COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY DATABASE

INFORMATION DATA SHEET FOR FACULTY MEMBERS
(Filled forms please send to registrar@cusat.ac.in)

(INSERT ADDITIONAL ROW(S)WHERE EVER NECESSARY)

Name:	**Dr. K. N. Madhusoodanan**
Department :	**Instrumentation**
Contact Details **Address for communication** **Email** **Phone** **Intercom**	 **Department of Instrumentation, Cochin University of Science and Technology, Cochin – 682022** **madhu@cusat.ac.in** **0484/2575008** **2353**

1. Academic Background

Qualifications:	
Qualifying Post Graduate Degree:	M.Sc., Ph.D
Ph. D with NET	Yes
Ph. D without NET	-
Post Graduate Degree(s)	M.Sc.
Under Graduate Degree(s):	B.Sc.
Any other PG degree/ Diploma relevant to the subject:	-

2. Research Performance

2.1	Each published /accepted paper in Journal/conferences

SI. No	Authors (As published in the paper)	Title	Journal	Year	Volume	Page No
1.	K.V. Sudhakaran, K.N. Madhusoodanan, M.K. Satheeshkumar, Jacob Philip	A sensitive electret microphone for the detection of photoacoustic signals	J. Acost. Soc. India	1986	14	125
2.	K.N. Madhusoodanan, M.R. Thomas, Jacob Philip	Photoacoustic measurement of the thermal conductivity of some bulk polymer samples.	J. Appl. Phys.	1987	62	1162
3	K.N. Madhusoodanan, Jacob Philip, G. Parthasarathy, S. Asokan, E.S.R. Gopal	Optical absorption and thermal diffusivity in Ge_xTe_{100-x} glasses by photoacoustic technque,	Phil. Mag. B.	1988	58	123
4	K.N. Madhusoodanan, Jacob Philip	Optical absorption and thermal diffusivity of Ge_xSe_{100-x} glasses	Phys. Status Solidi **a**	1988	108	775
5	Jacob Philip, K.N. Madhusoodanan	Percolation threshold of thermal conduction in $A_x^{IV}B^{VI}_{1-x}$ chalcogenide semiconducting glasses	Phys. Rev. B	1988	38	4127
6	K.N. Madhusoodanan, Jacob Philip, S. Asokan, E.S.R. Gopal	Thermal diffusivity of As_xTe_{1-x} glasses measured using photoacoustic technique	J. Materials Science Letters	1988	**7**	1333
7	K. N. Madhusoodanan	Photoacoustic investigation of the optical and thermal properties of selected amorphous chalcogenide semiconductors	Proc. DAE Solid state symposium, (invited talk), Bhopal	1988	31A	239
8	K.N.Madhusoodanan, Jacob Philip, S.Asokan, G.Parthasarathy, E.S.R.Gopal	Photoacoustic investigation of the optical absorption and thermal diffusivity in Si_xTe_{100-x} glasses	J. Non-Cryst. Solids	1989	109	255
9	K.N..Madhusoodanan, Jacob Philip	Evidence for threshold percolation of rigidity in $A^{IV}B^{VI}$ glass networks	Indian J. Phys.	1989	63A	539

10	K.N. Mahusoodanan., Jacob Philip	Composition dependence of the optical nenergy gap and thermal diffusivity in As-Se glasses	Praman - J. Phys.	1989	33	705
11	K. N. Madhusoodanan and Jacob Philip	Thermal transport near the glass transition in bulk As-Se glasses	Phys. Rev. B	1989	39	7922
12	K.N. Madhusoodanan, Jacob Philip	Thermal diffusion near glass transition in Ge-Se glasses meaasured by photoacoustics	Pramana - J. Phys.	1989	32	821
13	K. N. Madhusoodanan, K. Nandakumar, Jacob Philip, S. S. K. Titus, S. Asokan, E. S. R. Gopal	Photoacoustic investigation of glass transition in $As_x Te_{1-x}$ glasses	Phys.Stat.Solidi. **a**	1989	114	525
14	K.N.Madhusoodanan, R.Sreekumar, J Philip	Investigation of phase transitions using the photoacoustic technique	J. Acoust. Soc. India	1989	17	347
15	K. N. Madhusoodanan, J Philip	A photoacoustic spectrometer for high temperature applications	J. Instrument Soc. India	1989	19	314
16	K. Nandakumar, K.N. Madusoodanan, J Philip	Composition and temperature dependence of thermal diffusivity in As-Sb-Se glasses	J. Acoust. Soc. India	1989	17	351
17	J. Philip, K.N. Madhusoodanan, E.S.R. Gopal)	Thermal conduction threshold in binary chalcogenide glasses	Proc. 3 rd Int. Conf. Phonon Phys. (World Scientific),	1989	Vol I	507
18	K.N. Madhusoodanan, J. Philip	Temperaure dependence of thermal diffusivity in Ge-Se and As-Se glasses	Proc. 3 rd Int. Conf. Phonon Phys. (World Scientific)	1989	Vol I	510
19	K. Nandakumar, K. N. Madhusoodanan and J. Philip	Composition dependence of glass transition temperature in As-Sb-Se glasses	Thermal Analysis in Research and Industry,Ed. I. K. Verma and A. C. Momin, (Indian Thermal Analysis Society)	1989		296
20	K.N. Madhusoodanan, K.	Thermal diffusivity of vacuum	Proc. DAE Solid state	1989	32C	355

	Rajeevkumar, and J. Philip	evaporated a-Si thin films	symposium, Madras			
21	K. N. Madhusoodanan, J. Philip, S. Asokan, G. Parthasarathy, E.S.R. Gopal	Photoacoustic study of the glass transition and crystallization in bulk $Ge_x Te_{1-x}$ and Si_xTe_{1-x} glasses	Springer Series in Optical Sciences	1990	62	183
22	K.N. Madhusoodanan, M. K. Rabinal, S. Asokan, E.S.R. Gopal, J. Philip,	Photopyroelecric spectroscopy of In_xSe_{100-x} glasses	Proc. DAE Solid state symposium, Bombay	1990	33C	118
23	K.N. Madhusoodanan, K. Nandakumar, J Philip	On the imaging application of photoacoustic technique	J. Acoust. Soc. India	1990	18	28
24	K. N. Madhusoodanan, A. Sreenivasan, E.S.R. Gopal, K. Nandakumar, J Philip	Photoacoustic study of the compositional dependence of the optical band gap in Ge-As-Se glasses	Indian J. Phys.	1991	65A	306
25	A. Sreenivasan, K. N. Madhusoodanan, E. S. R. Gopal, J Philip	Photoacoustic properties of Ge - Sb- Se and Ge-As-Te glasses and their correlation with the average co-ordination number	J. Acoust. Soc. India	1991	19	72
26	A. Sreenivasan, K.N. Madhusoodanan, K. Nandakumar, J Philip and E.S.R. Gopal	Investigation on the rigidity percolation in Ge-sb-Se glasses	Proc. DAE Solid state symposium, Varanasi	1991	34C	194
27	K.N. Madhusoodanan, and J. Philip	Temperature dependence of optical energy gap in As_xSe_{1-x} and Ge_xse_{1-x} glasses	Physical Acoustics Ed. O.Leroy and M.A.Breazeale, Plenum Press, New York, 1991	1991		479
28	A. Sreenivasan, K.N. Madhusoodanan, E. S. R. Gopal, J Philip,	Observation of a threshold behavior in the optical band gap and thermal diffusivity of Ge- Sb-Se glasses	Phys. Rev. B	1992	45	8112
29	A. Sreenivasan, K.N. Madhusoodanan, E. S. R. Gopal, J Philip	Photoacoustic investigation on the critical composition in Ge-Se-Te glasses	Phil. Mag. B	1992	65	99
30	A. Sreenivasan, K.N. Madhusoodanan, E. S. R.	Chemical ordering in $Si_xAs_yTe_{100-x-y}$ glasses	J. Mater. Sci. Lett.	1992	11	1698

	Gopal, J Philip					
31	A.Srinivasan, K. Ramesh, K. N. Madhusoodanan, E. S. R. Gopal	High-pressure studies on the critical composition in Ge—As—Te glasses	Philos. Mag. Lett.	1992	65	249
32	A.Srinivasan, K. Ramesh, K. N. Madhusoodanan, and E. S. R. Gopal,	High pressure studies on Si-As-Te glasses-evidence for rigidity percolation	Phys. stat. sol. (b)	1992	170	K 83
33	A.Srinivasan, K. N. Madhusoodanan, and E. S. R. Gopal,	Thermal diffusivity of IV-V-VI glassess - An evidence for the existence of a mechanical threshold	Solid State Commun.	1992	83	163
34	A.Srinivasan, K. N. Madhusoodanan, R. Ganesan and E. S. R. Gopal,	Threshold behaviour in the nonisothermal properties of Ge-Sb-Se glasses	Physics and Chemistry of Glasses	1992	33	206
35	A.Srinivasan, K. N. Madhusoodanan and E. S. R. Gopal	Differential scanning calorimetry of Si-As-Te glasses	Indian J. Technology	1992	30	631
36	A. Sreenivasan, K.N. Madhusoodanan, E.S.R. Gopal, J Philip	Anomalous behaviour in the composition dependence of the photoacoustic properties of Si-As-Te glasses	J. Non- Cryst. Solids	1993	155	267
37	U. Zammit, K. N. Madhusoodanan, F. Scudieri, F. Mercuri, E. Wendler, and W. Wesch	Optical-absorption study of structural relaxation of ion-implanted *a*-Si	Phys. Rev. B	1994	49	2163
38	U. Zammit, K. N. Madhusoodanan, M. Marinelli, F. Scudieri, R. Pizzoferrato, F. Mercuri, E. Wendler, and W. Wesch	Optical-absorption studies of ion-implantation damage in Si on sapphire	Phys. Rev. B	1994	49	14322
39	U. Zamrnit, K.N. Madhusoodanan, M. Marinelli, F. Scudieri, R.	Optical absorption studies of ion implanted and amorphous silicon	Journal de Physique IV	1994	4	C7-113

	Pizzoferrato, F. Mercuri, E. Wendler, and W. Wesch					
40	E. Wendler, K. Gartner, W. Wesch, U. Zammit and K. N. Madhusoodanan,	Defect investigation in boron implanted silicon by means of temperature dependent RBS and optical near-edge absorption	Nucl. Instrum. and Methods in Phys. Res.B	1994	85	528
41	U. Zamrnit, K.N. Madhusoodanan, M. Marinelli, R. Pizzoferrato, F. Scudieri, F. Mercuri, E. Wendler, and W. Wesch	Optical absorption studies of ion implanted and amorphous semiconductors	Proc. 8th International topical Meeting on Photoacoustic and Photothermal Phenomena, France (1994) (Invited presentation)	1994		
42	U. Zammit, K. N. Madhusoodanan, M. Marinelli, F. Scudieri, F. Mercuri, W. Wesch, E. Wendler,	Optical absorption in ion implanted Si films	Nucl. Instrum. and Methods in Phys. Res.B	1995	96	241
43	G. Compagnini, U. Zammit, K. N. Madhusoodanan, and G. Foti	Disorder and absorption edges in ion-irradiated hydrogenated amorphous carbon films	Phys. Rev. B	1995	51	11168
44	R. Sreekumar, K.N. Madhusoodanan, and J. Philip	Photopyroelecric study of para-ferroelectric transition in triglycine sulphate single crystals	Proc. DAE Solid state symposium, Calcutta	1995	38C	373
45	R.Ganesan, K. N. Madhusoodanan, K. S. Sangunni and E.S.R.Gopal	Composition Dependence of the Glass Transition in Ge-Se-Te Glasses	Phys.Stat.Sol.(b)	1995	190	k23
46	K.N. Madhusoodanan	Defect related optical absorption in ion implanted silicon	Proc. DAE Solid state symposium, Bombay	1996	39C	190
47	K. N. Madhusoodanan	Subgap optical absorption in CVD diamond and a-C:H	DAE Solid state symp. (invited talk), Cochin	1997		
48	K.N. Madhusoodanan	Specific heat near Smectic-A – Nematic transition in 7AB liquid	Proc. DAE Solid state symposium, Cochin	1997	40C	349

		crystals				
49	G. Mathew, K. N. Madhusoodanan and J. Philip	Characteristics of photoconductivity in amorphous $Ge_xSb_{10}Se_{90-x}$ thin films,	Physica Status Solidi (a)	1998	168	239
50	U. Zammit, K. N. Madhusoodanan, M. Marinelli, F. Mercuri, and S. Foglietta,	Subgap absorption study of chemical vapor deposited thin diamond films	Phys. Rev. B,	1998	57	4518
51	K.N. Madhusoodanan, Alex Mathew, S. Murugavel and S. Asokan	Photoinduced effect on optical absorption edge in amorphous $GeSe_2$ thin films	10^{th} International topical Meeting on Photoacoustic and Photothermal Phenomena, Rome	1998		
52	K.N. Madhusoodanan, Alex Mathew, S. Murugavel and S. Asokan	Effect of annealing on the near edge optical absorption in amorphous in amorphous $GeSe_2$ thin films	5^{th} IUMRS International conference in Asia, Bangalore	1998		
53	K.N.Madhusoodanan	Subgap optical absorption in amorphous Ge-Sb-Se thin films	SPIE proc series	1998	3316	1211
	H. Nagavally, K.N. Madhusoodanan, and T. M. A. Rasheed	NIR optical absorption in He^+ and H^+ ion irradiated polystyrene films	Proc. DAE Solid state symposium, Kurukshetra	1998	41C	
54	U. Zammit, K. N. Madhusoodanan, S. Foglietta, M. Marinelli, F. Mercuri and F.Scudieri	Sub gap optical absorption characterization of CVD diamond thin films	AIP Conf. Proc.	1999	463	283
55	R.Ganesan, K. N. Madhusoodanan, A. Srinivasan,K.S.Sangunni and E.S.R.Gopal	Optical and Thermal diffusivity Measurement of Ge-Se-Te Glasses by Photoacoustic Technique	Phys.Stat.Sol (b)	1999	212	223
56	H. Nagavally, K. N. Madhusoodanan and T. M. A. Rasheed	Effect of He^+ and H^+ ion irradiation on polystyrene films probed by NIR photothermal deflection spectroscopy	Appl. Phys. A	1999	68	475

	K. N. Madhusoodanan and V. Heera	Electrical activation in high dose Al^+ ion implanted SiC	Solid State Physics	1999	42	661
57	K. N. Madhusoodanan, Alex Mathew, K. Gopi Menon and S. Rejimon	An inexpensive detection scheme for probe beam deflection in photothermal deflection spectroscopy	J. Instrum. Soc. India	1999	28(3)	115
58	A. Sreenivasan, K.N. Madhusoodanan and J. Philip	Thermal diffusivity of Al based quasi crystal alloys	Advances in phonon Physics Educational Publishers, Cochin	2000		200
59	K. N. Madhusoodanan, V. Heera, D. Panknin, and W. Skorupa,	Spreading resistance measurements on nanocrystalline SiC produced by ion beam induced crystallisation	Appl. Surf. Sci.	2001	184	209
60	Alex Mathew, and K.N. Madhusoodanan	Optical properties of amorphous Ge_xSe_{100-x} thin films	Natl. Conf. On thin film techniques and applications, Coimbatore	2002		
61	V. Heera, K. N. Madhusoodanan, A. Mücklich, D. Panknin, and W. Skorupa,	Low-resistivity, *p*-type SiC layers produced by Al implantation and ion-beam-induced crystallization	Appl. Phys. Lett.	2002	81	70
62	Alex Mathew and K.N. Madhusoodanan	Optical absorption studies on boron implanted silicon	Natl. Conf. On Recent Advances in Materials Science, Trichi	2002		
63	V. Heera, K.N. Madhusoodanan, A. Mücklich, D. Panknin, and W. Skorupa	Improved p-Type Conductivity in Heavily Al-Doped SiC by Ion-Beam-Induced Nano-Crystallization	Mater, Sci. Forum	2003	433 – 436	395
64	V. Heera, K.N. Madhusoodanan, A. Mücklich, and W. Skorupa,	Nanocrystalline SiC layers produced by ion-beam-induced crystallization-morphology and resistivity	Diamond Relat. Mater.	2003	12	1190
65	A. Mathew and K. N. Madhusoodanan	Optical characterisation of semiconducting amorphous As_xSe_{100-x} thin films	Asian J Spectrosc.	2003	7	27
	K.N. Madhusoodanan and Alex Mathew	Subgap absorption in nitrogen implanted As_xSe_{100-x} thin films	Natl. Conf. On Recent Advances in Materials	2003		

			Science, Thirupathy			
66	Alex Mathew, Jyotsna Ravi, K.N. Madhusoodanan.K.P. Rajappan Nair and T.M.A. Rasheed	PBD Technique for Thermal Diffusivity Measurements Of Ge_xSe_{100-x} Thin Films	Solid State Physics (India)	2003	46	515
67	Alex Mathew and K.N. Madhusoodanan	Photothermal deflection spectroscopy study of nitrogen ion implanted Ge_xSe_{1-x} thin films	Solid State Physics	2004	49	760
68	A. Mathew, J. Ravi, K. N. Madhusoodanan, K. P. R. Nair and T. M. A. Rasheed	Thermal diffusivity measurements of semiconducting amorphous Ge_xSe_{100-x} thin films by photothermal deflection technique	Appl. Surf. Sci.	2004	227	410
69	Alex Mathew and K. N. Madhusoodanan	Subgap Optical Absorption Studies in Boron Implanted Silicon	Jpn. J. Appl. Phys.	2004	43	5088
70	Alex Mathew and K. N. Madhusoodanan	Optical properties of amorphous Ge_xSe_{100-x} thin films	Thin film techniques and applications, O. N. Bala Sundaram, V. Veeravazhuthi, P. Meena and K. Thamil Selvan, Allied Publishers, New Delhi, 2004	2004		126
71	K. N. Madhusoodanan and V. Heera	Electrical properties of heavily Al-implanted, nanocrystalline and single crystalline SiC layers	Solid State Physics	2005	50	731
72	V. Heera, K. N. Madhusoodanan, W. Skorupa, C. Dubois and H. Romanus	A comparative study of the electrical properties of heavily Al implanted, single crystalline and nanocrystalline SiC	J. Appl. Phys.	2006	99	123716
73	K.N.Madhusoodanan and V. Heera	Optical absorption in amorphous and nanocrystalline SiC layers prepared by ion implantation	Solid State Physics	2006	51	809
74	K N Madhusoodanan,and R,	Enhanced hydrogen sensitivity in	Proc. 12^{th} Natl.	2007		155

	Nisha.	Pd/SiC gas sensor with nanocrystalline layer	Seminar on Phys. & Tech. of Sensors – NSPTS-12			
75	K. N. Madhusoodanan and V. Heera	Thermal diffusivity measurement in amorphous and nanocrystalline SiC layers prepared by ion implantation	Solid State Physics	2007	52	987
76	Benjamin Varghese, Sathish John, K. N. Madhusoodanan	Aquous magnetic rheological fluid based fiber optic sensor for transient current detection	Proc. MATCON 2007 Conference	2007		84
77	Maju Kuriakose and K.N. Madhusoodanan	Thermal transport behavior of 7AB liquid crystal across phase transitions	Solid State Physics	2008	53	241
78	P. Benjamin Varghese, Satish John and K.N. Madhusoodanan	Weighing system with ordinary load cell and a multimode fiber	J. Instrum. Soc. India	2009	39	65
79	Satish John, P. Benjamin Varghese and K. N. Madhusoodanan	Novel fuel gauge for automobiles employing fiber optic sensing techniques	J. Instrum. Soc. India	2009	39	85
80	Benjamin Varghese P, Satish John and K. N. Madhusoodanan	Fiber optic sensor for the measurement of concentration of silica in water with dual wavelength probing	Rev. Sci. Instrum.	2010	81	035111
81	Aji Balan Pillai, Benjamin Varghese, Kottarathil Naduvil Madhusoodanan	Design and development of novel sensors for the determination of fluoride in water.	Environmental Science & Technology	2011	46(1)	404-9
82	Nisha R, K.N.Madhusoodanan	NO_2 gas sensing properties of copper doped tungsten oxide	Journal of Instrum. Soc. india.	2011	41(4)	204
83	Benjamin, V.P., Madhusoodanan, K.N., Vinod, P., Radhakrishnan, P.	A novel Fiber Bragg Grating sensor for measuring weight	IEEE Xplore 6139568, DOI:10.1109/INDICON	2011		
84	Benjamin Varghese P, Vinod P, K N Madhusoodanan, P Radhakrishnan	Development of a strain sensor using Fiber Bragg Grating and its effect on temperature variation	Jl. of Instrum Soc. of India.	2011	41(4)	197

85	P. Benjamin Varghese, P. Vinod, Jibukumar, K.N. Madhusoodanan, P. Radhakrishnan	A quasi distributed fiber optic weight-displacement sensor using macro bends	Optical Fiber Technology	2012	18(4)	215
86	Benjamin Varghese P, Dinesh R, Mittu Raju, Jose J Edathala, K N Madhusoodanan	Fiber Bragg grating interrogator for temperature measurement	Jl. of Instrum. Soc. Of India.	2012	42(4)	258
87	Aji .B, Benjamin Varghese, K.N.Madhusoodanan	A fibre optic sensor for the determination of fluoride in water	Kerala Science Congress	2012		
88	Aswathy M S, Pournamy S. S, V. T. Gopakumar,V. P Mahadevan Pillai1, K N Madhusoodhanan and Balaji Srinivasan	All Optical Integrator Based on FBGs and Fabry-Perot Fiber Bragg Gratings	International Conference on Fiber Optics and Photonics OSA 2012	2012		WPo.46
89	Nisha, K.N. Madhusoodanan, T.V. Vimalkumar, K.P. Vijayakumar	Effect of Indium doping on the Gas sensing behavior of Zinc oxide films obtained by Chemical spray pyrolysis method	IEEE Xplore. 01/2012; 10.1109/ISPTS.2012.6260923:204.	2012		
90	Nandu VS,V T Gopakumar, V P Mahadevan Pillai, K N Madhusoodhanan and Balaji Srinivasan	Optical Clock Recovery with Fabry-Perot Filter Based on Fiber Bragg Gratings	International Conference on Fiber Optics and Photonics OSA 2012	2012		WPo.45
91	Benjamin Varghese P, Dinesh R, MittuRaju, Jose J Edathala, K N Madhusoodanan	A Simple Interrogator for FBG Sensors	International Journal of Advanced Electrical and Electronics Engineering.	2012	1(3)	17
92	Benjamin P. Varghese, Aji Balan Pillai, Madhusoodanan Kottarathil Naduvil	Fiber optic sensor for the detection of Ammonia, Phosphate, Iron in water,	Journal of optics	2013	42(2)	78
93	Nisha R., K. N.	NO_2 Gas Sensing Properties of In_2O_3	Energy Environ. Focus.	2013	2	157

	Madhusoodanan, Sreejith Karthikeyan, Arthur E. Hill, Richard D. Pilkington	Thin Films Prepared by Pulsed D.C Magnetron Sputtering Technique				
94	Nisha R, K.N.Madhusoodanan, Sreejith K, Arthur E Hill, Richargd D Pilkington	A comparative study of thin and thick film indium oxide gas sensors to a lower concentration of NO_2 gas	Journal of Instrum. Soc. India.	2013	43(2)	110
95	Benjamin Varghese P., Dinesh Kumar R., Mittu Raju, K. N. Madhusoodanan	Implementation of Interrogation Systems for Fiber Bragg Grating Sensors	Photonic Sensors.	2013	3(3)	283
96	Benjamin Varghese P., Dinesh Kumar R., Mittu Raju, K. N. Madhusoodanan and P. Radhakrishnan	Quasi distributed FBG sensors for the simultaneous measurement of strain, weight and temperature	J. Instrum. Technol. and Innovations	2013	3(3)	10
97	Aji Balan Pillai, Benjamin Varghese P, Dinesh Kumar R and K.N. Madhusoodanan	Design, development and characterization of a fiber optic interferometric sensor for the measurement of strain	J. Instrum. Soc. India	2013	43(4)	215
98	R. Nisha and K. N. Madhusoodanan	Composition dependent study of AC conductivity in AsSe samples	Intl. J. Sci. and Res. Publ	2014	4 (5)	
99	Nisha R, K. N. Madhusodanan and V. S. Prasad	No_2 gas sensing property of nanocrystalline tungsten oxide thick film sensor	Intl. J. Innov. and Applied Res.	2014	2(5)	95
100	Nisha R. K. N. Madhusoodanan and V. S. Prasad	Nanocrystalline tungsten oxide thick films sensor for the detection of H_2S gas.	Intl. J. Environ. Sci. and Toxicology	2014	2(3)	55
101	Nisha. R and K. N. Madhusoodanan	Copper Doped Nano Crystalline Indium Oxide Thick Film Sensor for No_2 Detection	Int. Conf. on Advances in Chemical Engineering and Technology, ICACE TKMCE '14, Elsevier Publications 2014	2014		178
102						

103	R. Nisha and K.N. Madhusoodanan	PC based PID temperature controller	Intl. J. of Engg. and Advanced Techn. Res.	2014	2(4)	16
104	Nisha.R, K.N.Madhusoodanan, , T.V.Vimalkumar and K.P.Vijayakumar	Gas sensing application of nanocrystalline Zinc oxide thin films prepared by spray pyrolysis	Bull. Mater. Sci.	2015	38(3)	1 - 9
105	Nisha Rajappan and K.N. Madhusoodanan	Design of an AC conductivity measurement setup for sensor materials characterization	International Journal of Measurement Technologies and Instrumentation Engineering	2015	4(3)	1
106	V. T. Gopakumar, K. N. Madhusoodhanan and Balaji Srinivasan	Simulation and Experimental Validation of Optical Clock Recovery Using Fiber Fabry-Perot Filters	J.Opt.	2015	44(2)	178
107	S. Sundarrajan and K.N.Madhusoodanan	Performance comparison of radial basis network with feed-forward neural network for sensor linearization	IEEE Intl. Conf. Computer, communication and control, Indore, 2015	2015	accep ted	

2.5	Research Guidance :				
2.5 (a)	Ph D – Degree Awarded				
SI No.	**Title**	**Name of co-guides (if any)**	**Name of student**	**University**	**Year**
1.	Optical absorption studies in ion implanted and amorphous semiconductors – Investigations in some tetrahedrally coordinated and chalcogenide materials	-	Alex Mathew	Cochin University of Science and Technology	2004

2.	Development of semiconductor metal oxide gas sensors for the detection of NO_2 and H_2S gases	-	Nisha. R	Cochin University of Science and Technology	2013
3.	Development of optical fiber sensors for selected chemical and physical sensing applications	-	Benjamin Varghese P	Cochin University of Science and Technology	2014

2.5 (b)	Ph D – Thesis submitted - nil				
SI No.	**Title**	**Name of co-guides (if any)**	**Name of student**	**University**	**Year**
1.					
2.					
3.					

2.6	Awards / Medals / Fellowships Academic Recognitions:
Award	**Particulars**
1 UGC NET – JRF, & CSIR SRF	Department of Physics, Cochin University of Sci. & Tech.
2 Research Associate	Department of Physics, Indian Institute of Science, Bangalore
3 Fellowship under TRIL program of ICTP	Department of Mechanical Engineering, II University Roma, Italy
4 Post doctoral Fellowship	Department of Physics, Catholic University, Leuven, Belgium
5 Visiting Scientist/Research Associate	Institute for ion beam physics and materials research, Research Center Rossendorf, Dresden, Geramany

2.7	Organiser / Convenor of International / National Conferences / Symposia / Seminars:			
	SI No.	**Title and year**	**Chief organiser/ Convener**	**Co-organiser/ co-convener**
International Level	1			
	2			
National Level	1	National Symposium on Instruemntation, NSI Nov. 2005	Convener	
	2	National Seminar on Emerging Trends in Electronic Instrumentation, March 2005		Co-Convener
	3	National seminar on emerging trends in Instrumentation 2015	coordinator	

3	Assessment of Domain Knowledge
3.1	***Experience*** Additional Teaching / Industrial Experience after obtaining minimum eligibility criteria for the particular post (Only Full-time teaching assignments and/ Industrial Experience not below the rank of Lecturer in UGC/AICTE approved institutions/ Assistant Manager / Officer in a public / multi-national Company, after obtaining the minimum educational qualifications for this post)

	SI No.	Institution	Post held	Period (from … to..)	No. of years
University PG Level	1.	Department of Instrumentation Cochin Univ. of Sci. & Tech.	Reader/ Associate Professor	1995 onwards	20 Years
	2.				
University UG/College level	1.				
	2.				

Industrial Experience	1.				
	2.				

3.2	***Additional Research Experience after Ph. D***			
	Institution	**Post Held**	**Period**	**No. of years**
Post-Doctoral Research	Department of Physics, Indian Institute of Science, Bangalore	Research associate	1990 – 1992	$2^1/_2$
	Department of Mechanical Engineering, II University Rome, Italy	Research Fellow	1992 -1994, 1996	$2^1/_2$
	Department of Physics Catholic University, Leuven, Belgium	Research Fellow	1994 – 1995	1
	Institute for Ion Beam Physics and Materials Research, Research Centre Rossendorf, Dresden, Geramny	Visiting Scientist/ Research Associate	1999, 2001 – 2002, 2003	$1^1/_2$
Design of Experiments for P. G. Level laboratory course				
Maintenance and operations of sophisticated equipments	Photoacoustics Spectrometer, Photothermal spectrometers, X-Ray Diffractometer, UV-VIS-NIR spectrometer, Theraml Analysis, Raman spectrometer, Ion implantation and RBS SIMS, XPS, Four probe/Hall effect, Vacuum Furnace,			

	Sputtering system etc.			
(In the case of Teachers who are also doing research work, their teaching experience alone will be counted – credit for both teaching and research will not be awarded concurrently)				

3.3	***Academic / Administrative Experience (give particulars):***
3.03 (a)	*Administrative experience:*

Sl No	Post Held	Period	No. of years
1	Assistant Warden (University hostel)	1998-2001	3
2	Head, Department of Instrumentation	2000 – 2001 2002 – 2003 2003 - 2011	10
3	Dean, Faculty of Engineering and Technology, M.G.University, Kottayam	2008 - 2010	2

3.03 (b)	Academic experience (Member, Board of studies, Academic council / Faculty etc.)		
Sl No	**Positions held**	**Period**	**No. of years**
1	Member, Board of Studies in Instrumentation, CUSAT	1999 - 2003	4
2	Chairman, Board of studies in Instrumentation	2003 - 2011	7
3	Member, Board of Studies in Instrumentation	2011 onwards	
4	Member, Faculty of Technology	2003 – onwards	
5	Member, Academic Council, CUSAT	2000 - 2011	10
7	Dean, Faculty of Engineering and Technology, M.G.University, Kottayam	2008 - 2010	2

8	Member, Academic Council, M.G.University, Kottayam	2008 - 2010	2
9	Member, Review and Research advisory Cpmmittee, STIC,Cochin	2007 - 10	4 years