

# LIST OF PROJECTS – 1976 TO TILL DATE

## COMPLETED PROJECTS

Title of the Project	Investigators	Funding Agency	Status of the Project	Year
Crystal Growth	G.S. Laddha P.Ramasamy	University of Madras	Completed	1976
Crystal Growth	G.S.Laddha P.Ramasamy	University of Madras	Completed	1977
Growth perfection and analysis of calcite	P.Ramasamy G.S.Laddha	CSIR	Completed	1977
Studies on calcite and calcite type crystals	P.Ramasamy G.S.Laddha	UGC	Completed	1977
Growth perfection and analysis of MoS <sub>2</sub>	P.Ramasamy G.S.Laddha	ISRO	Completed	1978
Growth perfection and analysis of ADP and ADP type crystals	P.Ramasamy	UGC	Completed	1981
Studies on SbSI and SbSI type crystals	F.D.Gnanam	UCG	Completed	1981-84
Special Assistance Programme, Dept. of Chemical Engineering	Crystal Growth Centre	UCG	Completed	1983-84
Growth perfection and analysis of yttrium aluminium garnet single crystals	P.Ramasamy and F.D.Gnanam	DRDO	Completed	1983-86
COSIST Programme (Dept. of Chemical Engineering)	Crystal Growth Centre	UGC	Completed	1984-85
Strengthening of technology oriented research in Crystal Growth Centre	Crystal Growth Centre	T.N. Govt.	Completed	1984-85
Electro winning of high purity low cost silicon suitable for solar cell devices	P.Ramasamy and G.S.Laddha	DNES	Completed	1984-87
Studies on KDP and KDP type single crystals	P.Ramasamy G.S.Laddha	DST	Completed	1984-87
Growth perfection and analysis of (i) Neodymium, Al Borate single crystals (ii) Solution grown and gel grown KDP single crystals	P.Ramasamy G.S.Laddha	CSIR	Completed	1984-87
Synthesis of efficient ice forming materials for artificial rain making	P.Ramasamy and R.Gopinathan	CSIR	Completed	1986-88

Growth of Yttrium aluminium garnet (YAG) single crystals by flux method	P.Ramasamy and F.D.Gnanam	UGC	Completed	1985-88
Investigations on mechanism and simulation of grain growth in heavily doped polycrystalline silicon	R.Dhanasekaran and P.Ramasamy	CSIR	Completed	1986-89
Growth and characterisation of ternary chalcogenides by CVT	P.Ramasamy	UGC	Completed	1987-90
Material science and technology development programme	Crystal Growth Centre	Govt. of India	Completed	1987-88
Growth of GaAs and InP single crystals and preparation of polished wafers	P.Ramasamy	DOE	Completed	1989-95
Structural theory and interfacial energy	P.Ramasamy and C.Subramanian	DST	Completed	1989-95
Growth of KTN, KTP and BaTiO <sub>3</sub> single crystals	P.Ramasamy and C.Subramanian	DAE	Completed	1990-94
Theoretical investigation on Nuclear Physics and Solid State Physics	V.Devanathan	CSIR	Completed	1990-93
Growth of sapphire crystals	P.Ramasamy	INDO Swiss Company	Completed	1990-93
CGC-UCG Anna University facility	Crystal Growth Centre	UGC	Completed	1990-97
Growth and characterisation of large size urea crystals of optical quality	R.Dhanasekaran P.Ramasamy	DST	Completed	1990-93
Development of opto electronic and laser crystals and their characterisation for advanced technology	P.Ramasamy	MHRD	Completed	1991-92
Development of facilities for photonic devices with emphasis on epitaxy of semiconductor materials	P.Ramasamy	AICTE	Completed	1991-92
Development of materials science with emphasis of semiconductor	P.Ramasamy	MHRD	Completed	1992-94
Growth perfection and characterisation of TGS, TGSP mixed crystals and Triglycine Molybdate single crystal	P.Ramasamy and C.Subramanian	UGC	Completed	1992-95
Establishment of an electrooptic coefficient measurement set up	J.Kumar	TWAS (ITALY)	Completed	1992-93

Experimental and theoretical investigation on the electrodeposition of cadmium chalcogenides	R.Dhanasekaran P.Ramasamy	UGC	Completed	1992-95
Growth of laser and non linear crystals under laser programme	Crystal Growth Centre	DAE	Completed	1992-2000
Growth (VPE) and characterisation of binary, ternary quaternary III-V Semiconductors	D.Arivuoli	TWAS (ITALY)	Completed	1992-93
Growth of InSb single crystals and preparation of polished wafer and for window/detector applications	P.Ramasamy P.Santhanaragavan	ISRO	Completed	1992-94
Growth of L-Arginine phosphate single crystal and its isotopic analog and fabrication of electrooptic modulator	S.Anbukumar P.Ramasamy	DST	Completed	1993-96
Ion implantation on GaAs and InP crystals	J.Kumar P.Ramasamy	IUC-DAEF	Completed	1993-97
COSTED Anna University programme	Crystal Growth Centre	COSTED	Completed	1993-95
Crystal Growth Centre Award of training fellowships under the ICTP-Italy programme	Crystal Growth Centre	ICTP	Completed	1994-98
DRDO-GAETEC	J.Kumar C.Subramanian	DRDO	Completed	1994-96
Development of semiconductor laser for optoelectronic devices	P.Ramasamy K.Baskar	MHRD	Completed	1995-97
Investigation on cholesterol crystallisation for devising newer drugs and treatment	S.Narayana Kalkura	AICTE	Completed	1995-97
Growth of large size Ba(1-x) Ax (A=Ca, Sr) TiO <sub>3</sub> single crystals and their characterisation	C.Subramanian and R.Jayavel	DAE-BRNS	Completed	1995-99
Crystal growth and development in Palm candy production	Crystal Growth Centre	T.N.Govt.	Completed	1995-98
Growth and characterisation of semiconductor crystals	J. Kumar	DAE Young Scientist Award	Completed	1995-98
Establishment of PI system for the evaluation of III-V crystalline wafers	J.Kumar P.Ramasamy	UGC	Completed	1995-98

Investigation on LEC grown III-V crystals through Deep level transient spectroscopy	J.Kumar P.Ramasamy	DST	Completed	1995-98
Development and fabrication of visible LEDs laser diode PIC's for advanced electronics	S.MoorthyBabu	MHRD	Completed	1996-98
Modernisation of flame fusion crystal growth systems for the production of emerald and star ruby	R.Jayavel	AICTE	Completed	1996-99
Development of Germanium substrates suitable for epitaxial growth of GaAs layers for space quality solar cells	J.Kumar and R.Jayavel	ISRO	Completed	1997-98
National Emeritus fellowship	T.Nagarajan	UGC	Completed	1997-98
Development of Lead Zirconium Titanate single crystals for the fabrication of Ultrasound Transducers	P.Ramasamy P.Santhanaragavan	AICTE	Completed	1998-2000
Upgradation of existing facilities suitable for the growth of semi-organic crystals for NLO applications	P.Ramasamy R.Jayavel	AICTE	Completed	1998-2000
Growth of bulk single crystals of high temperature superconductors and their characterisation	C.Subramanian R.Jayavel	DST	Completed	1998-2001
Development of semi-insulating GaAs room temperature radiation detectors	J.Kumar P.Ramasamy	AICTE	Completed	1998-2000
Investigations of the trace elemental analysis to study crystal deposition diseases	S.Narayana Kalkura P.Ramasamy	IUC-DAEF	Completed	1998-2001
Growth, Spectroscopy and lasing of Titanium doped sapphire crystals	P.Santhanaragavan	TWAS (ITALY)	Completed	1999
Production of cubic Zirconia crystals for gemology and electronic applications	P.Ramasamy P.Santhanaragavan	T.N.Govt.	Completed	1999-2000
Study of crystallogenesi s of proteins to obtain higher quality crystals for structural analysis	S.Narayana Kalkura	AICTE	Completed	1999-2001
Investigations on GaN	J.Kumar P.Ramasamy and R.Dhanasekaran	DST	Completed	1999-2002

Growth of ZnSe and ZnSSe single crystals by CVT method with convection shield and their characterisation	R.Dhanasekaran P.Ramasamy and S.Moorthy Babu	CSIR	Completed	2000-03
Oxygen irradiation effects on InGaAs based devices	K.Baskar D.Arivuoli	NSC	Completed	2001-04
Irradiation effects on GaN grown by VPE	D.Arivuoli	NSC	Completed	2002-05
Emeritus Scientist fellowship	C.Subramanian	AICTE	Completed	1999-2002
Growth of larger size and high quality single crystals of POM, MAP, TCP, NPP and L-PCA organic materials and their characterisation for non linear applications	R.Dhanasekaran P.Ramasamy S.MoorthyBabu	DST	Completed	2001-04
Fabrications of GaAs schottky diode and PN junction solar cells by wafer bonding on silicon substate using chalcogenides	K.Baskar	NSC	Completed	2002-04
Fast Growth of CdTe and related compounds for device applications	S.MoorthyBabu R.Dhanasekaran	UGC	Completed	2001-04
Growth and characterisation of lead molybdate and lead tungstate single crystals for acousto-optic and Scintillator applications	R.Dhanasekaran P.Ramasamy S.MoorthyBabu	UGC	Completed	2001-04
Investigation on compounds causing crystal deposition diseases	P.Ramasamy S.Narayana Kalkuar	UGC	Completed	2001-04
Growth and characterisation of organic molecular single crystals for detection of nuclear radiation	P.Ramasamy P.Santhanaragavan T.Nagarajan R.Dhanasekaran	NSC	Completed	2002-05
Irradiation effects of II-VI and III N materials	R.Dhanasekaran	NSC	Completed	2002-05
Development of laser elements of double tungstates for diode-pumped solid state laser applications	R.Dhanasekaran S.MoorthyBabu	DAE-BRNS	Completed	2003-06

Growth and characterisation of lead magnesium niobate – lead titanate (PMN-PT) and Lead Zinc Niobate – Lead titanate (PZT-PT) single crystals for Sonar Transducer applications	R.Dhanasekaran S.MoorthyBabu	DRDO	Completed	2003-05
Emeritus Scientist Scheme	P.Ramasamy	CSIR	Completed	2003-06
Growth and Characterisation of Gallium Nitride and Alloy systems to fabricate UV detectors	J.Kumar R.Dhanasekaran	UGC	Completed	2003-06
Radiation detectors and irradiation studies on semiconductor device structure	J.Kumar	NSC	Completed	2003-06
UGC X Plan UGC:CGC-Anna University facility	Director	UGC	Completed	2003-2008
Semiconductor Nanostructures	J.Kumar K.Baskar R.Dhanasekaran R.Jayavel	DST	Completed	2006-2009
State Initiated National Facility for Semiconductor based LEDs and Nano materials	J.Kumar K.Baskar R.Dhanasekaran R.Jayavel	Tamil Nadu Govt.	Completed	2005-2008
GaN and nitride alloy systems for nano electronics	J. Kumar	AICTE	Completed	2005-2008
Growth & Characterisation of Borate based single crystals and fabrication of SHG elements	R.Dhanasekaran S.Moorthy Babu V.K.Wadhawan S.Ganesamurthy	DST	Completed	2004-2007
Growth and characterization of alloys of InSb and InAs epitaxial layers for IR detector applications	K. Baskar	IUAC	Completed	2005-2008
Development of NLO devices from SLN	S. Moorthy Babu	IUAC	Completed	2005-2008
Stiochoimetric Lithium Niobate single crystals for advances non-linear devices	S.Moorthy Babu R.Dhanasekaran K.Wadhawan S.Ganesamurthy	DST	Completed	2005-2008
Indo-Italian joint research - Crystal growth and characterization of spintronic materials	J.Kumar	DST	Completed	2006-2009

EU-ASIA LINK Programme on Human Resource Development on Telecommunications Technology	S.Moorthy Babu R.DhanaSekaran J.Kumar	European Union	Completed	2005-2008
Growth and characterization of bimetallic Thiocyanate Crystals for Frequency Conversion devices	R. Jayavel	CSIR	Completed	2006-2009
Nanostructure formation of Metal-Semiconductors, Growth and Characterisation of DMS Materials using Swift Heavy Ions	J. Kumar	IUAC	Completed	2006-2009
Heavy Ion irradiation effects on colossal magnetoresistive single crystals	R. Jayavel	IUAC	Completed	2006-2009
Effect of Irradiation on Hydroxyapatite and their biological performance	S. N. Kalkura	IUAC	Completed	2006-2009
Synthesis, growth and characterization on Nanostructured optoelectronic materials	S.Moorthy Babu	UGC	Completed	2006-2009
High energy irradiation studies on II-IV nanocrystalline thin films & I-III-VI <sub>2</sub> chalcopyrites	R.Dhanasekaran	IUAC	Completed	2007-2010
Investigations on the synthesis of nanocrystalline calcium phosphates to prepare bone and dental replacement materials and drug delivery systems	S. N. Kalkura	DST	Completed	2007-2010
Capacitance & Conductance based sensor instrumentation for Biochemical characterisation	J. Kumar K. Sankaran	DST	Completed	2007-2009
DRDO Project "Supply of high resistive GaN, Si doped GaN & AlGaIn/ GaN epitaxial layer on 2" sapphire substrates."	K.Baskar	DRDO	Completed	2010-11
DST Project "Development of double Tungstate single crystal for Raman Laser Devices"	S.Moorthy Babu	DST	Completed	2010-13
DIT Project "Preparation of directed self assembly of GaN , InGaIn based Quantum dots suitable for fabrication of LEDS"	D.Arivuoli	DIT	Completed	2010-13

DBT Project "Synthesis and Physical characterization of Hydroxyapatite Based Scaffolds"	S.Narayana Kalkura	DBT	Completed	2010-13
DST Project - India – Japan research project on "Growth of homogenous Si1 – xGex (0<x<1) alloy semiconductor for Thermoelectric application"	S.Moorthy Babu	DST	Completed	2010-12
UGC Project "Nanomechanical characterization of Biomimetic materials"	D.Arivuoli	UGC	Completed	2010-13
UGC Project "Growth and Characterization of NBT –BT Single Crystal for Piezoelectric application"	R.Dhanasekaran	UGC	Completed	2010-13
DST Project "Validation of auto-range capacitance measurement instrumentation as clinical biochemical analyzer"	J. Kumar	DST	Completed	2011-13
IUAC Project "Investigations of physical and biological performance of swift heavy ion irradiation on calcium phosphate based bio-ceramic and its polymer composite"	S.Narayana Kalkura	IUAC	Completed	2011-14
DST INSPIRE FACULTY(IFA-PH-08)	Shubra Singh	DST	Completed	2012-17
CARS Project "First principles studies on electronic structure, magnetism and half-metallic effect in Heusler type Co-Fe-Si alloy thin films"	J. Kumar	DRDO (CARS)	Completed	2012-14
UGC Project "Growth and characterization of Sodium potassium niobate (NKN) single crystals for "	R.Jayavel	UGC	Completed	2012-15
UGC Project "Synthesis of Strontium titanate using solution growth method	M. Chitra	UGC	Completed	2012-15
UGC Project Investigation on the pathological deposition of biominerals"	S.Narayana Kalkura	UGC	Completed	2012-15
UGC Project "Development of polymer- CdTe-TiO2 based nano composites for low cost solar cells"	S.Moorthy Babu	UGC	Completed	2013-16



Development of Up conversion phosphors for infra-red signal detection in remote areas	P.Thiyagarajan	DST, SERB	Completed	2013-14
British Council Project	K. Baskar and	British Council	Completed	2013 -14
Nottingham-Anna University Research and Knowledge Economy Partnerships in Materials Technology	J. Kumar			
Investigation on Perovskites based solar cells	Moorthy Babu	DST, New Delhi	Completed	2015-18
Irradiation Effects on InGaN and AlInGaN Epilayers grown by Metal Organic Chemical Vapour Deposition	K. Baskar	IUAC, New Delhi	Completed	2015-18
Indo-German (DST-DAAD) Joint research project on “Development of biomimetic collagen based composite scaffolds for tissue regeneration and drug delivery”	S.Narayana Kalkura	DST, New Delhi	Completed	2016-18
Indo-French Joint Project Centre for Promotion of Advance Research	S.Narayana Kalkura	Indo French	Completed	2016-19
Women Scientist Scheme -A Biodegradable superabsorbent materials for..... Hygiene products -	.D.Arivuoli & Ms.Preethi.R	WOS	Completed	2016-19
Start-up grant for newly recruited faculty under UGC-Faculty Recharge Programme	Shubra Singh	UGC	Completed	2017- 19
Identification of arsenic .....environmental friendly nanomaterials	S.Narayana Kalkura	DST	Completed	2017-20
SERB - Project - Solar light driven, bulk & nano structures ... water treatment	Shubra Singh	SERB	Completed	2018 -21