Dr.K.Sankaranarayanan
Professor

Contact

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Date of Birth	:	26-06-1967
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Academic Qualifications: M.A./M.Sc./M.Phil./Ph.D./

Degree	University	Subject	Year	Class
Ph.D	Alagappa University, Karaikudi	Physics-Crystal Growth	2006	---
Thesis Title	"Introduction of Novel Crystal Growth Methods and Synthesis of Indium Phosphide Polycrystalline Material"			
M.Phil.,	Madurai Kamaraj University, Madurai	Physics	1990	I Class
M.Sc.,	Madurai Kamaraj University, Madurai	Physics	1989	I Class

Teaching Experience: 23 Years

Research Experience: 26 Years

Additional Responsibilities

1. Chairperson, School of Physical Sciences
2. Director, University Science Instrumentation Centre
3. President, Start-up Cell, School of Physical Sciences

Areas of Research

1. Materials Science
2. Crystallization kinetics of organic and inorganic materials.
3. Unidirectional growth of bulk organic and inorganic crystals.
4. III-V Semiconductor materials – synthesis and growth.

Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	Ph.D.	1	6
	M.Phil.	38	-
Project	PG	45	-
	UG / Others	--	--

Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals
55	25	--	30	3

Cumulative Impact Factor (as per JCR) : 192
h-index : 18
i10 index : 31
Total Citations : 1067

Funded Research Projects

Completed Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	AICTE	1996	1998	"Development of Indigenous Technology to Synthesize Indium Phosphide"	2.00
2	CSIR	1998	2000	"Growth of NLO Single Crystals by Low Temperature solution growth technique"	3.18
3	DST	2001	2002	"Production of Indium Phosphide Polycrystalline: An advanced III-V compound semiconductor material"	13.86
4	DRDO	2004	2007	"Growth of ZnO Single Crystals and Preparation of Polished Wafers for Nitride Epitaxy"	18.00
5	Alagappa University	2009	2011	Unidirectional Crystallization of Pure and Metal ion doped KDP crystal for SHG application.	0.64

Consultancy Projects – as Deputy Co-ordinator

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	UGC-SAP (DRS-III)	2015	2020	Preparation of crystals, Thin films and Battery materials for devices	105
2	DST-FIST Level II	2015	2020	Growth and study of different metal oxide thin films for gas sensors and memory devices	144

Patents

1. "Development of a novel material CuCdS as a UV Sensor". Appl.No. 693/CHE/2010: Dt.10.2.2011 Publication Date : 15.06.2012 / PO Journal No. 24/2012/Page:113 and
2. "A System For Growing A Unidirectional Organic Single Crystal Compound And Method Thereof" Appl.No. 201641011210, Date:30.3.2016 . PO Journal No. 50/2017 Dated 15/12/2017- P49635

Distinctive Achievements / Awards

1. **Indo-China Bilateral Students Exchange Fellowship** ***(1992-93)*** by Ministry of Human Resource Development, Govt. of India, New Delhi.

2. **Young Scientist Fellowship** ***(1995-96)*** by Tamil Nadu State Council for Science and Technology, Govt. of Tamil Nadu, Chennai, India.

3. **Prof.P.Ramasamy National Award for Crystal Growth** ***(2005)*** by Indian Association for Crystal Growth, Anna University, Chennai.

4. **Best Researcher Cash Award** ***(2005-2006)***, Alagappa University, Karaikudi

5. **Visiting Professor (*April, 2010-July, 2010)* –** Research Institute of Electronics, Shizuoka University, Hamamatsu, Japan.

6. **Visiting Scientist (19**-10-2014 to 24-10-2014) – Hebei Semiconductor Research Institute, Shijiazhuang, China.

Research Achievements:

- One of the key team members in the Growth of India's first bulk unidirectional 2" dia. Indium Phosphide Single Crystal by LEC technique in the year 1991 and grown several 2" dia., 1Kg GaAs and Si bulk single crystals using High Pressure Crystal Puller manufactured by M/S Cambridge Instruments, UK.
- Introduction of a new etchant to reveal the subsurface damages in the polished GaAs wafers.
- Designed and fabricated a versatile low pressure Crystal Puller for Oxide materials.
- Optimization of experimental parameters for the deposition of AlGaAs/GaAs heterostructures for LASER by Low Temperature-LPE using Piston boat configuration.
- Introduction of novel crystal growth methods namely ***Microtube-Czochralski Technique*** *(μT-CZ)* to grow single crystals without pre-grown seed and **Uniaxially Solution - crystallization *Method of Sankaranarayanan and Ramasamy (SR)**** to grow unidirectional crystals at room temperature from solution.
- A research paper regarding the Microtube-Czochralski Technique (μT-CZ) was republished as a News Item in the International journal "Current Science" published by Indian Institute of Science, Bangalore, India.
- Growth of India's first large size, 650mm length and 55mm diameter unidirectional benzophenone crystal using Sankaranaryanan – Ramasamy (SR) Method at room temperature.
- Designed and fabricated a transparent Vertical Bridgman Growth system especially for organic NLO crystals.
- Five research papers are listed among *TOP 25* most downloaded articles in the year 2004 - 2006.

Research Papers Published under this title in International Journals – 142, Major Research Projects Sanctioned by Govt. of India under this title – 12.

Events organized in leading roles

Number of Seminars / Conferences / Workshops / organized: 5

1. National Workshop on Recent Advancements in Materials Science (NWRAMS-08) at Alagappa University, Karaikudi during 7th March 2008.

2. National Workshop on Crystal Growth and Characterization (NWCGC-09) at Alagappa University, Karaikudi during 16th March 2009.

3. First National Workshop on Characterization Techniques at Alagappa University, Karaikudi during March 24 & 26th March, 2012.

4. Second National Workshop on Characterization Techniques at Alagappa University, Karaikudi during 21st -23rd March, 2013.

5. National Seminar on Recent Developments in Frontier areas of Materials Science, Alagappa University, March 23-24, 2016.

Overseas Exposure / Visits

Visited China (1992-93, 2005, 2008 , 2014) and Japan (2010)

Membership in

Professional Bodies

1. Life member in Indian Crystal Growth Association
2. Life member in Indian Physics Association, GEN/LM/13167
3. Life Member in Materials Research Society of India, LMB2486
4. Life Member in Indian Society of Atomic and Molecular Physics, MNo.1593
5. Life Member in Society for Advancement of Electrochemical Science and Tech.LF201801125

Editorial Board

1. Editorial Board - Member, Journal "Sadhana"- V.H.N.S.N.College, Virudhunagar
2. Editorial Board – Member, ANJAC Journal, A.N.J.A.College, Sivakasi

Advisory Board

1. Executive Council Member – Indian Association of Crystal Growth

Academic Bodies (such as Board of Studies etc.,)

1. Board of Studies-Member, Dept. of Physics, Alagappa University
2. Board of studies –Member: M.Sc Physics-A.N.J.A.College, Sivakasi
3. Doctor Committee Member, VIT-Vellore, Anna University-Chennai, NIT-Trichy and University of Madras, Chennai, SASTRA University, Tanjore

Resource persons in various capacities

Number of Invited / Special Lectures delivered: 33

Others

1. Products developed : Crystals for Scintillator and non-linear applications, Crystal Growth Equipment for SR Method of Crystal Growth.
2. No. of PhD Thesis evaluated : 14
3. No. of PhD Public Viva-Voce Examination conducted : 14

Publications

Sl. No.	Paper Title / Authors	Name of Journal, Volume No and Page	Year of Publica-tion
59	Electrochemical Synthesis, Single crystal growth, physic-chemical and Dielectric studies of Tetrabromobisphenol-A V. Govindan, K. Kulangiappar, S. Selvanayagam, B. Sridhar, K. Sankara narayanan	Indian Journal of Physics(Accepted manuscript in Press-2018) (IF:0.988)	2018
58	Microwave assisted synthesis of Ce-doped SnS_2 nano-flowers with enhanced vitamin-B sensing and photocatalytic activity V. Govindan, H. Imran, V. Dharuman, K. Sankaranarayanan	Materials Science: Materials in Electronics (Accepted for Publication) (IF:2.324)	2018
57	*Unidirectional* crystal *growth*, luminescence and scintillation characteristics of t-stilbene single crystals V. Govindan, D. Joseph Daniel, H. J. Kim, K. Sankaranarayanan	Dyes and Pigments, Volume 160, January 2019, Pages 848-852 (IF.3.767)	2019
56	Biological synthesis of silver nanoparticles using β-1, 3 glucan binding protein and their antibacterial, antibioflm and cytotoxic potential M.Anjugam, B.Vaseeharan, A. Iswarya, M.Divya,N.M.Prabhu , K. Sankaranarayanan	Microbial Pathogenesis, Volume 115, February 2018, Pages 31-40 (IF:2.0)	2018
55	Effect of substrate on electroplated copper sulphide thin films B. Bharathi, S. Thanikaikarasan • Pratap Kollu, P. V. Chandrasekar, K. Sankaranarayanan,X. Sahaya Shajan	J Mater Sci: Mater Electron (2014) December 2014, Volume 25, Issue 12, pp 5338-5344 (IF:1.569) DOI 10.1007/s10854-014-2310-7	2015
54	Quantum mechanical study and spectroscopic	Spectrochimica Acta Part A:	2015

	(FT-IR, FT-Raman, 13C, 1H) study, first order hyperpolarizability, NBO analysis, HOMO and LUMO analysis of 2-acetoxybenzoic acid by density functional methods K. Bhavani, K.Sankaranarayanan, S. Muthu	Molecular and Biomolecular Spectroscopy *Volume 136, Part C, 5 February 2015, Pages 1260-1268(IF:2.353)* DOI: 10.1016/j.saa.2014.10.012	
53	Influence of nano sized TiO_2 on the Structural, Electrical and Morphological Properties of Polymer Blend Electrolytes PEO – PVC – $LiClO_4$ S. Jayanthi, K. Kulasekarapandian, A. Arulsankar, K.Sankaranarayanan and B. Sundaresan	Journal of Composite Materials, *April 2015; vol. 49, 9: pp. 1035-1045* (IF:1.173) doi:10.1177/0021998314528824	2015
52	In-situ observation of faceted growth of benzophenone single crystals V. Natarajan, M. Arivanandhan, P. Anandan, K. Sankaranarayanan, G. Ravi, Y. Inatomi, Y. Hayakawa	Materials Chemistry and Physics, V144, 3, 2014, 402 - 408 (IF:2.234)	2014
51	Green synthesis of gold nanoparticles from leaf extract of Terminalia arjuna, for the enhanced mitotic cell division and pollen germination activity K. Gopinath, K.S. Venkatesh, R. Ilangovan, K. Sankaranarayanan and A. Arumugam	Industrial Crops and Products,V50 (2013) 737-742. (IF-2.468)	2013
50	"Effect of EDTA concentration on the physical and optical properties of CdS thin films" T.Prem Kumar and K.Sankaranarayanan	The Canadian Journal of Chemical Engineering., V91, p27, 2013 IF:1.003	2013
49	Influence of substrates on the structural, surface, optical, photoluminescence and computed three dimensional nanocrystal shape of CBD-CdS thin films" T.Prem Kumar and K.Sankaranarayanan	"J of Computation and Theoritical Nanoscience" V9, 947–952 (2012) (IF 0.86).	2012
48	Anisotropy of hardness and laser damage threshold of unidirectional organic NLO crystal in relation to the internal structure V. Natarajana, M. Arivanandhanb,, K. Sankaranarayananc, Y. Hayakawab	Materials Chemistry and Physics (IF-2.234) V130, Issues 1–2, 17 October 2011, Pages 154-158.	2011
47	Crystal growth of InGaSb alloy semiconductor at International space station: Preliminary experiments Mukannan Arivanandhan, Govindasamy Rajesh, Tadanobu Koyama, Yoshimi Momose, Krishnasamy Sankaranarayanan, Akira Tanaka, Yasuhiro Hayakawa,Tetsuo Ozawa, Yasunori Okano and Yuko Inatomi	J. Jpn. Soc. Microgravity Application, V28, 2, 2011, p046 (IF:NA)	2011
46	Effect of pure and mixed solvents on the solubility, crystal growth and morphology of	Physica B: Condensed Matter, Volume 406, Issue 8, 1 April 2011,	2011

	ethyl p-dimethylamino benzoate (EDMAB): An organic nonlinear optical material V. Natarajan, M. Arivanandhan, K. Sankaranarayanan, Y. Hayakawa	Pages 1410-1414, IF:1.327	
45	"Crystal Growth and characterization of a new organic material: Ethyl P-dimethylamino benzoate (EDMAB)" V.Natarajan, J. Kalyana sundar, P. Selvarajan, M. Arivanandhan, K. Sankaranarayanan, S.Natarajan, Y. Hayakawa,	J. of Minerals & Materials Characterization and Engineering (IF:NA) Vol. 10, No.1, pp.1-11, 2011	2011
44	Crystal Shape Determination in Thin Films and Studies on The Substrate Influence on The Crystal Shape In CBD-CdS Thin Films T. Prem Kumar, Daniel Sherwooda, Bosco Emmanuela, K.Sankaranarayanan;	Digest Journal of Nanomaterials and Biostructures, Vol. 4, No. 4, December 2009, P. 813 – 817, IF:1.092	2009
43	Growth and Characterization of CdZnS Thin Films by Short Duration Microwave Assisted-Chemical Bath Deposition Technique; T. Prem Kumar, K.Sankaranarayanan	Chalcogenide Letters Vol. 6, No. 10, October 2009, P. 555 – 562 IF:0.934	2009
42	Growth aspects and characteristic properties of pure and Li-doped l-arginine acetate (LAA) single crystals: A promising nonlinear optical material V. Natarajan, M. Arivanandhan, K. Sankaranarayanan, P. Ramasamy	Journal of Crystal Growth, Volume 311, Issue 3, 15 January 2009, Pages 572-575 IF:1.552	2009
41	Directional growth of organic NLO crystal by different growth methods: A comparative study by means of XRD, HRXRD and laser damage threshold M. Arivanandhan, Xinming Huang, Satoshi Uda, G. Bhagavannarayana, N. Vijayan, K. Sankaranarayanan, P. Ramasamy	Journal of Crystal Growth, Volume 310, Issue 21, 15 October 2008, Pages 4587-4592	2008
40	Growth of longest $\langle 1\,0\,0 \rangle$ oriented benzophenone single crystal from solution at ambient temperature M. Arivanandhan, K. Sankaranarayanan, P. Ramasamy	Journal of Crystal Growth, Volume 310, Issues 7-9, April 2008, Pages 1493-1496	2008
39	Melt growth of novel organic nonlinear optical material and its characterization M.Arivanandhan, K.Sankaranarayanan and P.Ramasamy	Materials Letters, Volume 61, Issue 26, October 2007, Pages 4836-4838	2007
38	Studies on large uniaxially grown benzophenone single crystals M.Arivanandhan, K.Sankaranarayanan, P.Ramasamy	Crystal Research Technology 42, No.6, 578-582 (2007)	2007
37	A novel way of modifying nanograin size by solution concentration in the growth of	Journal of Nanoparticle Research (2007) Volume 9, Number 2, P331-	2007

	$ZnAl_2O_4$ thin films K.Kumar, K.Ramamoorthy, P.M.Koinkar, R.Chandramohan and K.Sankaranarayanan	335	
36	Feasibility study on Czochralski growth of 3-methoxy 4-hydroxy benzaldehyde (MHBA) single crystals for NLO V.Vasudevan, M.Arivanandhan, G.Bhagavannarayana, K.Sankaranarayanan	Materials Letters, Volume 61, Issue 7, March 2007, Pages 1446-1450	2007
35	A novel in situ method for simultaneous growth of smart material single crystals and thin films K Ramamoorthy, KKumar, Pankaj Koinkar, K Ganesan,Amit P Shah, K Sankaranarayanan and P Ramasamy	Smart Mater. Struct. 16 (2007) 83–88	2007
34	A novel way of modifying the needle to hexagonal morphology of a single crystal by solution concentration K.Kumar, K.Ramamoorthy, R.Chandramohan and K.Sankaranarayanan	Materials Science and Engineering: B, Volume 135, Issue 2, 25 November 2006, Pages 150-153	2006
33	Unidirectional crystallization of large diameter benzophenone single crystal from solution at ambient temperature K.Sankaranarayanan and P.Ramasamy	Journal of Crystal Growth, Volume 292, Issue 2, July 2006, Pages 445-448	2006
32	High optical quality IZO ($In_2Zn_2O_5$) thin films by PLD – A novel development for III-V opto-electronic devices K.Ramamoorthy, K.Kumar, R.Chandramohan, K.Sankaranarayanan, R.Saravanan, I.V.Kityk, P.Ramasamy	Optics Communications, Volume 262, (2006), Pages 91-96	2006
31	Review on material properties of IZO thin films useful as epi-n-TCOs in opto-electronic (SIS solar cells, polymeric LEDs) devices K.Ramamoorthy, K.Kumar, R.Chandramohan, K.Sankaranarayanan	Materials Science and Engineering B, Volume 126, (2006), 1-15	2006
30	A novel growth method for $ZnAl_2O_4$ single crystals K.Kumar, K.Ramamoorthy, R.Chandramohan, K.Sankaranarayanan	Crystal Research Technology, Volume 41, No.3, (2006), Pages 217-220	2006
29	A novel in situ synthesis and growth of $ZnAl_2O_4$ thin films K.Kumar, K.Ramamoorthy, P.M.Koimkar, R.Chandramohan, K.Sankaranarayanan	Journal of Crystal Growth, Letter to Editors, Volume 289, (2006), Pages 405 - 407	2006
28	Development of a novel high optical quality ZnO thin films by PLD for III–V opto-electronic devices K. Ramamoorthy, C. Sanjeeviraja, M. Jayachandran, K. Sankaranarayanan, PMisra	Current Applied Physics 6, 1 (2006)103-108.	2006

	and L.M. Kukreja		
27	Growth of urea doped benzophenone single crystal for nonlinear optical applications M. Arivanandhan, C. Sanjeeviraja, K. Sankaranarayanan, S.K. Das, G.K. Samanta , P.K. Datta	Optical Materials 28 (2006) 324–330	2006
26	Growth of benzophenone single crystals from solution: A novel approach with 100% solute - crystal conversion efficiency K. Sankaranarayanan and P. Ramasamy	Cryst. Res. Technol. 41, No. 3, 225 – 230 (2006)	2006
25	Bulk crystal growth of zinc aluminate spinel at room temperature K.Kumar, K.Ramamoorthy, R.Chandramohan and K.Sankaranarayanan	Advances in Applied Ceramics, Volume 104, No.5, (2005), Pages 1-3	2005
24	Growth of large size ⟨1 1 0⟩ benzophenone crystal using uniaxially solution-crystallization method of Sankaranarayanan–Ramasamy (SR) K. Sankaranarayanan	Journal of Crystal Growth, Volume 284, Issues 1-2, 15 October (2005), Pages 203-208	2005
23	Optical frequency doubling in microtube Czochralski (μT-CZ) grown benzophenone single crystals M. Arivanandhan, K. Sankaranarayanan, C. Sanjeeviraja, A. Arulchakkaravarthi and P. Ramasamy	Journal of Crystal Growth, Volume 281, Issue 2-4, August (2005), Pages 596-603	2005
22	A novel nano-architecture for ZnO thin films on ⟨1 0 0⟩Si, GaAs and InP single crystal wafers by L-MBE as value in nano-robotic (machining) device fabrication efforts K. Ramamoorthy, C. Sanjeeviraja, M. Jayachandran, K. Sankaranarayanan, V. Ganesan, Pankaj Misra and L.M. Kukreja	Materials Science in Semiconductor Processing, Volume 8, Issue 4, (2005), Pages 555-563	2005
21	Unidirectional seeded single crystal growth from solution of benzophenone K. Sankaranarayanan and P. Ramasamy	Journal of Crystal Growth, Volume 280, Issues 3-4, 1 July (2005), Pages 467-473	2005
20	Growth of organic single crystals by transparent vertical Bridgman technique and its characterization M. Arivanandhan, K. Sankaranarayanan, K. Ramamoorthy, C. Sanjeeviraja and P. Ramasamy	Thin Solid Films, Volume 477, Issues 1-2, 22 April (2005), Pages 2-6	2005
19	Ethyl *p*-amino benzoate (EPAB): A novel organic non-linear optical material for optical devices M. Arivanandhan, A. Ramyalakshmi, R.	Optics Communications, Volume 251, (2005), Pages 172-178	2005

	Rathikha, R. Gopalakrishnan, C. Sanjeeviraja and K. Sankaranarayanan		
18	Growth of urea doped benzophenone single crystal for nonlinear optical applications M. Arivanandhan, C. Sanjeeviraja, K. Sankaranarayanan, S.K. Das, G.K. Samanta and P.K. Datta	Optical Materials, Volume 28, (2005), Pages 324-330	2005
17	Microtube-Czochralski (μT-CZ) growth of bulk benzophenone single crystal for nonlinear optical applications M. Arivanandhan, K. Ramamoorthy, K. Sankaranarayanan, C. Sanjeeviraja and P. Ramasamy	Optical Materials, Volume27, (2005),1864-1868	2005
16	Fabrication of a novel nano- architecture for IZO thin flims on <100> Si, GaAs and InP single crystal wafers by L-MBE K Ramamoorthy, C Sanjeeviraja, M. Jeyachandran, K Sankaranarayanan, V.Ganesan, Pankaj Misra[c] and L M Kukreja,	Surface Engineering , 20, 3, (2004) 205	2004
15	Development of a novel high speed (electron-mobility) epi-n-ZnO thin films by L-MBE for III–V opto-electronic devices K. Ramamoorthy, M. Jayachandran, K. Sankaranarayanan, Pankaj Misra, L. M. Kukreja and C. Sanjeeviraja	Current Applied Physics, Volume 4, Issue 6, November (2004), Pages 679-684	2004
14	Microbial inhibition, growth of Li^+-doped LAP single crystals and their characterization N. Kavitha, M. Arivanandhan, K. Ramamoorthy, K. Ragavendran and . K.Sankaranarayanan	Optical Materials, Volume 26, Issue 3, August (2004), Pages 275-280	2004
13	Highly textured ZnO thin films: a novel economical preparation and approachment for optical devices, UV lasers and green LEDs K. Ramamoorthy , M. Arivanandhan , K. Sankaranarayanan and C. Sanjeeviraja	Materials Chemistry and Physics, Volume 85, Issues 2-3, 15 June (2004), Pages 257-262	2004
12	Epitaxial lattice matching between epi-n-IZO thin films and <1 0 0> Si, GaAs and InP wafers with out any buffer layers by L-MBE technique: a novel development for III–V opto-electronic devices K. Ramamoorthy, C. Sanjeeviraja, M. Jayachandran, K.Sankaranarayanan, Pankaj Misra and L. M. Kukreja	Materials Chemistry and Physics, Volume 84, Issue 1, March (2004), Pages 14-19	2004
11	Epi-n-IZO thin films/<1 0 0> Si, GaAs and InP by L-MBE—a novel feasibility study for SIS type solar cells K. Ramamoorthy, M. Jayachandran, K.	Solar Energy, Volume 77, Issue 2, (2004), Pages 193-201	2004

	Sankaranarayanan, Pankaj Misra, L. M. Kukreja and C. Sanjeeviraja		
10	A novel way of modifying the thermal gradient in Vertical Bridgman-Stockbarger Technique and studies on its effect on the growth of Benzophenone single crystals M.Arivanandhan, K.Sankaranarayanan, K.Ramamoorthy, C.Sanjeeviraja, P.Ramasamy	Crystal Research and Technology, Volume 39, No.8, (2004), Pages 692-698	2004
9	Epi-n-ZnO/<100> Si, GaAs and InP by L-MBE: a novel approach for III–V devices K. Ramamoorthy, C. Sanjeeviraja, M. Jayachandran, K. Sankaranarayanan, Pankaj Misra and L. M. Kukreja	Materials Science in Semiconductor Processing, Volume 6, Issue 4, August (2003), Pages 219-224	2003
8	Preparation and characterization of ZnO thin films on InP by laser-molecular beam epitaxy technique for solar cells K. Ramamoorthy, C. Sanjeeviraja, M. Jayachandran, K. Sankaranarayanan, Pijush Bhattacharya and L. M. Kukreja	Journal of Crystal Growth, Volume 226, Issues 2-3, June (2001), Pages 281-286	2001
7	Influence of organic solvents on the habit of NMBA (4-nitro-4′-methyl benzylidene aniline) crystals K. Srinivasan, K. Sankaranarayanan, S. Thangavelu and P. Ramasamy	Journal of Crystal Growth, Volume 212, Issues 1-2, (2000), Pages 246-254	2000
6	A Novel method of growing bulk single crystals K.Sankaranarayanan	Current Science,Volume 77, No.12, (1999),1570-1571	1999
5	Microtube-Czochralski technique (μT-CZ):: a novel way of seeding the melt to grow bulk single crystal K. Sankaranarayanan and P. Ramasamy	Journal of Crystal Growth, Volume 193, Issues 1-2, 15 September (1998), Pages 252-256	1998
4	A new etchant to reveal the subsurface damage on polished gallium arsenide substrates K. Sankaranarayanan, R. R. Sumathi, M. Udhayasankar, P. Jayavel and J. Kumar	Journal of Crystal Growth, Volume 178, Issue 3, 1 July (1997), Pages 229-232	1997
3	Etchant Reveals Subsurface damages on Polished Substrates K.Sankaranaryanan	Electronic Alert Services, John Wiley & Sons,Inc.,New York, NY 10158, 1997.	1997
2	Photoluminescence Investigation on LEC grown GaAs' P.Santhanaraghavan, K.Sankaranarayanan, J.Arokiaraj, J.Kumar and P.Ramasamy	Physica Status Solidi Volume 142, (1994), Pages 521- 525	1994
1	Thermal Cycling, DLTS and PEC studies on LEC Gallium Arsenide" P.Santhanaraghavan**,** K.Sankaranarayanan,	Crystal Research Technology Volume 29,(1994), Pages 223 – 226	1994

	J.Arokiaraj, J.Kumar and P.Ramasamy		

Papers Published Under Sankaranarayanan-Ramasamy Method of Crystal Growth

No.	Title	Author	Journal &Year	Imp. Fact.
147	Unidirectional crystal growth, luminescence and scintillation characteristics of t-stilbene single crystals	V. Govindan, D. Joseph Daniel, H. J. Kim, K. Sankaranarayanan	Dyes and Pigments, Volume 160, January 2019, Pages 848-852	3.767
146	Growth, structural, optical, mechanical and quantum chemical analysis of unidirectional grown bis(guanidinium) 5-sulfosalicylate (BGSSA) single crystal	R.Sreedevi, G.Saravana Kumar, K.Amarsingh Bhabu, T.Balu, P.Murugakoothan, T.R.Rajasekaran	Physica B: Condensed Matter, Volume 531, 15 February 2018, Pages 21-29.	1.386
145	Bulk growth of organic non-linear optical (NLO) L-arginine 4-nitrophenolate 4-nitrophenol dihydrate (LAPP) single crystals by Sankaranarayanan–Ramasamy (SR) method	V. Sivasubramani, Mohd Anis, S. S. Hussaini, G. G. Muley, M. Senthil Pandian & P. Ramasamy	Materials Research Innovations, Pages: 426-433 **Published online:** 20 Dec 2016 Volume 21, 2017 - Issue 2	0.54
144	Bulk growth, structural, vibrational, crystalline perfection, optical and dielectric properties of L-threonine doped KDP single crystals grown by Sankaranarayanan-Ramasamy (SR) method	Mohd. Shkir, V. Ganesh, S. AlFaify, H. Algarni, G. Bhagavannarayana, K. K. Maurya, M. M. Abutalib & I. S. Yahia (2016):	Materials Research Innovations, DOI: 10.1080/14328917.2016.1192715 Volume 21, 2017 - Issue 2	0.54
143	Ultrasonic study of elastic anisotropy of unidirectional Rochelle salt single crystals grown using the Sankaranarayanan-Ramasamy method	S. Singaravadivelu, A. Uthayakumar, Saju T. Abraham	Journal of Crystal Growth, Volume 478, 15 November 2017, Pages 146-151.	1.462
142	Unique optical properties of Eu3 + doped l-histidine hydrochloride mono hydrate single crystals from low	K. Ramachandra Rao, S. Rajyalakshmi, Ch.Satya Kamal, B. Brahmaji, Jacek B. Jasinski, T.K.	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, Volume 176, 5	2.098

	temperature growth technique	Visweswara Rao	April 2017, Pages 52-57	
141	Optical and laser damage threshold studies on 1, 3, 5-triphenylbenzene scintillator crystal grown by Sankaranarayanan-Ramasamy (SR) technique	N. Durairaj, S. Kalainathan, R. Kumar	Optik - International Journal for Light and Electron Optics, Volume 140, July 2017, Pages 900-907.	0.769
140	Investigations on structural and photoluminescence mechanism of cerium doped l-Histidine hydrochloride mono hydrate single crystals for optical applications	S. Rajyalakshmi, K. Ramachandra Rao, B. Brahmaji, K. Samatha, T.K. Visweswara Rao, Y. Ramakrishna	Journal of Molecular Structure, Volume 1129, 5 February 2017, Pages 231-238	1.602
139	Bulk crystals of l-Histidinium dihydrogen phosphate orthophosphoric acid grown by Sankaranarayanan - Ramasamy method	Reena Ittyachan, A. Arunkumar	Journal of Crystal Growth, Volume 457, 1 January 2017, Pages 104-106	1.462
138	Growth of KDP single crystal in second harmonic direction by modified Sankaranarayanan–Ramasamy method,	F. Barati, H. Rezagholipour Dizaji ,	Optical and Quantum Electronics, September 2016, 48:432	1.290
137	Growth kinetics and bulk growth of inversely soluble lithium sulfate monohydrate single crystals and their characterization	A. Silambarasan, P. Rajesh, P. Ramasamy	Journal of Crystal Growth, In Press, Corrected Proof, Available online 10 November 2016	1.462
136	Directional growth of KCl added KDP crystal from aqueous solution by S-R method and investigation on its physical properties	H. Rezagholipour Dizaji, A. Rousta	Optik - International Journal for Light and Electron Optics, Volume 127, Issue 23, December 2016, Pages 11336-11341	0.769
135	Optical investigations on Tb3+ doped l-Histidine hydrochloride mono hydrate single crystals grown by low temperature solution techniques	S. Rajyalakshmi, K. Ramachandra Rao, B. Brahmaji, K. Samatha, T.K. Visweswara Rao, G. Bhagavannarayana	Optical Materials, Volume 54, April 2016, Pages 74-83	2.02
134	Single crystal growth of bis guanidinium hydrogen phosphate monohydrate by Sankaranarayanan-	RO.MU. Jauhar, G. Vinitha, P. Murugakoothan	Journal of Crystal Growth, Volume 455, 1 December 2016, Pages 90-93	1.462

	Ramasamy method and investigation of its linear and nonlinear optical properties			
133	Investigation on unidirectional growth of 1,3,5-Triphenylbenzene by Sankaranarayanan-Ramasamy method and its characterization of lifetime, thermal analysis, hardness and etching studies	N. Durairaj, S. Kalainathan, M.V. Krishnaiah	Materials Chemistry and Physics, Volume 181, 15 September 2016, Pages 529-537	2.101
132	Unidirectional growth of non-linear optical Triglycine calcium dibromide single crystal by Sankaranaryanan–Ramasamy method	G. Babu Rao, P. Rajesh, P. Ramasamy	Journal of Crystal Growth, Volume 440, 15 April 2016, Pages 47-54	1.462
131	Growth and characterization of high proficient second order nonlinear optical material: l-Valinium Picrate	M. Saravanan, S. Abraham Rajasekar	Optical Materials, Volume 52, February 2016, Pages 75-86	2.183
130	Growth and characterization studies of an efficient semiorganic NLO single crystal: 2-Amino 5-Nitropyridinium Dihydrogen Phosphate (2A5NPDP) by Sankaranarayanan–Ramasamy method	M. Ambrose Rajkumar, S. Stanly John Xavier, S. Anbarasu, Prem Anand Devarajan	Optik , Volume 127, Issue 4, February 2016, Pages 2187-2192	0.677
129	Bulk growth, crystalline perfection and optical characteristics of inversely soluble lithium sulfate monohydrate single crystals grown by the conventional solvent evaporation and modified Sankaranarayanan–Ramasamy method	A. Silambarasan, E. Nageswara Rao, S. Venugopal Rao, P. Rajesh and P. Ramasamya	CrystEngComm, 2016,18, 2072-2080	3.849
128	Unidirectional growth of large size urea doped L-cysteine hydrochloride monohydrate NLO organic crystal and investigations of its crystalline and optical properties	Sunil Verma, K. Ramachandra Rao, S. Kar, K.S. Bartwal	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy Volume 153, 15 January 2016, Pages 16–21	2.353
127	Unidirectional growth and characterization of mixed	V. Meenatchi, K. Muthu, SP.	Optik - Volume 126, Issue 23, December 2015, Pages 4032-	0.677

	crystals: Na(I)–incorporated KDP	Meenakshisundaram	4036	
126	Optical, thermal, mechanical and dielectric studies of NLO active unidirectional grown L-alanine lithium chloride single crystal by SR method	K. Parasuraman, R. Samuel Selvaraj, K. Sakthi Murugesan, R. Kanagadurai, B. Milton Boaz	Optik Volume 126, Issue 23, December 2015, Pages 4516-4522	0.677
125	Fabrication and performance study of electro-optical modulator and third order nonlinearity using unidirectional method (Sankaranarayanan–Ramasamy) grown Imidazolium l-Tartrate 〈0 1 0〉 single crystal	N. Elavarasu, S. Karuppusamy, S. Muralidharan, M. Anantharaja, R. Gopalakrishnan	Optical Materials, Volume 46, August 2015, Pages 141-148	1.981
124	Studies on influence of Cd2+ ions in unidirectional growth and characterization of l-Cysteine hydrochloride monohydrate single crystals	P.V. Prasad, T.K. Visweswara Rao, K. Ramachandra Rao, Ch. Satya Kamal, T. Samuel	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, Volume 136, Part C, 5 February 2015, Pages 1950-1954	2.129
123	Growth of K2Ni(SO4)2.6H2O crystal by Sankaranarayanan-Ramsamy (SR) method for UV light band-pass filter	N. Khayyat, H. Rezagholipour Dizaji	Optik - Volume 126, Issue 23, December 2015, Pages 3936-3938	0.677
122	Growth and characterization of TGS single crystal doped with NiSO4 grown by Sankara narayanan - Ramasamy method	N Zolfagharian & H Rezagholipour Dizaji	Indian Journal of Pure & Applied Physics Vol. 53, April 2015, pp. 234-238	‘0.76 6
121	Synthesis, growth, optimization, bulk SR method growth, fabrication of indigenous optical element and anisotropic studies on guanidinium l - monohydrogen tartrate (GuHT) single crystal for nonlinear optical device applications	P.Vivek, R. Roop Kumar, P. Murugakoothan	Journal of Crystal Growth Volume 412, 15 February 2015, Pages 40–48.	1.693
120	Unidirectional growth of <001>triglycine zinc	K. Aravinth, M. Senthil Pandian,	Spectrochimica Acta Part A: Molecular and Biomolecular	2.129

	chloride crystal by Sankaranarayanan-Ramasamy (SR) method and its characterization	P. Ramasamy	Spectroscopy, Volume 138, 5 March 2015, Pages 811-817	
119	A study on the growth, optical, thermal, mechanical, dielectric and piezoelectric properties of dye doped KAP single crystals,	G. Babu Rao, P. Rajesh, P. Ramasamy,	Materials Research Bulletin, Volume 60, December 2014, Pages 709-713,	1.968
118	Fabrication of optical element from unidirectional grown imidazole–imidazolium picrate monohydrate (IIP) organic crystals for nonlinear optical applications	P. Vivek, P. Murugakoothan	Optics & Laser Technology, Volume 64, December 2014, Pages 113-119,	1.649
117	Bulk single crystals of ammonium acid phthalate grown by the Sankaranarayanan–Ramasamy method for optical limiting applications	A. Arunkumar, P. Ramasamy	Journal of Crystal Growth, Volume 401, 1 September 2014, Pages 195-199	1.693
116	Unidirectional growth of pure and L-lysine added ADP crystals from aqueous solution	Samaneh Salarian, Hamid Rezagholipour Dizaji	Materials Science-Poland January 2014, Volume 32, Issue 1, pp 12-15	0.327
115	Growth of NaDP-GPI single crystal and its analysis on basis of HRXRD, optical and mechanical studies	S. Supriya AntonioJ.Dossantos-García,F.Fernández-Martinez	Materials Letters Volume 128(2014)114–116	2.269
114	Unidirectional growth, optical, mechanical and dielectric studies on a novel NLO crystal: l-Arginine 4-nitrophenolate 4-nitrophenol dihydrate	K. Parasuraman, K. Sakthi Murugesan, R. Samuel Selvaraj, S. Jerome Das, R. Uthrakumar, B. Milton Boaz	Optik - Volume 125, Issue 14, July 2014, Pages 3534-3539	0.524
113	Unidirectional growth of l-alanine single crystal: NLO material from the amino acid family	S. Natarajan, K. Moovendaran, S. Mohan Raju, K. Sethuraman	Optik - Volume 125, Issue 11, June 2014, Pages 2505-2508	0.524
112	Investigation on the SR method growth, etching, birefringence, laser damage threshold and thermal characterization of strontium bis (hydrogen l-malate)	A. Senthil, P. Ramasamy	Journal of Crystal Growth, Volume 401, 1 September 2014, Pages 200-204	1.737

	hexahydrate single crystal			
111	Effect of crystal violet dye on the optical, dielectric, thermal and mechanical properties of <0 0 1> directed KDP single crystal	P. Rajesh, A. Silambarasan, P. Ramasamy	Materials Research Bulletin, Volume 49, January 2014, Pages 640-644	1.913
110	A phase matchable nonlinear optical crystal salicylideneaniline: Synthesis, growth and characterization	S. Anbarasu, Prem Anand Devarajan	Optik - International Journal for Light and Electron Optics, Volume 125, Issue 1, January 2014, Pages 333-337	0.524
109	Growth and Characterization of Pure and Phosphoric Acid Doped Triglycine Sulfate Crystal by the S-R Method	H. Rezagholipour Dizaji and Z. Naseri	Chinese Journal of Physics, Volume 51, Number 4, October 2013, p. 766	0.477
108	"Studies on the Synthesis, Growth and Characterization of ([Paranitrophenyl]Imino)Benzene NLO Crystal by Sankaranarayanan-Ramasamy Method,	S. Anbarasu, T. Kumar and P. Devarajan,	Journal of Minerals and Materials Characterization and Engineering, Vol. 1 No. 3, 2013, pp. 110-116.	NA
107	Single crystal growth of ninhydrin by unidirectional Sankaranarayanan–Ramasamy (SR) method by using a glass ampoule for nonlinear optical applications	Neelam Rani, N. Vijayan, B. Riscob,ab Suraj Karan Jat,ac Anuj Krishna,a Subhasis Das,d G. Bhagavannarayana,a Brijesh Rathie and M. A. Wahabb	Cryst.Eng.Comm, 2013,15, 2127-2132	3.879
106	Unidirectional growth of Methyl 2-amino-5-bromobenzoate crystal by Sankaranarayanan–Ramasamy method and its characterization	M. Parthasarathy, R. Gopalakrishnan	Journal of Crystal Growth, Volume 372, 1 June 2013, Pages 100-104	1.737
105	Comparative studies of glycine added potassium dihydrogen phosphate single crystals grown by conventional and Sankaranaryanan–Ramasamy methods	K. Boopathi, P. Rajesh, P. Ramasamy, Prapun Manyum	Optical Materials, Volume 35, Issue 5, March 2013, Pages 954-961	1.918
104	Effect of KOH on glycine phosphite single crystal grown by the SR method	S. Supriya, S. Kalainathan, G. Bhagavannarayana	Journal of Physics and Chemistry of Solids, Volume 74, Issue 1, January 2013,	1.527

			Pages 70-74	
103	A study on Fourier transform infrared spectroscopy, thermal, mechanical, NLO and laser damage properties on unidirectional Glycinium Picrate Mono Glycine crystal	S.R. Thilagavathy, P. Rajesh, P. Ramasamy, K. Ambujam	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, Volume 115, November 2013, Pages 747-752	1.770
102	Unidirectional growth, improved structural perfection and physical properties of a semi-organic nonlinear optical Dichlorobis(L-proline)zinc(II) single crystal	Urit Charoen-In, P. Ramasamy, P. Manyum	Journal of Crystal Growth, Volume 362, 1 January 2013, Pages 220-226	1.737
101	Unidirectional growth, improved structural perfection and physical properties of a semi-organic nonlinear optical dichlorobis(L-proline)zinc(II) single crystal	Urit Charoen-In, P. Ramasamy, P. Manyum	Journal of Crystal Growth, Volume 362, 1 January 2013, Pages 220-226	1.737
100	Growth and Characterization of a Unidirectional <001> EDTA Added KDP Single Crystal by the S-R Method	A. Ghane and H. Rezagholipour Dizaji	Chinese Journal of Physics, Volume 50, Number 4 August 2012, p. 652	0.477
99	Synthesis, growth and characterization of L-lysinium(+)...L-lysinium(2+) dichloride perchlorate (LLDP) single crystals by Sankaranarayanan-Ramasamy Method	V. Vasudevan, R. Ramesh Babu, K. Ramamurthi	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, Volume 99, 15 December 2012, Pages 259-265	1.770
98	Optical studies on glycine sodium nitrate: A semiorganic nonlinear optical crystal	J. Mary Linet, S. Jerome Das	Optik - Volume 123, Issue 20, October 2012, Pages 1895-1899	0.524
97	Growth of cerium(III)-doped ADP crystals and characterization studies	K. Vanchinathan, K. Muthu, G. Bhagavannarayana, SP.Meenakshisundaram	Journal of Crystal Growth, Volume 354, Issue 1, 1 September 2012, Pages 57-61	1.737

96	Unidirectional crystal growth and crystalline perfection of L-arginine phosphate monohydrate	B. Riscob, M. Shakir, N. Vijayan, K. K. Maurya, M. A. Wahab G. Bhagavannarayana	J. Appl. Cryst. (2012). 45 [doi:10.1107/S0021889812016822]	3.794
95	Unidirectional growth of α-NiSO4·6H2O crystal by Sankaranarayanan–Ramasamy (SR) method	M. Hemmati, H. Rezagholipour Dizaji*	Crystal Research and Technology, Volume 47, Issue 7, July 2012, Pages: 703–706	0.946
94	Uniaxial growth of <100> zinc (tris) thiourea sulphate (ZTS) single crystal by Sankaranarayanan-Ramasamy (SR) method and its characterizations	M. Iyanar, C. Muthamizhchelvan, J. Thomas Joseph Prakash, S. Stephen Rajkumar Inbanathan, S. Ponnusamy	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, Volume 94, August 2012, Pages 265-270	1.770
93	Optical, thermal, dielectric and mechanical studies on glycine doped potassium dihydrogen orthophosphate singles crystals grown by SR method	N. Pattanaboonmee, P. Ramasamy, P. Manyum	Procedia Engineering, Volume 32, 2012, Pages 1019-1025	NA
92	Comparative studies on Conventional solution and Sankaranarayanan - Ramasamy (SR) methods grown Potassium Sodium Tartrate Tetrahydrate Single Crystals	T.S.Shyju S. Anandhi R.Gopalakrishnan	Crystal Engineering Communication 2012, 14, 1387-1396	4.006
91	Growth, crystalline perfection and characterization of Hexaaquanickel(II) dipotassium tetrahydrogen tetra-o-phthalate tetrahydrate crystals	K. Muthu, G. Bhagavannarayana, SP. Meenakashi sundaram	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, Volume 92, 15 June 2012, Pages 289-294	1.770
90	Growth of negative solubility lithium sulphate monohydrate crystal by slow evaporation and Sankaranarayanan-Ramasamy method	K. Boopathi, P. Rajesh, P. Ramasamy	Journal of Crystal Growth, Volume 345, Issue 1, 15 April 2012, Pages 1-6	1.737
89	A comparative study of ferroelectric triglycine sulfate (TGS) crystals grown by conventional slow evaporation and	M. Senthil Pandian, P. Ramasamy, Binay Kumar	Materials Research Bulletin, Volume 47, Issue 6, June 2012, Pages 1587-1597	2.145

	unidirectional method			
88	Unidirectional growth of Benzil crystal from solution by Sankaranarayanan–Ramasamy method and its characterization	M. Rajalakshmi, T.S. Shyju, R. Indirajith, R. Gopalakrishnan	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 86, (2012), p27-32	1.770
87	Sodium sulfanilate dihydrate (SSDH) single crystals grown by conventional slow evaporation and Sankaranarayanan–Ramasamy (SR) method and its comparative characterization analysis	M. Senthil Pandian, P. Ramasamy	Materials Chemistry and Physics, Volume 132, Issues 2–3, 15 February 2012, Pages 1019-1028	2.353
86	Improvement of Optical Qualities of Urea Doped GPI Single Crystal Grown By Sankaranarayanan and Ramasamy Method	S. Supriya S. Kalainathan	Asian Journal of Biochemical and Pharmaceutical Research Issue 2 (V1) 2011 p621-630 ISSN: 2231-2560	NA
85	Unidirectional growth of β-Alanine doped GPI Single Crystal and its Surface analysis using Etching, SEM, AFM and Laser damage threshold studies	S. Supriya S. Kalainathan	International Journal of Chem.Tech. Research Vol. 3, No.3, pp 1332-1338, July-Sept (2011)	NA
84	The growth of Benzophenone crystals by Sankaranarayanan–Ramasamy (SR) method and slow evaporation solution technique (SEST): A comparative investigation	M. Senthil Pandian, K. Boopathi, P. Ramasamy, G.Bhagavannarayana	Materials Research Bulletin, Volume 47, Issue 3, March 2012, Pages 826-835	2.145
83	Vibrational Spectroscopic Studies and Mechanical Properties of Unidirectional L-alanine Acetate Single crystal	G. Prabagaran, M.Victor Antony Raj S. Arulmozhi J. Madhavan	Der Pharma Chemica, (2011), 3 (6):p643-650	NA
82	Simultaneous growth of several materials using a single experimental setup	K. Moovendaran, J. Kalyana Sundar, S. Natarajan	Journal of Crystal Growth, 334, (2011), p 1-3	1.737
81	Anisotropy of hardness and laser damage threshold of unidirectional organic NLO crystal in relation to the internal structure	V. Natarajan, M. Arivanandhan, K. Sankaranarayanan Y. Hayakawa	Materials Chemistry and Physics, 130, (2011),p154-158	2.353

80	Optical, mechanical and transport properties of unidirectional grown L-Tartaric acid bulk single crystal for non-linear optical application	J. Mary Linet, S. Jerome Das	Materials Chemistry and Physics, 126, (2011),p 886-890	2.353
79	Optical and microhardness studies on unidirectional grown Triaqua glycine sulfato zinc (II): A semiorganic NLO crystal	J. Mary Linet, S. Dinakaran, S. Jerome Das	Journal of Alloys and Compounds, 509, (2011), p3832-3836	2.134
78	Spectral, thermal and hardness studies on unidirectional grown Dichlorido diglycine zinc dihydrate single crystal	J. Mary Linet, S. Jerome Das	Physica B: Condensed Matter, 406, (2011), p836-840	0.856
77	Unidirectional growth and characterization of L-Arginine monohydrochloride monohydrate single crystals	K. Sangeetha, R. Ramesh Babu, G.Bhagavannarayana K. Ramamurthi	Materials Chemistry and Physics, 130, (2011), p 487-492	2.353
76	Growth and characterization of L-Arginine doped potassium Dihydrogen phosphate single crystals grown by SR method.	N.Pattanaboonmee P.Ramasamy P.Manyum	Ferroelectrics. Volume 413, Issue 1, January 2011, pages 96-107	0.151
75	Investigation on growth and characterization of Dimethyl ammonium picrate (DMAP) single crystal grown by conventional and SR method	M. Magesh, G. Anandha Babu, P. Ramasamy	Journal of Crystal Growth, 324 (2011), p201-206	1.737
74	Enhancement of the crystalline perfection of <001> directed KDP single crystal	P.Rajesh S.Sreedhar K.Boopathi S.Venugopal Rao P.Ramasamy	Current Applied Physics 11 (2011) p1343-1348	1.740
73	Unidirectional growth of L-lysine L-lysinium dichloride nitrate (L-LLDN)single crystal by SR method.	V.Vasudevan R.Ramesh babu K.Ramamurthi	Physica B Condensed Matter 406(2011) p936-940	0.856
72	Optical, crystillne perfection and mechanical studies on unidirectional Bis(thiourea)cadmium zinc chloride single crystal.	R.Utharakumar C.Vesta G.Baghavannarayana R.Robert S.Jerome das	Journal Of Alloys And Components 509 (2011)p2343	2.134

71	Unidirectional growth linear and nonlinear optical, dielectric and mechanical properties of organic adduct of L-Tartaric acid nicotinamide.	P.Ramesh Kumar R.Gunaselan S.Kumararaman G.Baghavannarayana P.Sahayaraj	Physica B Condensed Matter 406 (2011) p1204-1210	0.856
70	Unidirecional growth of organic nonlinear optical L-Arginine maleate dehydrate single crystal by SR method and its characterization.	Urit Charoen –In P.Ramaswamy P.Manyum	Journal of Crystal Growth 318(2011) p745-750	1.737
69	Studies on conventional and Sankaranarayanan-Ramaswamy(SR) method grown ferroelectric Glycine phosphate(GPI)single crystal.	M.Senthilpandian N.Pattanaboonmee P.Ramaswamy P.Manyum	Journal of Crystal Growth 314(2011) p207-212	1.737
68	Investigations on the SR method growth , etching, birefringence, laser damage threshold and dielectric characterization of Sodium acid phthalate single crystals.	A.Senthil P.Ramaswamy Sunil Verma	Journal of Crystal Growth 318(2011) p757-761	1.737
67	A comparative study on pure,L-Arginine and Glycine doped ammonium Dihydrogen Orthophosphate single crystal grown by slow solvent evaporation and temperature-gradient method	N.Pattanaboonmee P.Ramasamy R.Yimnirun P.Manyuma	Journal of Crystal Growth 314(2011) p196-201	1.737
66	Unidirectional growth, structural, optical and mechanical properties of LTA crystal	G.Bahagavannarayan P.Ramesh Kumar R.Gunaseelan S.Kumararman P.Sagayaraj	Materials Chemistry And Physics 125-(2011)p15-19	2.353
65	Comparative study on Bis-thiourea cadmium acetate crystal using HRXRD, etching, microhardness, UV-visible and dielectric characterization	V.Ganesh Ch.SnehalathaReddy Mohd.Shakir M.A.Wahab	Physica B Condensed Matter 406(2011)p 259-264	0.856
64	Unidirectional growth of L-Cysteine hydrochloride monohydrate:first time observation as nonlinear optical material and its	G.Bahagavannarayan Suman Kumar Mohd shakir S.K.Kushwaha K.K.Maurya	J.Appl.Cryst.(2010)43, p710-715	3.794

	characterization	Rajni Maalhotra S.K.Kushawaha		
63	Studies on barium Bis-para-nitrophenolate para-nitrophenol tetrahydrate NLO single crystal by unidirectional growth method.	R.Utharakumar C.Vesta S.Jerome Das M.Jose K.Sugandhi S.Krishnan	Physica B Condensed Matter 405(2010)p3371-3375	0.856
62	Optical and mechanical studies on unidirectional grown tri-nitro phenol methyl P-Hydroxybenzoate bulk single crystal.	R.Utharakumar C.Vesta R.Robert G.Mangalam S.Jerome Das	Physica B Condensed Matter 405(2010)p 4274-4278	0.856
61	Investigations on growth morphology bulk grown and crystalline perfection of L-Threonine,an organic nonlinear optical material	Mary Linet S.Jerome Das	Physica B Condensed Matter 405(2010)p 3955-395	0.856
60	Spectral, optical and mechanical studies on L-Histidine hydrochloride monohydrate (LHC) single crystal grown unidirectional growth technique	R.Robert C.Justin Raj S.Krishnan R.Uthrakumar S.Dinakaran S.Jerome Das	Physica B Condensed Matter 405(2010) p3248-3252	0.856
59	Investigations for obtaining enhanced SHG element KH2PO4 crystal	S.Dinakaran Sunil verma S.Jerome das S.Kar,P.K.Gupta, K.S.Bartwal	Physica B Condensed Matter 405(2010) p1809-1812	0.856
58	Influence of forced convention on unidirectional growth of crystal	S.Dinakaran Sunil verma S.Jerome das S.Kar K.S.Bartwal P.K.Gupta	Physica B : Condensed Matter 405(2010) p3919-3923	0.856
57	Growth, structural, spectral, mechanical and optical properties of pure and metal ions doped Sulphamic acid single crystal	R.Ramesh Babu R.Ramesh R.Gopalakrishnan G.Bhagavan narayana K.Ramamurthi	Spectrochemica Acta Parta 72 (2010)p470-475	1.770
56	Comparative study on K-Alaninium maleate single crystal grown by SR method and conventional slow evaporation solution technique	Urit charoen-in, P.Ramasamy P.Manyum	Journal of Crystal Growth312(2010) p2369-2375	1.737

55	Unidirectional growth L-Asparagine monohydrate single crystal: First time observation of NLO nature and other studies of crystalline perfection optical, mechanical and dielectric properties	Mohd. Shakira K.K. Maura V.Ganesh G.Bhagavannarayana B.Riscob K.K. Maura	Journal of Crystal Growth 312(2010) p3171-3177	1.737
54	Unidirectional growth of L – Proline Cadmium Chloride monohydrate single crystal and its characterization for structural, vibrational, LDT optical and dielectric properties	Mohd. Shakira S.K. Kushwaha K.K. Maura R. C. Bhatta Rashmi C G.Bhagavannarayana	Materials Chemistry And Physics 120(2010) p566	2.353
53	Unidirectional growth of <101> Glycine Zinc Chloride single crystal by SR method	D. Nagaraju P.V. Rajasekar T. Bhaskar Rao K. Krishna Rao	Materials Letters 64 (2010)p267-270	2.117
52	Influence of NH4Cl on the <100> directed growth and properties of ADP crystal	P.Rajesh P.Ramasamy	Materials Letters, 64 (2010) p798-801	2.117
51	Comparative study on L-Asparagine monohydrade doped ADP crystals.	P.Rajesh P.Ramasamy	Physics:B Condensed Matter. 405(2010)p1287-1293	0.856
50	Growth of <100> directed ADP crystal with slotted ampoule	P.Rajesh P.Ramasamy G.Bhagavannarayana Binay kumar	Current Applied Physics 10 (2010) p1221-1226	1.740
49	Bulk crystal growth and characterization of nonlinear optical Bisthiourea Zinc Chloride single crystal by unidirectional growth method	R. Uthra kumar C. Vesta C. Justin Raj S. Krishnan S. Jeromedas	Current Applied Physics, 10 (2010) p548-552	1.740
48	Growth, theoretical and optical studies on Potassium dihydrogen phosphate(KDP) Single crystal by SR method	R.Robert C.Justinraj S.Krishnan S.Jerome das	Physica B Condensed Matter 405(2010)p20-24	0.856
47	Unidirectional growth of Sulphamic acid single crystal and its quality analysis using etching, microhardness HRXRD, UV-Visible and Thermogravimetric-	M.Senthil Pandian Urit chararoen ln P.Ramasamy Prapun Manyum M.Lennin N.Balamurugan	Journal of Crystal Growth 312 (2010) p397-401	1.737

	Differential thermal characterizations			
46	Unidirectional growth of<101> Glycine zinc chloride single crystal by SR method	D.Nagaraju P.V.Raja sheker T.Baskara Rao K.Krishna Rao	Materials Letters, 64 (2010) p267	2.117
45	Conventional slow evaporation and SR method grown Diglycine zinc chloride(DGZC) single crystal and its comparative study	M.Senthil pandian P.Ramasamy	Journal of Crystal Growth, 312(2010) 413-419	1.737
44	Synthesis, growth of Strontium bis(hydrogen-malate) hexahydrate bulk single crystal : A promising semi-organic nonlinear optical material	A.Senthil P.Ramasamy	Journal of Crystal Growth, 312 (2010) 276-281	1.737
43	Optical, Mechanical and Surface Analysis on Potassium Boromalate Monohydrate Grown by SR Method	R. Priya, C. Justin Raj, S. Krishnan, S. Dinakaran, R. Robert and S. Jerome Das	International Journal of Materials Sciences, Volume 4 Number 5 (2009) pp. 627-634	NA
42	Characterization of unidirectionally grown NaCl1-x Brx O3 crystals	Jingran S.U. Youting Song Daofan Zhang Xinan Chang	Powder Diffraction 24 (2009) 234-238	0.482
41	Growth, optical, mechanical, dielectric and theoretical studies on Potassium Pentabourate tetrahydrate(KB508.4H2O) Single crystal by modified SR method.	C.Justin raj S.Krishnan S.Dinakaran J.Mary linet R.Uthrakumar R.Robert S.Jerome dass	J.Mater.Sci.Technol., 25 No.6 (2009) p745-748	0.759
40	Investigation of SR method grown 001 directed KDP single crystal and its characterization by High-resoultion X-Ray diffraction (HRXRD), Laser damage threshold, dielectric, thermal analysis, optical and hardness studies.	S.Balamurugan P.Ramasamy S.K.Sharma Yutthapong Inkong Prapun,Manyum.	Materials Chemistry and Physics, 117 (2009) 465-470	2.353
39	Unidirectional growth of <001> Sodium acid phthalate single crystal by SR method	A.Senthil P.Ramasamy	Journal of Crystal Growth, 311 (2009) 4720-4724	1.737

38	A study on optical, thermal, mechanical, dielectric, and NLO behavior of unidirectional Ammonium dihydrogen phosphate crystals	P.Rajesh P.Ramasamy	Materials Letters, 63 (2009) 2260	2.117
37	Optical, dielectric and microhardness studies on<100> directed ADP crystal	P.Rajesh P.Ramasamy	Spectrochimica Act Part A:Malecular and Biomolecular Spectroscopy,74 (2009) 1493	1.770
36	Growth of DL-Malic acid doped Ammonium dihydrogen phosphate crystal and its characterization	P.Rajesh P.Ramasamy	Journal Of Crystal Growth, 311(2009) 3491	1.737
35	Growth of a bulk organic single crystal of Benzoylglycine by unidirectional crystal growth method.	S.Dinakaran Sunil Verma C.Justinraj J.Mary Linet S.Krishnan S.Jerome Das	Crystal Growth & Design (2009), 9(1) p151-155	4.389
34	Growth and characterization of Novel Nonlinear optical Potassium boromalate monohydrate (KBM) single crystal grown by modified SR method	C.Justin Raj S. Krishnan S. Dinakaran S. Mary Nais Priya R. Uthra Kumar S. Jeromedas	Crystal Growth and Design, (2008), 8(11), P 3956-3958	4.389
33	Studies on optical, mechanical and transport properties of NLO active L-Alanine formate single crystal grown by modified SR method	C. Justin Raj S. Krishnan S. Dinakaran S. Jerome Das B.Milton Boaz	Optics Communication 281 (2008) 2285-2290	1.517
32	Directional growth of organic NLO crystal by different growth methods: A comparative study by means of XRD, HRXRD and laser damage threshold	M. Arivanandhan Xinming Huang Satoshi Uda G.Bhagavanarayana N. Vijayan P. Ramasamy K. Sankaranarayanan	Journal of Crystal Growth, 310 (2008) 4587	1.737
31	Unidirectional growth of Largest L-LMHCL cihydrate crystal by SR method	A. Senthil R.Ramesh Babu N. Balamurugan P. Ramasamy	Journal of Crystal Growth, 311(2008) 544	1.737
30	Unidirectional growth of <001> Tetra glycine barium	M. Senthil Pandian P. Ramasamy	Journal of Crystal Growth ,311(2008) 944	1.737

	chloride (TGBC)single crystal by SR method			
29	Growth and characterization of unidirectional <100> KDP single crystal by SR method	N. Balamurugan P. Ramasamy	Spectrochimica Acta Part A,71(2008)1979	1.770
28	Effect of KCl on the bulk growth KDP crystal by SR method	N. Balamurugan P. Ramasamy Yutthapong Inkong Prapun Manyum	Material Chemistry and Physics,112 (2008) 622	2.353
27	Bulk growth of <101> KDP crystal by SR method and its characterization	N. Balamurugan P. Ramasamy	Material Chemistry and Physics, 112 (2008) 1	2.353
26	Characterization of <010>directed KDP single crystal grownby SR method	M. Senthil Pandian N. Balamurugan G. Bhaganarayanan P. Ramasamy	Journal of Cyrstal Growth ,310(2008)4143	1.737
25	Bulk growth and characterization of semiorganic Nonlinear Optical L-Alanine Cadmium Chloride Single crystal by Modified Sankaranarayanan-Ramasamy Method	C.Justin Raj S.Jerome Das	Crystal Growth and Design 8 (2008) 2729	4.389
24	Growth by SR method and characterization of Bis(thiourea) zinc(II) chloride single crystal	G. Bagavanarayana N.Vijayan S.K.Kushwaha	Materials Letters, 62(2008) 3931	2.117
23	Growth by SR method and characterization of Hippuric acid single crystals	G. Bagavanarayana N.Vijayan Alex M.Z.Slawin	Materials Letters, 62(2008) 2480	2.117
22	Growth of Unidirectional Potassium dihydrogen orthophospate single crystal by SR method and its characterization	S. Balamurugan G. Bagavanarayana P. Ramasamy	Materials Letters, 62(2008) 3963	2.117
21	Growth of TGS single crystal by conventional and SR method and its analysis on the basis of mechanical, thermal, optical and etching studies	Senthil. M Pandian N. Balamurugan V. Ganesh P.V. Raja Shekar K. Krishna Rao P. Ramasamy	Materials Letters, 62(2008)3830	2.117
20	Effect of additives in supersaturated binary and ternary solutions on cluster growth by gravity driven concentration gradient	G. Anandha babu P. Ramasamy	Cryst. Res. Tech . 439(2008)626	0.946

	studies			
19	Unidirectional growth of Benzophenone single crystal from solution	P. Ramasamy	Journal of Crystal Growth 310(2008) 1501	1.737
18	Growth of Longest <100> oriented Benzophenone Single Crystal from Solution at Ambient Temperature	M. Arivanandhan K. Sankaranarayanan P. Ramasamy	Journal of Crystal Growth,310(2008) 1493	1.737
17	Uniaxial growth non linear optical active Lithium para nitrophenolate trihydrate single crystal by SR method	S. Dinakaran S. Jerome Das	Journal of Crystal Growth, 310(2008)410	1.737
16	Studies on large uniaxially grown Benzophenone single crystals	M. Arivanandhan K. Sankaranarayanan P. Ramasamy	Cryst. Res. Technol. 42 (2007) 578	0.946
15	Growth and characterization of nonlinear optical active L-Alanine formate crystal by modified SR method	C. Justin Raj S.Jerome Das	Journal of Crystal Growth 304(2007)191	1.737
14	Growth and optical absorption studies on Potassium dihydrogen phosphate single crystal	C. Justin Raj S. Krishnan S. Dinakaran R. Uthrakumar S.Jerome Das	Cryst. Res. Tech 43(2007)245	0.946
13	Solution growth of new ferroelectric Glycine phosphate unidirectional single crystals at room temperature	R. Ezhil Vizhi S. kalaonathan G. Bagavanarayana	Cryst. Res. Tech. 42(2007) 1104	0.946
12	Growth of Potassium acid phthalate crystals by SR method and its optical characterization	N. Balamurugan M. Lenin P. Ramasaamy	Materials Letter. 61(2007) 1896	2.117
11	The growth of L-Glitamic acid hydrochloride crystals by SR method	R. Bairava Ganesh V. Kannan R. Sathyalakshmi P. Ramasamy	Materials Letters 61(2007) 706	2.117
10	Growth of Benzimidazole single crystal by SR method and it characterization by High- Resolution X-Ray diffraction, Thermogravimetric/Differential Thermal analysis, and Birefringence studies	N. Vijayan K. Nagaraj Alex M.Z. Slawin C.K.Shashidharan Nair G.Bhagavannarayana	Crystal Growth and Design 2 (2007)445	4.389

9	Growth of TGS crystal using unioaxially solution – crystallization method of Sanakaranarayanan-Ramasamy	M. Lenin N. Balamurugan P. Ramasamy G.Bhagavannarayana	Crystal Research Technology 42(2007) 151	0.946
8	Growth of Sulphamic acid single crystal by SR method and its characterization	M. Lenin N. Balamurugan P. Ramasamy	Crystal Research Technology 42(2007) 39	0.946
7	Growth of L-Lysine monohydrochloride dehydrate bulk single crystal by SR method	K. Sethuraman P. Ramesh Babu R. Gopalakrishnan P. Ramasamy	Journal of Crystal Growth, 297(2006) 356	1.737
6	Unidirectional growth of <110> Ammonium dihydrogen orthophosphate single crystal by SR method	K. Sethuraman P. Ramesh Babu R. Gopalakrishnan P. Ramasamy	Journal of Crystal Growth, 294(2006) 349	1.737
5	Investigation on growth rate formula and Bulk Laser Damage Threshold of KDP crystal grown from Aqueous Solution by SR method	N. Balamurugan P. Ranmasamy	Crystal Growth & Design, 6 (2006) 1642	4.389
4	Unidirectional crystallization of large diameter Benzophenone single crystal from solution at ambient temperature	K. Sankaranarayanan P. Ramasamy	Journal of Crystal Growth 292(2006)445	1.737
3	Growth of Benzophenone single crystal from solution: A novel approach with 100% solute – crystal conversion efficiency	K. Sankaranarayanan P.Ramasamy	Cryst. Res Technol. 41(2006)225.	0.946
2	Growth of large size <110> Benzophenone crystal using uniaxially solution crystallization method of Sankaranarayanan – Ramasamy(SR)	K. Sankaranarayanan	Journal of Crystal Growth 284(2005) 203	1.737
1	Unidirectional seeded single crystal growth from solution of Benzophenone by SR method	K. Sankaranarayanan P.Ramasamy	Journal of Crystal Growth 280(2005) 467	1.737

Major Research Projects Sanctioned under Sankaranarayanan-Ramasamy Method of Crystal Growth by Government of India

Sl.No	Name of the Principle Investigator/Institution	Funding Agency	Amount Rs.lakh	Title of the Project
1	Dr.P.Ramasamy SSN Instittutions, Chennai	DST	18.74	Growth of large size KDP and ADP crystals by SR Method
2	Dr.P.Ramasamy SSN Instittutions, Chennai	AICTE	10.00	Investigations on bulk growth of unidirectional single crystals of benzophenone derivatives
3	Dr..Ramesh Babu Dept. of Physics Bharathidasan Univ. Trichy	UGC	10.68	Unidirectional growth of pure and doped L-Arginine family single crystal by novel solution growth method and their charcterization
4	Dr..Ramesh Babu Dept. of Physics Bharathidasan Univ. Trichy	UGC	11.00	Growth, Structural, Spectral, thermal, mechanical and optical studies on semi-organic L-Lysine based single crystals for NLO applications
5	Dr.J.Madhavan Dept. of Physics Loyala College Chennai	UGC	7.75	Investigations on Amino acid based NLO materials for Photonics device fabrications
6	Dr.R.Gopalakrishnan Dept. of Physics Anna University Chennai	CSIR	16.71	Synthesis, Growth and Characterization of picrate family crystals and growth potassium sodium tartrate teterahydrate single crystal from conventional solution growth and unidirectional method of Sankaranaryanan-Ramasamy for technological applications
7	Dr.P.Selvarajan Dept. of Physics Aditanar College of Arts and Science, Tiruchendur	DST	20.00	Growth and characterization of some novel NLO based single crystals of L-Alanine complexes
8	Dr.B.Sunddaresan Dept. of Physics Ayya Nadar Janaki Ammal College Sivakasi	UGC	3.20	Unidirectional Growth of Semiorganic NLO Active L-lysine Borate Single crystal By SR Method
9	Dr. Muthu Senthil Pandian, SSN Research Centre, SSN Institutions, Chennai-603 110	DST-SERB	16.60	Unidirectional and bulk growth of high quality nonlinear optical (NLO) 2-amino-5-nitropyridinium (2A5NP) derivative single crystal for second harmonic generation

				(SHG) device applications
10	Dr.P.Murugakoothan, Pachaiyappa's College, Chennai	DST-SERB	29.85	Indigenous optical cell fabrication from Guanidinium based organic crystals for nonlinear optical applications
11	Dr.P.Rajesh Dept. of Physics SSN College of Engineering Chennai-603110	DAE/ BRNS	23.00	Development of High Quality Direction Controlled Lithium Iodate and Lithium Sulphate Single Crystals for NLO applications
12	Dr.M.Senthil Pandian Research Scientist, SSN research Centre, SSN Institutions, Chennai	DAE/BRNS	25.00	High Quality Unidirectional 4-Nitrophenol Derivative Single Crystals for SHG Device Applications