment", K. K. Sharma, N. R. Das and **Mainuddin**, *Symposium on Frontiers in Biomedical Research*, 31March-2 April 1998, North Campus, Delhi university.

37 "Development of RF Excited CO_2 Slab Laser in Defence Science Centre," K. K. Sharma, N. R. Das, **Mainuddin** and A. Mallik, *NLS-97*, 10-12 Dec, 1997, pp. 338-339, PRL, Ahmadabad.

(D) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number
Mainuddin, Gaurav Singhal, A.L. Dawar	Sensors and Measurement Techniques for Chemical Gas Lasers	International Frequency sensor Association (IFSA)Publishing, Barcelona, Spain	2014	ISBN-13: 978-84-617-1865-8
Ashraf, M., Mainuddin, Beg, M.T., Sekia, A., Dwivedi, S.K. (2024)..	Effects of Material Deformation on U-shaped Optical Fiber Sensor	In: Sharma, D.K., Peng, SL., Sharma, R., Jeon, G. (eds) Micro-Electronics and Telecommunication Engineering. ICMETE 2023. Lecture Notes in Networks and Systems, vol 894. Springer, Singapore.	2023	ISBN:978-981-99-9561-5
Mohd Ashraf, Mainuddin	Simulation of Optical FBG Based Sensor for Measurement of Temperature, Strain and Salinity	International Conference on Optical and Wireless Technologies: Proceedings of OWT 2021, pp 17-25, 2021, In: Tiwari, M., Ismail, Y., Verma, K., Garg, A.K. (eds) Optical and Wireless Technologies. OWT 2021. Lecture Notes in Electrical Engineering, vol 892. Springer, Singapore. https://doi.org/10.1007/978-981-19-1645-8_3Springer Nature Singapore,	2021	ISBN No. 9811916446, 9789811916441
M.Y. Ansari, A. Prakash, **Mainuddin**	Gravitational K-Means Algorithm	Data Science and Analytics. REDSET 2019. Communications in Computer and Information Science, vol 1230. Springer, Singapore Editors: Batra U., Roy N., Panda B.	2019	ISBN 978-981-15-5830-6
Ammar Abdul-Hamed Khader, **Mainuddin**, Mirza Tariq Beg	Book Chapter: "The Exploitation of Unused Spectrum for Different Signal's Technologies" in	Springer International Publishing Switzerland	2015	ISBN 978-3-319-11217-6

	the Book "Advances in Intelligent Informatics" pp. 157-167			
Mainuddin, Gaurav singhal, A.K. Varshney, R. Dohare, R.K. Tyagi	Book Chapter: "Optical Diagnostics for Singlet Oxygen for Chemical Oxygen Iodine Laser" in the Book "Advances in Laser Physics and Technologies" pp. 120-134	Cambridge University Press, India	2015	ISBN 978-93-84463-41-0
A. K. Varshney, Ashwani Kumar, Gaurav Singhal, **Mainuddin**, R. K. Tyagi	Book Chapter: "Development of Laser Cavity and Resonator for 20kW COIL" in the Book "Advances in Laser Physics and Technologies" pp. 278-290	Cambridge University Press, India	2015	ISBN 978-93-84463-41-0
Ammar Abdul-Hamed Khader, **Mainuddin**, Mirza Tariq Beg	Book Chapter: "Bouncy Detector to Differentiate between GSM and WiMAX Signals" in the Book "Advances in Intelligent Systems and Computing" pp. 379-390	Springer International Publishing Switzerland	2014	ISBN NO: 978-3-319-04959-5
Amir Ahmad, **Mainuddin**	Book Chapter: "A Novel Data Mining Technique to Study Customer Satisfaction", in the book "Emerging Trends and Technologies in	MacMillan Publishers ,India	2012	ISBN NO: 978-935-059-032-4

	Data Management" pp. 10-18			
Amir Ahmad, **Mainuddin**,	Book Chapter: "A Novel Ensemble Method for Regression Problems", in the Book "Emerging Trends and Technologies in Computer Science and Engineering" , pp.30-39	MacMillan Publishers ,India	2012	ISBN NO: 978-93505-9033-1,
R. Rajesh, Gaurav Singhal, P. M. V. Subbaroa, **Mainuddin**, R.K. Tyagi, A.L. Dawar,	Book Chapter: "Chemical Oxygen Iodine Laser: Current development status and applications" in book "Perspectives in Optics Research" pp. 83-170	Nova Science Inc., USA	2011	ISBN NO: 978-1-61122-934-9

(E) Patents

S No.	Inventors	Title of patent	File number	Date of filing	Filing Office	Filing Status
1	Mainuddin, Mogd Ashraf, Fiza Moin	Optical Fiber-Based Iron Detection And Quantification Sensor	202111030290	6 July 2021	IP, India	Granted
2	Amber Khan, **Mainuddin**, MoinUddin, Parikshit Vasisht, Sudhakar Ranjan, Atul Kathait, Anuranjan Sharma	Compact Elliptical Patch Antenna for Early Detection of Breast Cancer with High Mammographic Density	202211024046 A	24 April 2022	IP, India	Published