

# National Institute of Technology, Tiruchirappalli: Performa for CV of Faculty/ Staff Members

## Curriculum Vitae



Brief Profile: 1-2 paragraphs (not exceeding 500 words)

After completing Ph.D. degree from Anna University, Chennai, I joined as a Lecturer in NIT-Tiruchy in 1991. Since then, I have been teaching UG (B.Tech.) and PG (M.Sc. (Physics) and M.Tech. (NDT)) Courses and carrying out research in the area of Laser materials processing and Fiber optic sensors. I have involved in the development of department in terms of equipping with instruments, developing laboratories, conducting many seminars and workshops. And also involved many administrative activities of Institute.

1. Name : **D. Sastikumar**
2. Designation : **Professor**
3. Office Address: Department of Physics, National Institute of Technology, Tiruchirappalli .
4. Telephone (Direct) (Optional):  
Telephone : 0431-2503604 Extn (Optional):  
Mobile (Optional): 9488600672
5. Email (Primary): sasti@nitt.edu Email (Secondary) :
6. Field(s) of Specialization: Fiber optic Sensors  
and Laser Materials Processing

### 7. Employment Profile

Job Title	Employer	From	To
Professor	NIT, Tiruchy	April 2007	Till Date
Assistant Professor	NIT, Tiruchy	Oct. 1998	April 2007
Lecturer	NIT, Tiruchy	Aug.1991	Oct.1998

## National Institute of Technology, Tiruchirappalli: Performa for CV of Faculty/ Staff Members

---

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

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D.	Anna University	1991	-	Dye Lasers
M.Phil.	Anna University	1987	First	Physics
M.Sc.	Anna University	1984	First	Materials Science
B.Sc.	Madras University	1982	First	Physics
PUC	Madras University	1979	Second	Physics, Maths , Chemistry
S.S.L.C		1978	-	

### 9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Dean (Institute Development )	Institution	Sept. 2015	Till date
Chief Vigilance Officer	Institution	2013	2015
Head	Department	Nov. 2005	Nov. 2008
Quarters Allotment committee -Member	Institution	2012	2013
Member	Department Purchase committee	-	-
Staff Advisor	NITT-SPIE and NITT-OSA Students chapters	2016 onwards	
Chairman - Doctoral Committee.	Many departments	-	-
TEQIP coordinator	Department	Phase I Phase II	-
N.S.S. officer	Institution	1993	1996.
Hostel Deputy warden/Warden	NIT, Agate Hostel	1992	1994

## National Institute of Technology, Tiruchirappalli: Performa for CV of Faculty/ Staff Members

---

### 10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To
Member	Board of Studies		

### 11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2007	Best teacher award	NIT-Tiruchy
2010	Best poster paper award	21 <sup>st</sup> AGM of Materials Research Society of India
2013	Best poster paper award	14 <sup>th</sup> Asia Pacific Conference on Non-Destructive Testing, ISNT.

### 12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)
		Nil		

### 13. Details of Academic Work

(i) Curriculum Development: Development of Theory and Lab subjects for B.Tech., M.Tech. (NDT), and M.Sc.(Physics). Establishing of research laboratories.

(ii) Courses taught at Postgraduate and Undergraduate levels

<b>Odd semester :</b>	
a.	Digital Signal and Image Processing (M.Sc.(Physics) and M.Tech. (NDT))
b.	Engineering Physics I ( B.Tech. First year)
c.	Engineering Physics Laboratory I ( B.Tech. First year)
d.	Non-Destructive Testing (M.Sc.)
e.	Research Methodology ( Course work for Ph.D. candidates)
<b>Even semester:</b>	
a.	Fiber optic sensors ( M.Sc. Physics)
b.	Engineering Physics II (B.Tech. First year)
c.	Engineering Physics Laboratory II ( B.Tech. First year)
d.	Research Methodology (Course work for Ph.D. candidates)
e.	Mathematical Physics

National Institute of Technology, Tiruchirappalli:  
Performa for CV of Faculty/ Staff Members

---

(iii) Projects guided at Postgraduate level

**Title of P.G. Projects guided (M.Tech. (NDT) and  
M.Sc.(Physics)**

<b>M.Tech. (Non-Destructive Testing)</b>		
<b>Name of the Student</b>	<b>Title of the project</b>	<b>Year</b>
Satwant Singh	Quality control of laser and cold metal transfer (GMAW)	2014
Anil Krishnan	Evaluation of Adhesive Bonded lap Joints by ultrasonic NDE and Mechanical Test	2014
P. Balaji	Non- Destructive Evaluation of Friction Stir welded Aluminium alloy(AA 2014_	2014
Y.V.V.M.Mohana Rao	Ultrasonic Inspection of Aluminum Welds Produced by Friction Stir Welding	2013
Venu Tambala	Ultrasonic signal analysis of defects in dissimilar joints of alloy steel and stainless steel using Hilbert-Hung Transform	2012
Mohd.Sajid siddiqui	To study the effect of microstructure at the interface of white cast iron and spheroid gray cast iron on the ultrasonic signal	2012
V.V.M. Mohana Rao Yavvari	Non Destructive tesing of aluminum butt weld produced by friction stir process	2012
Muhammed shafi A P	Technique for imaging using virtual array of sources(TIVAS) using shear waves	2011
Jeevana babu. Ch	Ultrasonic detection of defects using Hilbert-Huang tranform	2010
Srinivas.N	Analysis of ultrasonic signal from defect using Hilbert-Huang tranform	2010
Ramesh parise	Investigations in digital speckle shearing interferometry using Mach-Zehnder based interferometer for non-destructive testing	2009
Sathiaseelan.M	Ultrasonic signal processing methods using some algorithms	2008
Anbarasu.K	Application of magnetic Barkhausen noise technique to assess the residual stresses in boiler tubes and turbine components	2008

National Institute of Technology, Tiruchirappalli:  
Performa for CV of Faculty/ Staff Members

<b>M.Sc.(Physics)</b>		
<b>Name of the student</b>	<b>Title of the project</b>	<b>Year</b>
Anu .K	Designing of fiber optic sensor for Bullet velocity measurement	2014
Indu .K	Designing of optoelectronic detector for Bullet velocity measurement	2014
Celestine Reena J	Theoretical studies on Clad-modified fiber optic gas sensor	2013
Padmavathi S	Gas sensing mechanism in Clad-modified fiber optic gas sensor	2013
Sivasankari .C	Remote sensing of soils by optical reflection method	2012
Lakshmanan. C	Water level measurement using laser	2012
Santhosh kumar. J	Sensing property of gadolinium oxide using fiber optic gas sensor	2011
Vijaya gayathri .M	Design and sensing properties of fiber optic gas sensor using yttrium oxide nanoparticles	2011
Gopakumar. C. K	Design and sensing properties of optical fiber gas sensor using copper oxide nanoparticles	2010
Harikrishnan. P	Fiber optic pressure and temperature sensors using Mach-Zehnder interferometry	2009
Suresh babu. R	Laser surface modification of AISI 316L stainless steel coated with silicon carbide (SiC) and chromium (Cr) by high power (CO <sub>2</sub> ) laser processing	2009

(iv) Other contribution(s): Members in different committees.

#### 14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Optical power limiting studies on Ag and Cu nanowire composite glasses	DRDO	2009	2013	Completed
Fund for Improvement of Science & Tech. Infrastructure (FIST) - Project Coordinator	DST	2008	2013	Completed
Design of Fiber Optic Sensors for Measuring Thickness of Thin Transparent Material and Online Monitoring of Refractive Index of Liquids	MHRD	2004	2006	Completed

**National Institute of Technology, Tiruchirappalli:  
Performa for CV of Faculty/ Staff Members**

Laser Surface Alloying of Aluminium Alloy and Stainless Steel with Cr and SiC	CSIR	2002	2005	Completed
Formation of Metal Carbide Composite Layer on Aluminium Alloy by Laser Processing	DST	2003	2005	Completed
Laser Surface Alloying of Aluminium - Silicon Alloy with Silicon Nitride	MHRD	2002	2004	Completed
Design of Thickness and Micro-Displacement Photonic Sensors	MHRD	2001	2003	Completed
Modernization of Non-Destructive Testing Laboratory	MHRD	2000	2002	Completed

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award
B. Renganathan	Nanocrystalline Metal oxides based fiber optic sensor for ammonia vapor detection	Supervisor	2012
G.Balaksrishnan	Study on microstructural, optical and high temperature properties of thin films of metal oxides and their nanomultilayers prepared by pulsed laser deposition	Supervisor	2010
G.Gobi	Design and development of fiber optic displacement sensors- Applications	Supervisor	2009
A.Viswanathan	Metal-ceramic composite layer formation on Al-Si alloy and AISI 316L stainless steel by high power laser (CO <sub>2</sub> ) processing	Supervisor	2008
M. Jamal Mohamed Jaffar	Laser Surface Modification of Aluminium- Silicon alloy with metals and silicon carbide	Supervisor	2006
R. Jagdheesh	Laser Surface Modification of Austenitic Stainless steel	Supervisor	2005

**National Institute of Technology, Tiruchirappalli:**  
**Performa for CV of Faculty/ Staff Members**

---

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 <sup>th</sup> -11 <sup>th</sup> October 2014	Photonics Asia 2014	International	Paper presenter		China Beijing,
18-22 <sup>nd</sup> , Nov. 2013.	Asia Pacific Conference on Non- Destructive Testing,	International	Paper presenter	Indian Society for Non- destructive Testing	Renaissance Convention Centre Hotel Mumbai,
16-18 <sup>th</sup> May 2013.	Heat treatment and Surface Engineering	International			Chennai Trade Centre, Chennai
09-12, Dec.2012.	International conference on Fiber optics and Photonics (Photonics 2012	International	Paper presenter		IIT, Chennai
23-25 May 2011.	Optics 11 International conference,	International	Paper presenter	NIT, Calicut,	NIT, Calicut,
7-10 Dec. 2011,	National seminar on Non- Destructive Evaluation,	National	Paper presenter	Indian Society for Non- destructive Testing	Chennai Trade Centre, Chennai.
01-05, Aug. 2010	SPIE Optics and Photonics Conference,	International	Paper presenter	SPIE, USA.	San Diego, USA.
November 2-5, 2009	23 <sup>rd</sup> International Conference on Surface Modification Technologies,	International	Paper presenter		Chennai.
10-12 Dec. 2009,	National seminar & Exhibition on Non- Destructive	National	Paper presenter	Indian Society for Non- destructive Testing	NIT, Tiruchirappalli.

**National Institute of Technology, Tiruchirappalli:  
Performa for CV of Faculty/ Staff Members**

	Evaluation,				
April 14-18 2008,	19th International Conference on Optical Fiber Sensors	International	Paper presenter		Perth, Australia
December 15- 17,2008	International conference on Fiber optics and Photonics (Photonics 2008)	International	Participation		Indian Institute of Technology, New Delhi, India.

17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/  
Organizing Secretary/ Convener / Co-Convener)

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue
Future Non Destructive Technological methods	Local	15 Sept. 2016	Convener	NIT, Tiruchy
Workshop on Elemental, compound and Phase analysis by powder X- ray Diffraction	National	19-20 <sup>th</sup> Sept. 2014.	Convener	NIT-Tiruchy
Workshop on Advances in Non-destructive Testing	Local	03-04 <sup>th</sup> , Oct. 2013	Convener	NIT-Tiruchy
Workshop on Optical and Ultrasonic methods in NDE,	Local	16-20 <sup>th</sup> Oct. 2013	Convener	NIT-Tiruchy
Short term course on Post Graduate level physics problems : Understanding and solutions NIT-Tiruchy	Local	1 – 6 <sup>th</sup> June, 2012	Convener	NIT-Tiruchy
Workshop on Scanning Electron Microscopy	National	3-5 <sup>th</sup> Nov. 2011	Convener	NIT-Tiruchy
X-Ray Diffraction Analysis (XRD) and Intellectual property Rights (IPR)	Local	15 <sup>th</sup> March 2008	Convener	NIT-Tiruchy
Advanced Materials & Devices	Local	10 <sup>th</sup> Jan. 2008	Convener	NIT-Tiruchy
Teaching Science Through Digital	Local	March 6- 7, 2008	Convener	NIT-Tiruchy



## National Institute of Technology, Tiruchirappalli: Performa for CV of Faculty/ Staff Members

Introduction to Computers and Internet Lab	Local	November 1-2, 2007	Convener	NIT-Tiruchy
--	-------	--------------------	----------	-------------

### 18. Invited Talks delivered

Topic	Date	Inviting Organization
Laser & Applications	10 <sup>th</sup> March 2016	Shunmuga Industries Arts and Science College, Tiruvanamalai.
Fiber optic gas sensors	11th March 2013.	School of Physics Bharathidasan University, Tiruchy
Applications of XRD	February 28th and March 1 <sup>st</sup> , 2013	Department of Material Science and Engineering Care Group of Institutions Thiruchirappalli - 620 009
Laser Materials Processing	24 <sup>th</sup> Nov. 2012	Staff Academic College Bharathidasan University, Tiruchy
Fiber optic gas sensors based on metal oxides	11 <sup>th</sup> March 2011.	Department of Physics Madurai Kamaraj Univerisity, Madurai.
Laser Surface Modification	11 <sup>th</sup> March, 2011.	Department of Physics Manomanian Sundaranar university, Tirunelveli.
Nanoscience & Technology	15 <sup>th</sup> Feb. 2010.	Department of Physics Urumu Dhanalakshmi college, Tiruchirappalli
Laser Materials Processing	01 Mar. 2010	Department of Physics, Jamal Mohamed College, Tiruchy

### 19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member )	Organization	Membership No. with date
Life Member	Indian Society for Technical Education	LM 21520, 1996
Life Member	Indian Laser Association	Lm 363, 1997
Life Member	Indian Society for Non destructive Testing	LM 8443, 2006
Ordinary Member	Internal Society for	-

**National Institute of Technology, Tiruchirappalli:  
Performa for CV of Faculty/ Staff Members**

	Photonics engineer, SPIE	
--	-----------------------------	--

20. Academic Foreign Visits

Country	Duration of Visit	Programme
China Beijing,	8 <sup>th</sup> -11 <sup>th</sup> October 2014	International Conference
Italy	4- 15th Feb. 2013	Workshop
Japan	June 2007	Lab Visit
San Diego, USA.	01-05, Aug. 2010	International Conference
Perth, Australia	April 14-18 2008,	International Conference
Italy	2-13th Feb. 2004	Workshop

21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)
S. Devendiran, <u>D. Sastikumar</u>	Gas sensing based on detection of light radiation from a region of modified cladding (nanocrystalline ZnO) of an optical fiber	Optics & Laser Technology	89	186–191	2017,	
K. Manikandan S. Dhanuskodi, Anitta Rose Thomas, N. Maheswari, G. Muralidharan D. Sastikumar	Size–strain distribution analysis of SnO <sub>2</sub> nanoparticles and their multifunctional applications as fiber optic gas sensors,	RSC Advances	6	90559 – 90570	2016,	

National Institute of Technology, Tiruchirappalli:  
Performa for CV of Faculty/ Staff Members

	supercapacitors and optical limiters†					
T. Kavinkumar, D. Sastikumar S. Manivannan	Effect of functional groups on dielectric, optical gas sensing properties of graphene oxide and reduced graphene oxide at room temperature	Royal Society of Chemistry, Advances,	5	10816-10825.	2015	
J.L. Noel <sup>a</sup> , R. Udayabhaskar <sup>b</sup> , B. Renganathan <sup>b</sup> , S. Muthu Mariappan <sup>b</sup> , D. Sastikumar <sup>b</sup> , B. Karthikeyan <sup>b</sup>	Spectroscopic and fiber optic ethanol sensing properties Gd doped ZnO nanoparticles	<u>Spectrochimica Acta Part A</u>	132	634–638	2014,	<sup>b</sup>
J. Rajeev Gandhi <sup>a</sup> , M. Rathnakumari <sup>a</sup> , K. Ramamurthi <sup>b</sup> , R. Ramesh Babu <sup>c</sup> , D. Sastikumar <sup>d</sup> , P. Sureshkumar <sup>a</sup>	Measurement of nonlinear refractive index of pure and doped KTP crystals by Z-scan technique using cw He–Ne Laser	Optik	125	6462–6465	2014,	
B. Renganathan D. Sastikumar R. Srinivasan A.R. Ganesan	Nanocrystalline samarium oxide coated fiber optic gas sensor	<u>Materials Science and Engineering: B</u>	186	122–127	2014	
B. Renganathan D.Sastikumar, S.GokulRaj, A.R.Ganesan	Fiber optic gas sensors with vanadium oxide and tungsten oxide nanoparticle coated claddings	Optics Communications	315,	74-78	2014	
L.R. Shobin, D. Sastikumar, S. Manivannan	Glycerol mediated synthesis of silver nanowires for roomtemperature ammonia vapor sensing	Sensors and Actuators	A 214	74–80	2014	

National Institute of Technology, Tiruchirappalli:  
Performa for CV of Faculty/ Staff Members

S. Dhanuskodi , R.Mohandoss , B.Renganathan , D.Sastikumar	Transition metal doped nanocrystalline Li <sub>2</sub> B <sub>4</sub> O <sub>7</sub> for gas sensing applications	Optics & Laser Technology	64	204–212	2014	
L.R.Shobin, <b>D.Sastikumar</b> , S. Manivannan,	Silver nanowires coated fiber optic sensors for ammonia sensing application, .	Sensors and Actuators A : Physical, 2	14 ( )	74-80	2014	
B. Renganathan, D. Sastikumar A. Chandra Bose, R. Srinivasan , A.R. Ganesan	Nanocrystalline cerium oxide coated fiber optic gas sensor	Current Applied Physics	14,	467-471	2014	
L.R. Shobin, B. Renganathan, D. Sastikumar, Kyu Chang Park and S. Manivannan	Pure and Iso-Butyl Methyl Ketone Treated Multi-Walled Carbon Nanotubes for Ethanol and Methanol Vapor Sensing,	IEEE SENSOR S JOURNAL	14	1238-1243,	2014	
R. Mohandoss, S. Dhanuskodi, B. Renganathan,. <u>D.Sastikumar</u> ,	Improved ethanol sensing characteristics of sol–gel derived nanocrystalline manganese doped lithium tetraborate, , Vol. Pages	Sensors and Actuators A	203	310–315	2013	
Mohandoss, S. Dhanuskodi, B. Renganathan, D. Sastikumar	Gas sensing property of lithium tetraborate clad modified fiber optic sensor	Current Applied Physics	13	957-963	2013	
M. Parthibavarman, B. Renganathan, D. Sastikumar	Development of high sensitivity ethanol gas sensor based on Co-doped SnO <sub>2</sub> nanoparticles by microwave irradiation	Current Applied Physics	13	1537-1544	2013	

National Institute of Technology, Tiruchirappalli:  
Performa for CV of Faculty/ Staff Members

	technique					
G. Balakrishnan, P. Kuppusami, D. Sastikumar and Jung Il Song	Growth of nanolaminate structure of tetragonal zirconia by pulsed laser deposition,	<i>Nanoscale Research Letters</i>	8	82	2013	
<u>R.N. Mariammal, K. Ramachandran, G. Kalaiselvan, S. Arumugam, B. Renganathan, D. Sastikumar</u>	Effect of magnetism on the ethanol sensitivity of undoped and Mn-doped CuO nanoflakes	<u>Applied Surface Science</u>	<u>270</u>	545–552	2013	
G. Balakrishnan S. Tripura Sundari R. Ramaseshan, R. Thirumurugesan ,E. Mohandas, D. Sastikumar P. Kuppusami, T.G. Kim, J.I. Song	Effect of substrate temperature on microstructure and optical properties of nanocrystalline alumina thin films	<u>Ceramics International</u>	39,	9017–9023	2013,	
R.N. Mariammal, K. Ramachandran, B. Renganathan, D. Sastikumar	On the enhancement of ethanol sensing by CuO modified SnO <sub>2</sub> nanoparticles, using fiber-optic sensor	Sensors and Actuators B	169,	199–207	2012	
A.	Laser processed TiC–Al <sub>13</sub> Fe <sub>4</sub> composite layer formation on Al–Si alloy,	Optics and Lasers in Engineering	50	1321–1329	2012	
Mariammal, R. N.; Susila, V. M.; Renganathan, B.; Sastikumar, D.; Ramachandran, K.	Ethanol Sensor Using Zn <sub>1-x</sub> Cd <sub>x</sub> O (x = 0.00 and 0.10) Nanorods by Fiber-Optic Technique	Sensor Letters,	10,	18-25	<i>2012</i>	
S. Manivannan, A.M. Saranya, B.	Single-walled carbon nanotubes	<i>Sensors and</i>	<i>171–172</i>	<i>634–638</i>	<i>2012</i>	

National Institute of Technology, Tiruchirappalli:  
Performa for CV of Faculty/ Staff Members

Renganathan, D. Sastikumar, G. Gobi, Kyu Chang Park,	wrapped poly- methyl methacrylate fiber optic sensor for ammonia, ethanol and methanol vapors at room temperature	<i>Actuators B</i>				
R. N. Mariammal, V.M.Susila, B.Renganathan, D.Sastikumar, K. Ramachandran	Ethanol sensor using ZnO and ZnO: CdO nanorods by fiber-optic technique.	<i>Sensor Letters</i>	50	1321– 1329	2012	
G. Balakrishnan ,P. Kuppusami, S. Murugesan, C. Ghosh, R. Divakar, E. Mohandas, D.Sastikumar	Characterization of Al <sub>2</sub> O <sub>3</sub> /ZrO <sub>2</sub> nano multilayer thin films prepared by pulsed laser deposition,	<i>Materials Chemistry and Physics,</i>	133	299– 303	2012	
G Balakrishnan, P. Kuppusami, S. Murugesan, E. Mohandas, and D.Sastikumar	High temperature x-ray diffraction studies of zirconia thin films prepared by reactive pulsed laser deposition	<i>Cryst. Res. Technol</i>	47 ( )	415 – 422	2012	
A.Viswanathan, D.Sastikumar, HarishKumar, A.K.Nath	Laser processed TiC–Al <sub>13</sub> Fe <sub>4</sub> composite layer formation on Al–Si alloy	<i>Optics and Lasers in Engineeri ng</i>	50	1321– 1329	2012	
S. Manivannan, A.M.Saranya, B.Renganathan, D.Sastikumar, G. Gobi, Kyu Chang Park	Single-walled carbon nanotubes wrapped poly- methyl methacrylate fiber optic sensor for ammonia, ethanol and methanol vapors at room temperature	<i>Sensors and Actuators B</i>	171– 172	634– 638	2012	

National Institute of Technology, Tiruchirappalli:  
Performa for CV of Faculty/ Staff Members

G. Balakrishnan, P. Kuppusami, S. Murugesan, C. Ghosh, R. Divakar, E. Mohandas, D. Sastikumar	Characterization of Al <sub>2</sub> O <sub>3</sub> /ZrO <sub>2</sub> nano multilayer thin films prepared by pulsed laser deposition	<i>Materials Chemistry and Physics,</i>	133	299–303	2012	
R.N. Mariammal, K. Ramachandran B. Renganathan, D. Sastikumar	On the enhancement of ethanol sensing by CuO modified SnO <sub>2</sub> nanoparticles using fiber-optic sensor	<i>Sensors and Actuators B</i>	, 169	199–207.	2012	
B. Renganathan, D. Sastikumar, G. Gobi, N. Rajeswari Yogamalar, A. Chandra Bose	Nanocrystalline ZnO coated fiber optic sensor for ammonia gas detection	Optics & Laser Technology	43	1398–1404	2011	
B. Renganathan, D. Sastikumar, G. Gobi, N. Rajeswari Yogamalar, A. Chandra Bose	Gas sensing properties of a clad modified fiber optic sensor with Ce, Li and Al doped nanocrystalline zinc oxides	<i>Sensors and Actuators B</i>	156	263–270	2011	
A. Subashini, R. Kumaravel, S. Leela, Helen Stoeckli Evans, D. Sastikumar, K. Ramamurthi	Synthesis, growth and characterization of 4-bromo-4-chloro benzylidene aniline—A third order non linear optical material	<i>Spectrochimica Acta Part A</i>	78	935–941	2011	
G. Balakrishnan T.N. Sairam, P. Kuppusami R. Thiumurugesan, E. Mohandas V. Ganesan, D. Sastikumar	Influence of oxygen partial pressure on the properties of pulsed laser deposited nanocrystalline zirconia thin films	<u>Applied Surface Science</u>	257	8506–8510	2011,	

National Institute of Technology, Tiruchirappalli:  
Performa for CV of Faculty/ Staff Members

G. Balakrishnan P. Kuppusami S. Murugesan Chanchal Ghosh Divakar Ramachandran E. Mohandas D. Sastikumar	Thermal stability of CeO <sub>2</sub> /ZrO <sub>2</sub> multilayer thin films prepared by pulsed laser deposition	Transactions of the Indian Institute of Metals	64	297–299	2011	
G. Balakrishnan, S. Tripura Sundari, P. Kuppusami, P.Chandra Mohan, M.P. Srinivasan, E. Mohandas, V. Ganesan, D.Sastikumar	A study of microstructural and optical properties of nanocrystalline ceria thin films prepared by pulsed laser deposition	<i>Thin Solid Films</i>	519	2520-2526	2011	
P. Indra Devi, N. Rajkumar, B. Renganathan, D. Sastikumar, and K. Ramachandran,	Ethanol Gas Sensing of Mn-Doped CoFe <sub>2</sub> O <sub>4</sub> Nanoparticles	<i>IEEE Sensors Journal,</i>	11	1395-1402	2011	
G. Balakrishnan, P. Kuppusami S. Tripura Sundari, R. Thirumurugesan, V.Ganesan , E. Mohandas, D.Sastikumar	Structural and optical properties of $\gamma$ -alumina thin films prepared by pulsed laser deposition	<i>Thin Solid Films</i>	518	3898-3902.	2010	
D.Sastikumar, G.Gobi and B. Renganathan	Determination of the thickness of a transparent plate using a reflective fiber optic displacement sensor	<i>Optics and Laser Technology,</i>	42	911-917	2010	
G.Balakrishnan, P.Kuppusami, S.Tripura Sundari,	Synthesis and properties of Ceria thin films prepared	<i>J Nanoscience and</i>	9	5421-5424	2010	



National Institute of Technology, Tiruchirappalli:  
Performa for CV of Faculty/ Staff Members

R.Thirumurugesan, V. Ganesan, E.Mohandas and D.Sastikumar	by Pulsed Laser Deposition	<i>Nanotechn ology</i>				
A. <u>Viswanathan</u> , <u>D. Sastikumar</u> , Harish <u>Kumar</u> , A.K. <u>Nath</u> ,	Formation of WC- iron silicide (Fe <sub>5</sub> Si <sub>3</sub> ) composite clad layer on AISI 316L stainless steel by high power (CO <sub>2</sub> ) laser	<i>Surface and Coatings Technolog y,</i>	203	1618- 1623.	2009	
G.Balakrishnan, P.Kuppusami, T.N.Sairam, R.V.Subba Rao, E.Mohandas and D.Sastikumar	Influence of background gas atmosphere on the formation of chromium oxide thin films prepared by pulsed laser deposition	<i>Surface Engineeri ng,</i>	25	223- 227.	2009	
<u>Gobi G. Ganesh</u> , <u>A. Balaji</u> , <u>Radhakrishnan,T.</u> <u>K. Sastikumar, D.</u>	Laser based optical sensor to observe metal surfaces subjected to early microbic corrosion	<i>Lasers in Engineeri ng,</i>	17)	397- 404	2007	
A. <u>Viswanathan</u> , D. Sastikumar , P. <u>Rajarajan</u> , Harish Kumar, A.K. <u>Nath</u>	Laser irradiation of AISI 316L stainless steel coated with Si <sub>3</sub> N <sub>4</sub> and Ti	<i>Optics and Laser Technolog y,</i>	39	1504- 1513	2007	
A.Viswanathan Sastikumar, D. <u>Kamachimudali</u> , <u>U. Harish Kumar</u> , <u>Nath, A.K.</u>	TiC reinforced composite layer formation on Al-Si alloy by laser processing	<i>Surface Engineeri ng,</i>	23	123- 128	2007	
<b>D.Sastikumar</b> , A.Viswanathan, M.Jamal Mohamad Jaffer	Laser Surface Modification of AISI 316L Stainless steel	Lasers in Engineeri ng	16	447- 458	<b>2006</b>	

National Institute of Technology, Tiruchirappalli:  
Performa for CV of Faculty/ Staff Members

and A.K.Nath.	with SiC-Fe-Ni-Cr.					
A.Balaji Ganesh, T.K.Radhakrishnan, G.Gobi, <b>D.Sastikumar</b>	Estimation of Corrosion of Metals using Fiber optic Displacement Sensor System.	Sensors & Transducers Journal,	70	645-654.	<b>2006</b>	
M.Jamal Mohamad Jaffer, <b>D.Sastikumar</b> and A.K.Nath.	Laser Assisted Al-Si-SiC composite layer formation on an Al-Si Alloy	Lasers in Engineering,	15	393-411.	<b>2005</b>	
R. Jagdheesh, U. Kamachi Mudali, <b>D. Sastikumar</b> and A.K. Nath	Laser Cladding of Si on austenitic stainless steel	Surface Engineering, .	21	113-118	<b>2005</b>	
M.Jamal Mohamad Jaffer, <b>D.Sastikumar</b> and A.K.Nath.	Metal–Ceramic composite layer formation on Al-Si alloy by laser processing	Lasers in Engineering,	15	(267-283	<b>2005</b>	
R. Jagdheesh, <b>D. Sastikumar</b> U. K. Mudali and A.K. Nath.	Laser Processed Metal-Ceramic Coatings on AISI Type 316L Stainless Steel.	Surface Engineering,	20	360-366.	<b>2004</b>	
N.Ravi, <b>D.Sastikumar</b> , R.Jagdheesh, N.Subramanian, and A.K.Nath	Formation of WC-Co composite layer on the surface of aluminium alloy by Laser Processing.	Lasers in Engineering,	11	267-282.	<b>2001</b>	
N. Ravi, <b>D. Sastikumar</b> , N.	Microhardness and Microstructure	Materials and	15	395-404.	<b>2000</b>	

National Institute of Technology, Tiruchirappalli:  
Performa for CV of Faculty/ Staff Members

Subramanian, A.K. Nath and V. Masilamani	studies on laser surface alloyed Aluminium alloy with Ni-Cr	Manufacturing processes				
<b>D.Sastikumar</b> and V.Masilamani	Amplified spontaneous emission characteristics of LD 473 and coumarin laser dyes.	Indian J. of Chem. Sec A	37 A	151.	<b>1998</b>	
<b>D. Sastikumar,</b> Jamal Mohamed Jaffar, V. N. P. Moses and A. Arokiasamy	An optoelectronic device for measuring rate of air flow	Indian Journal of Pure & Applied Physics,	35	739.	<b>1997</b>	
<b>D.Sastikumar</b> and V.Masilamani	Influence of solvents on amplified spontaneous emission characteristics of 7-diethylamino-methylcoumarin	Proc. Indian Acad. Sci. (Chem Sci.)	109	325	<b>1997</b>	
<b>D.Sastikumar</b> and V.Masilamani	Effect of solvents on dual amplified spontaneous emission characteristics of Coumarin 2 and Coumarin 307 laser dyes	Indian J.Pure & App.Physics	35	379.	<b>1997</b>	
<b>D.Sastikumar</b> and V.Masilamani	Dual amplified spontaneous emission from 7-ethylamino-6methyl-4-	Indian J. Pure & App. Physics	34	827	<b>1996</b>	

National Institute of Technology, Tiruchirappalli:  
Performa for CV of Faculty/ Staff Members

---

	trifluoro methyl coumarin (Coumarin 307)					
<b>D.Sastikumar</b> and V.Masilamani	Dual ASE from laser dyes with rigidised electron donors	Proc.Indian Acad. Sci.(Chem Sci.)	107	593.	<b>1995</b>	
<b>D.Sastikumar</b> and V.Masilamani	Dual ASE from 7-diethylamino-4-trifluoromethylcoumarin (C35)	Proc.Indian Acad. Sci.(Chem Sci.)	107	143.	<b>1995</b>	
<b>D.Sastikumar</b> and V.Masilamani	Photophysics of some laser dyes under high density of excited molecules	Proc.Indian Acad. Sci.(Chem Sci.)	104	765.	<b>1992</b>	
K.Joesph Prabahar, <b>D.Sastikumar</b> , S.Selladurai, V.T.Ramakrishnan and V.Masilamani	A new class of laser dyes from the Acridine diones derivatives	Indian J.Pure and App.Physics	29	382.	<b>1991</b>	
V.Masilamani, D.Sastikumar, S.Natarajan and P.Natarajan	Simultaneous dual superradiance from twisted and planar conformations of laser dye	Optical Commun.	62	389	<b>1987</b>	

National Institute of Technology, Tiruchirappalli:  
Performa for CV of Faculty/ Staff Members

---

(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedi ngs	Page numbe rs	Conference Theme	Venue	Year
<b>D.Sastikumar</b> and B. Renganathan,	Sensing characteristics of clad-modified with nanocrystalline metal oxide fiber optic gas sensor	-	-	Photonics Asia 2014	Beijing, China.	2014,
P. Balaji, <b>D.Sastikumar</b> , S.Muthukurmaran, S.Venukumar	Non-Destructive evaluation of dissimilar aluminium alloys (AA2014 & AA1100) welded using friction stir welding.	-	-	14 <sup>th</sup> Asia Pacific conference on Non- Destructive Testing	Mumbai.	2013
Y.V.V.M Mohana Rao, V. Kalyanavalli, <b>D.Sastikumar</b> , S.Muthukurmaran, S. Venukumar	Non-Destructive evaluation of Aluminium A601- T6 spot welds produced by friction stir welding	-	-	14 <sup>th</sup> Asia Pacific conference on Non- Destructive Testing	Mumbai.	2013
A.G. Anil Krishnan, <b>D.Sastikumar</b> , M. Ramesh Kumar, D.Karuppanan.	Lap joint studies on composite laminates by using ultrasonic methods	-	-	14 <sup>th</sup> Asia Pacific conference on Non- Destructive Testing	Mumbai.	2013
Y.V.V.M.Mohana Rao, A. Pradeep, S. Muthukurmaran and <b>D. Sastikumar</b>	Ultrasonic Inspection of Aluminum Welds Produced by Friction Stir Welding	-	-	National seminar on Non- Destructive Evaluation	Delhi	2012,
B. Renganathan, <b>D. Sastikumar</b> , G. Gobi, N. Rajeswari	Annealed Ce Doped ZnO Coated Fiber Optic Gas Sensor.	-	-	<i>Optics 11 International conference</i>	<i>Calicut,</i>	<i>2011</i>

National Institute of Technology, Tiruchirappalli:  
Performa for CV of Faculty/ Staff Members

Yogamalar, and A. Chandra Bose						
Venu Tambala and <b>D. Sastikumar</b>	Ultrasonic Signal Analysis of Defects in Austenitic Stainless Steel using Hilbert-Huang Transform			National seminar on Non-Destructive Evaluation	Chennai	2011,
B. Renganathan, <b>D. Sastikumar</b> , G. Gobi, R. Srinivasan, N. Rajeswari, Yogamalar, A. Chandra Bose,	Nanocrystalline Titanium dioxide coated optical fiber sensor ammonia vapour detection.	<i>Proceedings of SPIE</i> vol. 7764		SPIE Optics and Photonics conference	San Diego, USA,	2010,
<b>D.Sastikumar</b> , N.Srinivas and M.Asokh.	Analysis of highly attenuated ultrasonic signal from defect using Hilbert-Huang Transform			National seminar & Exhibition on Non-Destructive Evaluation	NIT, Tiruchirappalli.	2009
<b>D.Sastikumar</b> , A. Viswanathan, and A.K. Nath	SiC-TiC reinforcement on Al-Si alloy by laser processing,			23 <sup>rd</sup> International Conference on Surface Modification Technologies	Chennai,	2009
G. Balakrishnan, S. Murugesan, C. Ghosh, P. Kuppusami, R. Divakar, E. Mohandas and D. Sastikumar	High Temperature XRD of Zirconia /Alumina Multilayer Thin Films Prepared by Pulsed Laser Deposition	<i>Proc. of SPIE</i> Vol. 7404, 74040P,		SPIE Optics + Photonics conference	San Diego, USA	2009.
<u>D.Sastikumar, D.;</u> <u>G. Gobi, G.;</u> B. <u>Renganathan.</u>	Fiber optic sensor for determination of thickness of transparent plates	<i>Proceedings of SPIE</i> -, v 7004,		19th International Conference	14-18 Perth, Australia	2008

National Institute of Technology, Tiruchirappalli:  
 Performa for CV of Faculty/ Staff Members

---

		70044Q, 2008,		on Optical Fibre Sensors,		
B.Renganathan, G.Gobi, <b>D.Sastikumar</b> , R.Srinivasan, A.Chandrabose	Nanocrystalline SnO <sub>2</sub> coated on optical fiber for ammonia sensing			International conference on Fiber optics and Photonics- Photonics 2008,	<i>IIT, Delhi</i>	2008.

(C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number
		-		