Curriculum Vitae

Prof. P. SURESHKUMAR, M.Sc., Ph.D.,

Former Dean - Research
Velammal Engineering College, Chennai - 66

Academic Qualification

1991 Ph.D. Physics,, Anna University, Chennai, India

1985 M.Sc. Physics, Presidency College, University of Madras, Chennai, India

Research & Teaching Experience

1985 - 1989 Research fellow - Anna University, Chennai, India

Jan 1990 - Mar 1991 Senior Project Assistant, Crystal Growth Centre, Anna University, Chennai, India

April 1991 – Dec 1992 - Scientist (Growth of sapphire by verneuil technique) Indo-Swiss Synthetic Gem Mfg.Co., Mettupalayam-641301 Tamilnadu, India,

July 1992 – Oct 1993 CSIR – CSIR Research Associate, Department of physics, College of Engineering, Anna University, Chennai-600025

Oct 1993 – Oct 1994 Lecturer – Department of Physics - Adhiparasakthi Engg.College, Melmaruvathur-chennai, India

Oct 1994 –Aug1995 Lecturer- Department of Physics- Sathyabama Engg.college, Chennai

Sep1995- Aug 2006 Lecturer, Asst.Prof. , Professor & Head, Department of Physics, Velammal Engineering college, Chennai

Aug 2006 to July 2007 - BK21 researcher at Information display lab- Polymer BIN Fusion research team - Chonbuk National University, South Korea (PDF)

Aug 2007 to May 2009, Professor & Chief Coordinator , TIFAC CORE , Velammal Engineering College,Chennai

May 2009 to June 2019 , Professor & Dean Research ,
Velammal Engineering College ,Chennai

ACHIEVEMENTS:

1. Received **Eight funded projects worth 126.87 lakhs from DST,DRDO,CSIR & ISRO**
2. Instrumental in signing MOUs between Velammal Engg. College and Chonbuk National University – on Preparation of optoelectronic materials for Solar cell applications

3. Design & Development Expertise
   (a) Designed a low cost Nano fiber fabrication equipment,

   (b) Established a materials research laboratory in Velammal with funding from external agencies

List of Funded projects Executed

S.No	Agency	Title of the project	Duration	Investigator	Amount in Lakhs
1	**DRDO**	**Growth and characterization of novel organic non linear optical crystals of phenolic polyene OH1 .**	**2014-17**	**Dr.P.Sureshkumar (PI)**	**20.87**
2	**DST**	**"Growth of novel high NLO efficient Bismuth Borate(BIBO) cryatals and their optical characterization"**	**2014-17**	**Dr.P.Sureshkumar (PI)**	**28.83**
3	**CSIR**	**Growth of Novel NLO crystal BABO for high power UV light generation**	**2013-16**	**Dr.P.Sureshkumar (PI)**	**12.00**
4	**DRDO**	**Investigation on growth and characterization of a novel organic NLO crystal BDAS-TP THz wave generation.**	**2012-15**	**Dr.P.Sureshkumar (Co-PI)**	**14.93**
5	**ISRO**	**Growth and characterisation of pure & substituted langasite crystals for development of high temp-erature SAW devices suitable for space application**	**2014-16**	**Dr.P.Sureshkumar (PI)**	**16.44**
6.	**CSIR**	**Growth and characterization of ZTC & ZTS NLO crystal**	**2002-05**	**Dr.P.Sureshkumar (PI)**	**5.25**
7.	**DRDO**	**Growth of DAST- Organic Crystals for Electro Optic sensors & THz waves generation**	**2006-10**	**Dr.P.Sureshkumar (PI)**	**13.99**
8.	**DST**	**Growth and characterization of KTP crystals for OPO-LIDAR application**	**2007-10**	**Dr.P.Sureshkumar (PI)**	**14.56**

Major Fellowships/Awards

Direct awardee of CSIR research associateship to carry out research in the field of Superconductors -1992-1993

Best paper award for the research paper entitled fabrication of CuO and ZnO nano Fibers by electro spinning and their characterization. Presented at national Symposium on crystal growth and characterization, Chennai, 29-30 Sep 2005

Reviewer
Reviewer for Department of Science & technology (DST) –SERB projects

Reviewer for following international Journals

1.Journal of applied polymer science
2. Journal of nano science and technology
3. Journal of alloys and compounds

Areas of Research
***Nano materials*:** Preparation of Nano fibers by electrospinning suitable for sensor , bio medical and industrial filter applications.

Multiferroic materials: Preparation of multi ferroic materials A_2BX_4 like $[N(CH_3)_4]_2MnCl_4$, $[N(CH_3)_4]_2CuCl_4$, $[N(CH_3)_4]_2CdCl_4$, $[N(CH_3)_4]_2ZnCl_4$

***Display devices*:** Fabrication of prototype Electrowetting display devices , new reflective type display devices and Electro optic studies of CNT doped LCDs,

***Superconducting materials* :** Flux growth of high Tc superconducting materials like YBCO,BSCCO,BKBO, LSCO and their characterizations Also growth of oxide materials like sapphire ruby etc by vernuiel technique

***NLO materials*:** Growth of inorganic , semi organic and organic NLO materials like KTP, ZTS & ZTC and DAST crystals

Professional Activities
Member : Board of studies of Science and humanities,
Sri venkateswara College of Engineering,
Autonomous institution-Affiliated to Anna University 2016 onwards

Member : Board of studies of Science and humanities,
Anna University, Chennai, - India, 2002 to 2005

Member : Governing Council -Anjugam Government aided Higher sec school, Chennai, India

Chairman : Board of Physics, BE, B.Tech degree examinations (Evaluations)
Anna University ,Chennai -during 2003- 2005

Membership in professional bodies

Life member –
Indian Association for crystal growth
Indian society for technical education
Indian Spectro physics Association

Administrative Experience

Chief Superintendent for Univeristy of Madras & Anna university examinations for five years

Researchers completed their Ph.D and The Title Of Their Work
Dr. Devashankar – Multiferroic materials
Dr. L.Mariyappan - NLO materials
Dr. N. S. Vijay Kumar- Preparation & characterization of thin films of II-VI compounds
Dr.K.Alamelumangai- Hexaferrite nanomaterials
Mr.N.Marimuthu- Growth of Langasite crystals for SAW device applications

International Conference organised :

Organized an International Conference on functional materials for advanced technology (ICFMAT2000) during 29-30th Jan 2009.

The conference was co sponsored by BRNS and ISRO. Many international /national experts delivered invited talks and about 100 researchers presented their research papers.

Overseas Visits for Academic Purpose:
USA, South Korea.

Publications:

International journals -**51**
Books Published : Authored a Text book of applied physics

Publications of Dr.P.SURESHKUMAR

S.No	Title of the Paper	Name of the Journal	year	Scopus/ Impact factor	Vol. no	Page Nos
1	Dual photoluminescence emission of Er3+, Yb3+ and Er3+/Yb3+ doped La3Ga5.5Nb0.5O14 ceramics under UV and IR excitation	J Mater Sci: Mater Electron,	**2019**	**2.019**	**30**	**17424-31**
2	Influence of GeP precipitates on the thermoelectric properties of P-type GeTe and $Ge_{0.9-x}P_xSb_{0.1}Te$ compounds	*CrystEngComm*		3.382	20	6449-57
3	Synthesis and transport properties of Al substituted langasite ceramics	J Mater Sci: Mater Electron,	2018	Impact factor-2.019	doi.org/10.1007/s10854-017-8033-9	
4	Impedance and modulus spectroscopy studies of cobalt substituted strontium hexaferrite ceramics	J Mater Sci: Mater Electron,	2017	Impact factor-2.019	28	13445-54
5	Photoluminescence in cerium doped barium aluminium borate difluoride—BaAlBO3F2 glass ceramics,	Optik	2016	Impact factor0.835	127	8956-62
6	Studies on synthesis, structural, surface morphological and electrical properties of Pr6O11–MgO nanocomposite,	J Mater Sci: Mater Electron,	2016	Impact factor-2.019	27	6457-63
7	Synthesis and Study of Optical properties of MgO based TM oxide (TM=Cu, Mn and Zn) nanocomposites	Materials Research Express	2016	Impact factor-1.06	3	115017
8	Structural, electrical and magnetic properties of Mn3O4/MgO nanocomposite	J Mater Sci: Mater Electron,	2017	Impact factor-2.019	28 2317-24	
9	Synthesis, growth and characterization of BDAS-TP crystal	International Journal of Applied Engineering Research	2015	Scopus	10	236-39
10	Enhancement of Conversion Efficiency of PV Cells through Anti-Reflective Coating	International Journal of Applied Engineering Research	2015	Scopus	10	230-35
11	Influence of metal ion doping on dielectric, ionic conductivity and piezoelectric properties of flux grown KTP crystals	International Journal of Applied Engineering Research	2015	Scopus	10	297-301
12	Study on Growth and Solubility of 4-Dimethylamino-Nmethyl-4-stilbazolium tosylate (DAST) in Mixed Solvents	International jl. Mat. Sci	2014	Scopus	9	47-54
13	Shape Transition Effect of Temperature on MgO Nanostructures and its Optical Properties	International Journal of Scientific & Engg. Research	2014	Scopus	5	60-64
14	Structural and Magnetic properties of Strontium Hexa-Ferrites for	International Journal of Scientific & Engg. Research,	2014	Scopus	5	65-69

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15	Spectroscopic investigation of nano-sized strontium ferrite particles At different annealing temperatures	*Journal of Applied Spectroscopy,*	2014-	Impact factor0.572	81	519-524
16	Measurement of nonlinear refractive index of pure and doped KTPcrystals by Z-scan technique using cw He–Ne Laser	*OPTIK*	2014	Impact factor 0.835	125	6462–6465
17	Analysis of crystalline perfection of pure and Mo doped KTP crystals on different growth planes by HRXRD	Journal of applied crystallography	2014	Impact factor 3.9	47	931-935
18	Synthesis, growth and properties of a novel organic nonlinear optical material: Benzimidazolium perchlorate(2)	OPTIK	2013	Impact factor 0.835	124	5707-10
19	Synthesis, growth and properties of an organic nonlinear optical crystal: 2-Aminopyridinium benzoate (2-APB)(	OPTIK	2013	Impact factor 0.835	124	2630-34
20	Electrical and nonlinear optical studies of flux grown Mo and Fe doped KTP crystals	OPTIK	2013	Impact factor 0.835	124	5702-07
21	Display applications ofElectrowetting	Journal of Adhesion Science and Technology	2012	Impact factor 1.09	26	1947
22	Sol-gel synthesis ofelectrospun BaO/MnONano composite fibers and their magneticcharacterization .	Cryst. Res. Tech.	2012	Impact factor-0.98	47	213-220
23	Influence of Process Parameters on Microstructureof Electrospun Polysulfone-HydroxyapatiteComp-osite Coating on Ti-6Al-4V Substrate	Advanced Science, Engineering and Medicine	2012	Scopus	4	421-25
24	Electrical and nonlinearoptical studies onelectrospun ZnO/BaO composite nanofibers	Frontiers of Materials Science	2012	Impact factor	6	69-78
25	Growth of pure and Modoped Potassium Titanylphosphate (KTP) crystals:Influence of KTP/Flux ratios on the growthmorphology	Jl. of Minerals & Materials Characterization & Engineering	2011	Impact factor	10	683
26	Synthesis, dielectric, AC conductivity and non-linear optical studies of electrospun copper oxide nanofibers	Archives of Applied Science Research	2011	-	3	514-25
27	Synthesis of electrospunZnO / CuO nanocompositefibers and their dielectric and nonlinear optic studies	Journal of Alloys and Compounds	2010	Impact factor 2.81	507	225-229
28	Investigation on growth and properties of 2-Aminopyridinium maleate: A new organic	Nonlinear Optics, Quantum Optics	2010	Impact factor 0.39	41	265-271

	nonlinearoptical Crystal.,					
29	Growth andcharacterization of tetramethyl ammonium Tetrachlorozincate II: A ferroic crystal	Jl. of crystal growth	2009	Impact factor 1.8	311	4207
30	Growth and charactersationof Ferro elastic crystalTetra methyl Ammonium Tetrachloro Cuprate-II.	International journal materials Science	2009	Scopus	4	771-777
31	Studies on Growth andoptical, etching, thermal,and mechanical properties of an organic crystal 2-Amino-pyridiniumbenzoate ,	Surface Review Letters	2009	Impact factor 0.435	16	737-742
32	Studies on Growth andoptical, thermal, etching, ofTris Thio urea Glycine-A nonlinear optical crystal.	International journal materials Science	2009	Scopus	16	577-584
33	Effect of surface roughness on the fabrication ofelectrowetting display cells	Surface Review Letters	2009	Impact factor 0. 435	16	23-28
34	Anomalous electro kineticdispersion of carbonnanotube clusters in Liquid crystal under electric field.	Jl. of nano science and technology	2009	Impact factor 1.483	9	1-6
35	Unusal double four –lobetextures generated by motion of carbon nanotubes in nematic liquid crystal	Optics letters	2007	Impact factor 3.4	15	11698-11704
36	Synthesis, Growth, and Characterization of LProline Cadmium ChlorideMonohydrate (L-PCCM)Crystals: A New Nonlinear Optical Material,	Crystal growth and Design	2007	Impact factor 4.05	7	183-186
37	Preparation andcharacterization of ZnO Nano fibers by electrospinning,	Cryst. Res. Technol	2006	Impact factor 0.98	41	446-449
38	Growth and characterization of tris allylthiourea mercuric chloride crystals,	Cryst. Res. Technol	2006	Impact factor 0.98	41	771-774
39	Growth and Opticalproperties of a new semiorganicnonlinear opticalcrystal L-Arginine hydrochloro fluoride monohydrate (LAHClF),	Surface review Letters	2006	Impact factor 0.435	13	803-808

40	Nucleation, growth andcharacterization studies of anonlinear optical crystal – trisallylthiourea cadmium chloride	Laser Physics lett.	2006	Impact factor 2.4	3	588-593
41	Effect of oxygen partialpressure on the NucleationKinetics of orthorhombic YBCO .	Crystal research and Tech	2002	Impact factor 0.98	37	11
42	Vanallin 1	Acta.Cryst	1995	Impact factor	C-31	252
43	Gel growth of vanillincrystal and its X-raycharacterization	Cryst. Res. Technol	1994	Impact factor 0.98	29	K59
44	Growth and Morphologystudies of La 2-x Srx Cu Osingle crystals	Mat. Res. Bulletin	1991	Impact factor 2.13	26	945-950
45	Growth and micro indentation studies of YBCO single crystals	Ferro electrics	1990	Impact factor 0.551	102	347
46	*Growth of YBCO and NBCO single crystals*	Modern physics letters B,	1990	Impact factor 0.687	4	1289
47	*Growth* and micro hardness studies of Ba 1-xK xBiO3 Single crystals,	Modern physics letters B	1990	Impact factor 0.687	4	1355
48	Growth and characterization of YBCO crystals	Crystal and Tech,	1989	Impact factor 0.98	24	207
49	Growth and morphology studies of Bi2Sr2CaCu2Oy crystals	Modern physics letters B	1989	Impact factor 0.687	3	417
50	Nucleation kinetics of ellipsoidal shaped nucleus on a dislocation during solid state transformation	Scripta metall	1988	Impact factor	22	1189
51	Study on Controlling Oil Movement in Electro-wetting Display	J. of. KIEEME	2007	scopus	20	173