LIST OF PUBLICATIONS

Publications in International Journals

1. Crystal growth of Trans-stilbene by vertical Bridgman technique with modified growth vessels and its characterization
A. Arulchakkaravarthi, P. Santhanaraghavan, P. Ramasamy
Journal of Crystal Growth 224 (2001) 89–94

2 Studies on the microhardness and slip systems in Bridgman grown stilbene crystals
A.Arul chakkaravarthi, P.Santhanaraghavan and P.Ramasamy
Materials Letters Vol 51/2, (2001) 151-155

3. Growth of organic molecular single crystals trans-stilbene by selective self seeding from vertical Bridgman technique
A.Arulchakkaravarthi, P.Jayavel, P.Santhanaraghavan and P.Ramasamy
J. Cryst. Growth 234 (2002) 159

4. Investigations on the growth of anthracene and trans-stilbene single crystals using Vertical Bridgman Technique
A.Arulchakkaravarthi,C.K. Lakshmanaperumal, P. Santhanaraghavan, P. Jayavel, R. Selvan, K.Sivaji, R.Gopalakrishnan and P. Ramasamy
Materials Science Engineering B 95 (2002) 236-241

5. Preparation of high-quality anthracene crystals using doublerun selective self-seeding vertical Bridgman technique(DRSSVBT)
A. Arulchakkaravarthi, C.K. Laksmanaperumal, P. Santhanaraghavan, Rakesh Kumar, S. Muralithar, K.Sivaji, P. Ramasamy,
Journal of Crystal Growth 246 (2002) 85–89

6. Electrical and magnetoresistivity studies in chemical solution deposited $La_{(1-x)}Ca_xMnO3$ thin films
S. Angappane, P. Murugaraj, K. Sethupathi, G. Rangarajan, V. S. Sastry, **A.Arulchakkaravarthi** and P. Ramasamy
Journal of Applied Physics Volume 89, Number 11 1 June 2001(6979-6981)

7. Investigations on the swift heavy ion implanted GaAs substrates
P. Jayavel, **A. Arulchakkaravarthi**, P. Ramasamy, J. Kumar
Vacuum 68(4) (2002) 291-296

8. Detection characteristics of vertical Bridgman grown stilbene crystals for gamma rays using ^{60}Co, ^{137}Cs and ^{22}Na gamma ray sources
A. Arulchakkaravarthi, P. Santhanaraghavan, Rakesh Kumar, S. Muralithar, P. Ramasamy, T. Nagarajan, C.W. Lan
Materials Chemistry and Physics 77 (2002) 77–80.

9. On the improvement of detection characteristics of trans-stilbene crystals by improving crystal perfection
A. Arulchakkaravarthi, Rakesh Kumar, P. Santhanaraghavan, S. Muralithar, R.Gopalakrishanan, P. Ramasamy
Materials Research Innovations Vol.6 (2002) 272-276.

10. Enhancement of photochemical deposition (PCD) and analysis of surface spread of CdS crystalline thin films
R.Padmavathy, N.P.Rajesh, **A.Arulchakkaravarthi**, R.Gopalakrishnan, P.Santhanaraghavan, P.Ramasamy
Materials Letters 53(2002) 321-325

11. Synthesis, crystal growth and FTIR, NMR, SHG studies of 4-methoxy benzaldehyde- N-methyl-4-stilbazolium tosylate (MBST)
C.K. Lakshmana Perumal, **A. Arulchakkaravarthi**, N.P. Rajesh, P. Santhana Raghavan, Y.C. Huang, M. Ichimura, P. Ramasamy
Journal of Crystal Growth 240(1-2) (2002) 212.

12. Growth and characterization of high quality, large size methyl- p-hydroxybenzoate (p-MHB) a non-linear optical material
C.K.Lakshmana Perumal, **A. Arulchakkaravarthi** , P.Santhanaraghavan and P.Ramasamy
Journal of Crystal Growth 241 (2002) 200-205

13. Enhancement of photochemical deposition (PCD) and analysis of surface spread of CdS crystalline thin films
R.Padmavathy, N.P.Rajesh, **A.Arulchakkaravarthi**, R.Gopalakrishnan, P.Santhanaraghavan, P.Ramasamy
Materials Letters 53 (2002) 321-325.

14. Microhardness and Slip systems of solution grown MHB Crystals
C.K.Laksmanaperumal, **A.Arulchakkaravarthi**, N.P.Rajesh, P.Santhanaraghavan, P.Ramasamy
Materials Letters56 (2002) 578-586.

15. Effect of low grain boundaries on detector characteristics of Trans-stilbene crystals
A.Arulchakkaravarthi, Rakesh Kumar, P.Santhanaraghavan, T.Nagarajan, P. Ramasamy
Materials Letters *(considered for publication)*

16 Electron Momentum Distribution Mapping of Trans-Stilbene Single Crystal by Positron Annihilation
K. Sivaji, S. Selvakumar, **A.Arulchakkaravarthi**, P. Santhanaraghavan, K. Sivakumar, Babu Varghesse, T. Nagarajan, P. Ramasamy
Physical Review Letters *(considered for publication)*

17. Effect of hollow pores on the detection characteristics of trans-stilbene crystals grown by Vertical Bridgman Technique
A.Arulchakkaravarthi, P.Ramasamy , T. Nagarajan, P. Santhanaraghavan RakeshKumar, S. Muralithar ,R.Gopalakrishanan, K.Sivaji
Materials Research Innovations *(In press)*

18. Crystal X-ray rocking studies on vertical Bridgman grown trans-stilbene crystals
A.Arulchakkaravarthi, Umesh K Tiwari, K.Sivaji, P.Santhanaraghavan, Rakesh Sharma, K.Sivakumar, T.Nagarajan, P.Ramasamy
Journal of Crystal Growth *(considered for publication)*

19. Pulse shape discrimination of the neutron and two gamma component by using combined ^{22}Na & ^{252}Cf sources from trans-stilbene crystals grown by selective self seeding Bridgman Technique as Scintillator
A.Arulchakkarvarthi, P. Santhanaraghavan, Rakesh Kumar, S. Muralithar, Sandeep Chopra, R. Gopalakrishnan, P. Ramasamy
Materials Letters 56(2002) 373-378.

20. Studies on the distribution of Spirals growth pattern and vicinal hillocks on the Organic molecular crystal trans-stilbene crystals
A.Arulchakkaravarthi, P. Santhanaraghavan, R.Gopalakrishnan, K.Sivaji, T.Nagarajan, P.Ramasamy
Journal Physics Chemistry of Solids *(revision)*

21. Synthesis, crystal growth and FTIR, NMR, SHG studies of 4-Hydroxybenzaldehyde- *N*-methyl-4-stilbazolium tosylate (HBST).
C.K. Lakshmana Perumal, **A. Arulchakkaravarthi**, P. SanthanaRaghavan, P. Ramasamy
Journal of Crystal Growth (Communicated.)

22. Raman Spectroscopic studies on Vertical Bridgman technique grown trans-stilbene crystal
A.Arulchakkaravarthi, R.Kesavamoorthy, S.Selvakumar, P.Santhanaraghavan, K.Sivaji, P.Ramasamy, T.Nagarajan
Materials Research Innovations (Communicated)

23. Raman Spectroscopic studies on grown Anthracene crystal
A.Arulchakkaravarthi, R.Kesavamoorthy, S.Selvakumar, P.Santhanaraghavan, K.Sivaji, P.Ramasamy, T.Nagarajan
Materials letters (Communicated)

24. Photoluminescence studies on vertical Bridgman grown stilbene crystals
A.Arulchakkaravarthi, Fouran Singh, P.Santhanaraghavan, P.Ramasamy
Materials Letters (Communicated)

25. Photoluminescence studies on grown anthracene crystals
A.Arulchakkaravarthi, Fouran Singh, P.Santhanaraghavan, P.Ramasamy
Materials letters (Communicated)

26. Scintillation and time response of stilbene to high energy protons
A.Arulchakkaravarthi, Rakesh Kumar, S.Muralithar, R.P.Singh, S.Golda, A.Surma, Hardev Singh, P.Santhanaraghavan, P.Ramasamy, R.K.Bowmik, T.Nagarajan
Physical Review Letters (to be submitted)

27. Powder diffraction pattern of of 4-methoxy benzaldehyde- N-methyl-4-stilbazolium tosylate (MBST).
C.K.Lakshmanapermal, **A.Arulchakkaravarthi**, P.Santhanaraghavan, P.Ramasamy
ICDD (Communicated)

28. Raman spectroscopic, photoluminescence and IR spectral studies on the solution grown 4-methoxy benzaldehyde- N-methyl-4-stilbazolium tosylate (MBST) crystals
A.Arulchakkaravarthi, R.Kesevamoorthy, C.K.Lakshamapermal, Fouran Singh P.Santhanaraghavan, P.Ramasamy (under preparation)

29. Raman spectroscopic, photoluminescence and IR spectral studies on the solution grown 4-hydroxybenzaldehyde- N-methyl-4-stilbazolium tosylate (MBST) crystals
A.Arulchakkaravarthi, R.Kesevamoorthy, C.K.Lakshamapermal, Fouran Singh, P.Santhanaraghavan, P.Ramasamy (under preparation)

30. Raman spectroscopic, photoluminescence and IR spectral studies on the solution grown Methyl para hydroxy Benzoate crystals
A.Arulchakkaravarthi, R.Kesevamoorthy, C.K.Lakshamapermal, Fouran Singh, P.Santhanaraghavan, P.Ramasamy (under preparation)

Workshops Papers accepted/Attended

1. Workshop on "Detectors and Transducers" by Dr.A.K.Sinha 28th February to 3rdApril 2000, Nuclear Science New Delhi-110067 India (attended)

2. " Work shop for Microton users" Manglaore university Oct 24-25, 2001, India (attended).

3. Accelerator User Committee meeting Nuclear Science Centre, July 6-7th (2001) Beam time request for experiments "Growth and Characterisation of Organic molecular Crystals for the detection of nuclear radiation" **A.Arulchakkaravarthi**, P.Santhanaraghavan, T.Nagarajan, P.Ramasamy (Attended / presented)

4 Accelerator User Committee meeting Nuclear Science Centre, July 6-7th (2002) Beam time request for experiments (attended).

5 "Workshop on radiation detectors" Nuclear Science Centre, New Delhi, "Energy and time response of stilbene scintillator for proton energy ranging from 5-25MeV".
A.Arulchakkaravarthi, Rakeshkumar, S.Muralithar, R.P.Singh, K.S.Golda, Hardev Singh, Asiti Surma, K.Sivaji, P.Santhanaraghavan, T.Nagarajan, P.Ramasamy, R.K.Bhowmik. (accepted / not presented)

Publications in national and international conferences

1. Growth aspects of organic molecular crystals for scintillation detector applications
A.Arulchakkaravarthi, K.Sivaji, P.Ramasamy
Nineth national seminar on crystal 24-26 Feb (2003) Crystal Growth Centre Anna Univeristy Chennai-25.

2. Crystal X-ray rocking studies on vertical Bridgman grown trans-stilbene crystals
A.Arulchakkaravarthi, T.Nagarajan, P.Ramasamy
Nineth national seminar on crystal 24-26 Feb (2003), Crystal Growth Centre Anna Univeristy Chennai-25. **(Received Best Paper Award)**

3. Synthesis and growth of 4 methoxy benzaldehyde –N-methyl stilbazolium toyslate(MBST) : An organic non linear optical material
C.K.Laksmanaperumal, **A.Arulchakkaravarthi**, P.Ramasamy
Nineth national seminar on crystal 24-26 Feb (2003), Crystal Growth Centre Anna Univeristy Chennai-25.

4. Growth of organic NLO material MBST and its characterization
C.K.Laksmanaperumal, **A.Arulchakkaravarthi**, P.Santhanaraghavan, P.Ramasamy
National Laser Symposium NLS-2001-CAT Indore, December 19, 2001.

5. Growth and quality assessment of 4-methoxy benzaldehyde –N-methyl-4-stilbazolium Toyslate (MBST)
C.K.Lakshmanapermal, **A.Arulchakkaravarthi**, P.Santhanaraghavan, P.Ramasamy.
American Conference on Crystal Growth and Epitaxy AACGE 14 2002, August 4-6, Seattle, Washington, U.S.

6. Growth of novel NLO material " 4-hydroxy benzaldehyde –N-methyl-4-stilbazolium Toyslate (HBST).
C.K.Lakshmanapermal , **A.Arulchakkaravarthi** , P.Santhanaraghavan P.Ramasamy.
American Conference on Crystal Growth and Epitaxy AACGE 14 2002, August 4-6, Seattle, Washington U.S.

7. Growth and characterization of p-nitrotoluene doped trans-stilbene crystals
A.Arulchakkaravarthi, P.Santhanaraghavan, K.Sivaji, C.K.Lakshmanapermal, P.Ramasamy
American Conference on Crystal Growth and Epitaxy AACGE 14 2002, August 4-9, Seattle, Washington, U.S.

8. Growth difficulties of organic molecular crystals trans-stilbene
A.Arulchakkaravarthi, P.Santhanaraghavan, P.Ramasamy
American Conference on Crystal Growth and Epitaxy AACGE 14 2002, August 4-9, Seattle, Washington Seattle, Washington, U.S.

9. Investigations on the growth of anthracene and trans-stilbene crystals
A.Arulchakkaravarthi, P.Jayavel, P.Santhanaraghavan and P.Ramasamy
The Thirteenth International Conference on Crystal Growth and The Eleventh International Conference on Vapour Growth Epitaxy (ICCG-13/ICPGE-11 held at Doshisha University, Kyoto, Japan during, July 30-Aug.4.2001.

10. Growth of high potential NLO crystal: meta-nitroaniline
C.K.Lakshmanapermal, **A.Arulchakkaravarthi,** P.Santhanaraghavan
Symposium on crystal growth of laser related materials 7-8 th August 2000
Crystal Growth Anna University, Chennai-25 India.

11. Crystal growth of trans-stilbene crystals and their characterisation
A.Arulchakkaravarthi, P.Santhanaraghavan and P.Ramasamy
National Conference on Crystal Growth and characterisation (NCCGC)
March 22-23, 2001 Hindu College, Nagercoil-629 002, India

12. Growth of trans-stilbene crystal: A potential Scintillator material
A.Arulchakkaravarthi, P.Santhanaraghavan, P.Ramasamy
XXX National Seminar on Crystallography, Department of Physics, Sri Venkateswara University, Tirupati, India, 28th June 2000.

13. Optical, mechanical and scintillation time resolution studies of trans- stilbene crystal
A.Arulchakkaravarthi, P.Santhanaraghavan, P.Ramasamy
American Conference on Crystal Growth and Epitaxy AACGE 12 2002,
August 13-18, Marriot Mountain Resort, Vail, Colorodo, U.S.A.

14. Crystal Growth of Trans-Stilbene by Bridgman technique:
A potential scintillator material
A.Arulchakkaravarthi, P.Santhanarghavan, P.Ramasamy
American Conference on Crystal Growth and Epitaxy AACGE 12 2002,
August 13-18, Marriot Mountain Resort, Vail, Colorodo, U.S.A.