

## BIO DATA



Name : Dr. Manoj  
Official Address : Assistant Professor  
Department of Physics  
GEC TCR, Thrissur  
Residential Address : Ambily,  
Behind Ideal National School,  
Kadoopadom, UCC P.O.  
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Contact No. : 9605510350  
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Academic qualifications :

Sl.No.	Degree	Specialization	College/Institute
1	PhD	Physics	Department of Physics, CUSAT
2	Msc Physics	Electronics, Computer Science	Department of Physics, CUSAT

Experience

(i) Teaching : Assistant Professor ( 4 June 2014 - Present)(2 Years, 6 months)  
6 Years 6 Months) Department of Physics,  
(ii) Researche : Government Engineering College,  
6 Years 3 Months) Thrissur, 680 009.

Assistant Professor (29 Jan 2014 - 4 June 2014) (4 months)  
Sree Rama Government  
Polytechnic College, Thrippayar,  
680567.

Associate Professor (1<sup>st</sup> June 2012 - 27<sup>th</sup> January 2014) (1 Years, 6 months)  
Electronics & Communication  
Engineering (ECE), Toc H  
Institute of Science &  
Technology, Arakkunnam P.O,  
Ernakulam, Kerala, India. Pin -  
682313  
Assistant Professor (12<sup>th</sup> March 2008 - 20<sup>th</sup> May 2010) (2 Years,

2 months)  
Electronics & Communication  
Engineering (ECE), Toc H  
Institute of Science &  
Technology, Arakkunnam P.O,  
Ernakulam, Kerala, India. Pin -  
682313

Postdoctoral Researcher (2010-  
2012) ((2 Years)  
Centro de Investigación en  
Energía (CIE), Departamento de  
Materiales Solares, UNAM,  
Mexico.

Postdoctoral Researcher (19<sup>th</sup>  
Oct 2006 - 15<sup>th</sup> Oct 2007)(1 Year)  
ICTP - TRIL Fellow, ENEA, Portici  
Research Centre, Casella Postale  
n.32, Via Vecchio Macello,  
Località Granatello, 80055  
Portici, Naples, Italy

Senior Research Fellow (23<sup>rd</sup>  
May 2005 - 15<sup>th</sup> Oct 2006) (1  
Year, 5 months)  
Centre of Excellence in Laser  
and Optoelectronics Sciences at  
Cochin University of Science and  
Technology, Kochi 682022,  
Kerala, India

Research Associate ( 7<sup>th</sup> Dec  
1998 - 6<sup>th</sup> Oct 2000) (1 Years, 10  
months)  
Renewable Energy Research  
Center, Sacred Heart College,  
Thevara, Cochin, 682 013 Kerala,  
India.

No. of publications

(i) Referred Journals	:	17
(ii) International Conferences	:	8
(iii) National Conferences	:	10

No. of M.Tech Projects guiding/guided :

Award Obtained :

- Selected for the World Materials Summit Student Congress held at Washington in October 2011. One of the 50 students shortlisted from a

worldwide competition among material science students.

- Postdoctoral fellowship at Centro de Investigación en Energía (CIE) Departamento de Materiales Solares, UNAM, México (2010).
- ICTP- UNESCO fellowship for Training and Research in Italian Laboratories in October 2006
- Senior Research Fellowship of the Center of Excellence in Laser and Optoelectronics Sciences at Cochin University of Science and Technology, Kochi 682022, Kerala, INDIA in 2005.
- Young Scientist Award for the best research paper presented at the 13<sup>th</sup> Swadeshi Science Congress held at Community biodiversity center, M. S. Swaminathan Research Foundation, Kalpeta, Kerala in November 2003.

Field Of Interest : Material Science,  
Optoelectronic Materials,  
Sensors, Thermoelectric  
Materials.

Other Contributions :

1. "Thin Film thermocouples for energy harvesting of waste heat".(ECR/2015/000501) Sanctioned on 12 January, 2017 Rs. 3614600/- Sanctioned by Science and Engineering Research Board (SERB)
2. Completed the project Sputter deposition studies on nickel super alloy based specimens for thin film sensor deposition, sanctioned by Center for Acquisition of Research Services, DRDO for Gas Turbine Research Establishment, Bangalore for Rs. 8,40,000/-

Co Authored one book "Engineering Physics" P.P. Mathews, P.I. Paulose and Manoj Ramachandran, Published by TIST Consultancy PVT. Ltd. (2012)

At present I am

Assistant Professor, Department of Physics, Govt. Engineering College, Thrissur

## LIST OF PUBLICATIONS

### Referred Journal

1. Cluster Perturbation Simulated Annealing for Protein Folding Problem, Juan Frausto-Solís, Mishael Sánchez-Pérez, Ernesto Liñan-García, Juan Paulo Sánchez-Hernández, **Manoj Ramachandran**, Journal of Universal Computer Science, Vol. 19, No. 15, pp. 2207-2223 (2013).
2. Optical and Electrical Properties of SnSe<sub>2</sub> and SnSe thin films prepared by spray pyrolysis, Dalia Martínez-Escobar, **Manoj Ramachandran**, Aarón Sánchez-Juárez, Jorge Sergio Narro-Ríos, Thin Solid Films, Vol 535, 390 - 393 (2013)
3. Ultrasonic spray pyrolysis deposition of SnSe and SnSe<sub>2</sub> using a single spray, Jorge Sergio Narro-Ríos, **Manoj Ramachandran**, Dalia Martínez-Escobar, Aarón Sánchez-Juárez, Journal of Semiconductors Vol. 34 issue 1, pp 013001-4 (2013)
4. Pulsed laser deposited ZnO:Al thin films for optoelectronic applications, **R Manoj** and M.K.Jayaraj, JIPLAAP, Vol 2, No 1 pp 11-15 (2012)
5. Low power plasma treatment for the growth of SnSe thin films for photovoltaic applications, **Manoj Ramachandran**, Dalia Martínez-Escobar, Jorge Sergio Narro-Ríos, Aarón Sánchez-Juárez, Chalcogenide Letters Vol 8 no 11, pp 695- 697 (2011)
6. Violet luminescence from ZnO nanorods grown by room temperature pulsed laser deposition, R.S.Ajimsha, **R.Manoj**, P.M.Aneesh, M.K.Jayaraj, Current Applied Physics, vol. 10, issue 2, pp. 693-697(2009)
7. Effect of Oxygen intercalation on the properties of sputtered CuYO<sub>2</sub> for potential use as p-type transparent conducting films, **R. Manoj**, M. Nisha, K. A. Vanaja, M. K. Jayaraj, Bulletin of Materials Science Vol 31 No 1 (2008 ) 49.
8. Growth of zinc oxide thin films for optoelectronic application by pulsed laser deposition, K. J. Saji, **R. Manoj**, R. S. Ajimsha, M. K. Jayaraj, Proc. Advances in Thin-Film Coatings for Optical Applications III; Michael J. Ellison; Ed., SPIE Vol. 6286, (2006) 62860D.
9. Effect of substrate temperature on the growth of ITO thin films, Nisha M, Anusha S, Aldrin Antony, **Manoj R** and M.K. Jayaraj, Applied Surface Science 252(2005) 1430
10. Electrical and optical properties of ZnGa<sub>2</sub>O<sub>4</sub> thin films deposited by pulsed laser deposition, K Mini Krishna, M.Nisha, R Reshmi, **R Manoj**, A.S.Asha, M.K.Jayaraj, Materials Forum 29 (2005) 243.
11. Pulsed laser deposition of ZnGa<sub>2</sub>O<sub>4</sub> phosphor thin films, R.Reshmi, K.Minikrishna, **R.Manoj**, M.K. Jayaraj, Surface and Coating Technology 198(2005) 345.
12. Effect of pH on the growth and properties of chemical bath deposited ZnS thin films, Aldrin Antony, K.V. Murali, **Manoj R.**, M.K. Jayaraj, Materials Chemistry and Physics 90/1 (2005) 106

13. Growth of CuInS<sub>2</sub> thin films by sulphurisation of Cu-In alloys, Aldrin Antony, Asha A.S., Rahana Yoosuf, **Manoj R.**, M.K.Jayaraj, Solar Energy Materials and Solar Cells 81 (2004) 407
14. Influence of target to substrate spacing on the properties of ITO thin films, Aldrin Antony, Nisha M., **Manoj R.**, M.K. Jayaraj, Applied Surface Science 225 (2004) 294
15. Preparation and characterisation of ZnS thin films by chemical bath deposition and electron beam evaporation, Murali K.V., Aldrin Antony, **Manoj Ramachandran.** and M. K. Jayaraj, Materials, Active Devices and Optical Amplifiers, (Eds) C. Hasnain, J. Connie, H. Dexiu, N. Yoshiaki, R. Xiaomin, in: Proc. SPIE Int. Conf. APOC 2003, Wuhan, China, 5280 (2004) p600
16.  $\beta$ -In<sub>2</sub>S<sub>3</sub> Thin Films Prepared by The Sulphurisation of Evaporated Indium Films, Rahana Yoosuf, Jerome Kalloor Cheekku, Aldrin Antony, **Manoj Ramachandran** and Madambi K. Jayaraj, Materials, Active Devices and Optical Amplifiers, (Eds) C. Hasnain, J. Connie, H. Dexiu, N. Yoshiaki, R. Xiaomin, in: Proc. SPIE Int. Conf. APOC 2003, Wuhan, China, 5280 (2004) p669
17. Transparent conducting zinc oxide thin film prepared by off-axis rf magnetron sputtering, M.K.Jayaraj, Aldrin Antony, and **R.Manoj** Bull of Material Science 25 (2002) 227

### Referred Conferences (International)

1. "Photocatalytic activity of TiO<sub>2</sub>/CNT nanostructured thin films" **Manoj R**, Sanjay G, Anaswara E.R., K.S. Subil, Reshmi R and Jayaraj M.K. , OMTAT 2013, held at Cochin University of Science and Technology from 2-5 January 2013.
2. "Effects of Annealing on the properties of SnSe thin films deposited by Spray pyrolysis" Dalia Martinez, **Manoj Ramachandran**, Aarón Sánchez, Jorge Narro, XXI IMRC 2012 held at Cancun, Mexico from 12-17 August 2012.
3. "Photovoltaic Materials based on Tin", Manoj Ramachandran, A. Sánchez-Juárez, J. S. Narro-Ríos, D. Martínez-Escobar, 2011 World Materials Summit Student congress held at Washington D. C. from 8 to 12<sup>th</sup> October 2011.
4. "Structural and electrical characterization of SnSe and SnSe<sub>2</sub> thin films materials deposited by ultrasonic spray pyrolysis, J. S. Narro-Ríos, A. Sánchez-Juárez, D. Martínez-Escobar, **M. Ramachandran** presented at 26<sup>th</sup> European Photovoltaic Solar Energy Conference and Exhibition, Hamburg, Germany during 5<sup>th</sup> to 9<sup>th</sup> September 2011.
5. "Thin film Nichrome Strain sensors for aerospace application", **Manoj R**, Manju.T, Sasank Kumar, M.K.Jayaraj, presented at The International Conference on Electroceramics (ICE – 2009) University of Delhi, New Delhi, India, December 13-17, 2009.
6. "Optical and electrical properties of Cu<sub>2</sub>O nanoparticles", **Manoj R**, Suresh K, Sreeja Subash, Anita Kasim, Presented at the Second International Conference on Frontiers in Nanoscience and Technology (Cochin Nano 2009), at Cochin, Jan 4-6, 2009
7. Optimisation of low pressure chemical vapour deposited ZnO thin films as front contact electrode of thin film silicon based solar cells M.L.Addonizio, **R.Manoj**, I. Usatii presented at 22nd European Photovoltaic Solar Energy Conference and Exhibition, Milan, Italy, 3<sup>rd</sup> to 7<sup>th</sup> September 2007.
8. Effect of Oxygen intercalation on the properties of sputtered CuY<sub>0.98</sub>Ca<sub>0.02</sub>O<sub>2</sub> p-type transparent conducting films, **Manoj.R**, Nisha.M, Vanaja.K.A, M.K.Jayaraj, International Conference on Materials for Advanced Technologies (ICMAT 2005), 3 - 8 July, 2005, Singapore.
9. Pulsed Laser Deposition of ZnGa<sub>2</sub>O<sub>4</sub> Phosphor Films, R.Reshmi, K.Minikrishna, **R.Manoj**, M.K. Jayaraj, Thin Films 2004 – The 2nd International Conference on Technological Advances of Thin Films & Surface Coatings, 13 – 17 July 2004, Singapore