

## Dr. R. Jayavel

**Assistant Professor  
Crystal Growth Centre  
Anna University**

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Professional Experience: Teaching – 12 Years; Research – 17 Years

Position	Period	Institution	Nature of work
Visiting Professor	1st Dec.06-31st March 07	Research Institute of Electronics, Shizuoka University, Japan	Research
Director	21st Oct.'05 - Till Date	Centre for Nanoscience & Technology Anna University, India	Research & Teaching
Assistant Professor	18th April '02 – Till Date	Crystal Growth Centre, Anna University, India.	Research & Teaching
Special Researcher	15th Aug.'01-31st Mar.'03	National Institute for Materials Science-Japan	Research
STA Fellow	15th Aug.'99-14th Aug.'01	National Institute for Materials Science-Japan.	Research
Lecturer	12th Dec.'95-14th Aug.'99	Crystal Growth Centre, Anna University, India.	Research & Teaching

### Academic Positions:

### Education:

Degree	Institution	Year	Branch	Class
Ph.D.	Anna University	1995	Physics (Materials Science)	By Thesis
M.Phil.	Anna University	1990	Physics (Crystal Growth)	I Class
M.Sc.	University of Madras	1988	Physics	I Class
B.Sc.	University of Madras	1985	Physics	I Class

### Areas of Research:

- Synthesis and characterization of Nanomaterials
- Preparation of Nanocrystalline thin films.
- Growth and characterization of Ferroelectric single crystals
- Investigations on the fabrication of oxide thin films
- Studies on the growth aspects of Laser and Nonlinear Optical Crystals

### Other Academic Responsibilities:

Position	Programme	Duration	Institution	Responsibility
Director-in-Charge	Centre for International Affairs	21.8.2005 to Till Date	Anna University	Overseas Research Collaboration & NRI Admission
Chairman	Japan-India Workshop on Optronic Materials and Devices Based on Micro to Nano Technology	March 22-23, 2007	National Institute of Materials Science, Japan.	Organisation and Lecture
Regional Secretary	86th Meeting of Asian Academic Network for Environmental Safety and Waste Management	December 10-12, 2006	Anna University	Organisation
Coordinator	International Workshop on Nano Science and Technology	January 23-28, 2006	Anna University	Organisation and Lecture
Coordinator	International Workshop on Crystal Growth & Applications of Advanced Materials	January 9-13, 2006	Crystal Growth Centre, Anna University	Organisation and Lecture
Convener	Indo-Japan Workshop on Crystal Growth of Advanced Materials	Dec. 7-10, 2004	Crystal Growth Centre, Anna University	Organisation and Lecture
Co-Coordinator	UGC-Refresher Course on Crystal Growth	Nov. 17- Dec. 7, 2004	Crystal Growth Centre, Anna University	Organisation and Lecture
Co-Director	International Workshop on Crystal Growth of Technologically Important Materials	Feb. 24-28, 2004	Crystal Growth Centre, Anna University	Organisation and Lecture
Coordinator	Memorandum of Understanding (MoU) between Anna University and AIST, Japan	2002-2007	Anna University & Institute of Energy Electronics, AIST, Japan.	Collaborative Research and Exchange Programme
Coordinator	Visitor's Program under Inter-University Scheme.	1995-99 & 2003-05	Crystal Growth Centre, Anna University	Lectures and Demonstration

#### Sponsored Research Projects Completed:

Sl.No	Title of the project	Position	Funding Agency	Duration	Grant (in Lakhs)
1	Growth of large size Ba <sub>1-x</sub> A <sub>x</sub> (A=Ca, Sr) TiO <sub>3</sub> single crystals and their characterization	Co-Principal Investigator	DAE-BRNS	1995-1999	9.86

2	Modernisation of flame fusion crystal growth system for the production of emerald and star Ruby	Principal Investigator	AICTE	1996-1999	10.00
3	Upgradation of Existing facilities suitable for the Growth of Semiorganic Crystals for NLO applications	Principal Investigator	AICTE	1998-2000	10.00
4	Growth of bulk single crystals of high temperature semiconductors and their characterization	Principal Investigator	DST	1998-2001	12.40
5	State Initiated National Facility for Semiconductor based LEDs and Nanomaterials.	Co- Investigator	TN Govt.	2005-2006	50.00

#### **Ongoing Sponsored Research Projects:**

Sl.No	Title of the project	Position	Funding Agency	Duration	Grant (in Lakhs)
1	Heavy ion Irradiation Effects on Colossal Magneto Resistance (CMR) Single Crystals.	Principal Investigator	IUAC	2006-2009	3.75
2	Growth and Characterization of Bimetallic Thiocyanate Crystals for Frequency Conversion Devices	Principal Investigator	CSIR	2006-2009	9.76
3	Semiconductor Nanostructures	Co-Investigator	DST	2006-2009	616.24
4	Synthesis and Characterization of Carbon Nanotubes using Mesoporous MCM-41 molecular sieves-its Application as Memory Devices in Supercomputers	Co-Investigator	DST	2006-2009	30.66

#### **Industry Collaboration:**

Colour Stability in doped sapphire crystals for Synthetic Gem Applications.  
Industry: Indo-Swiss Synthetic Gem Manufacturing Co Ltd., Mettupalayam.  
Metallic Nano powders for high reliability electronics.  
Industry: Global Applied Materials Inc., Bangalore.

## Research Guidance Ph.D

- Ten ( Awarded)
- Ten ( in Progress)
- M.Phil – Seven ; M.Sc : Twleve
- No. of M.Phil./M.Sc. students from other Colleges/Institutions : Seventeen

### Overseas visits:

Country	Period	Place and purpose of visit
U.K.	May 1995	SEM training at Cambridge and visit to Cambridge University and Birmingham University.
U.S.A.	Dec.1995	MRS Meeting at Boston and visit to Pennsylvania State University and Argonne National Laboratory, Illinois.
JAPAN	July 1998	10th International workshop on superconductivity at Okinawa and visit to several laboratories/Institutions.
JAPAN	Aug.1999-Mar.-2003	Research at National Institute for Materials Science, Tsukuba Science City, Ibaraki.
GERMANY	May 2000	Visit to RWTH, Aachen and Institute for Crystal Growth, Berlin under DAAD-Sandwich Model Fellowship
U.S.A.	March 2001	American Physical Society meeting at Seattle and visit to Argonne National Laboratory, Illinois.
FRANCE	June 2002	European Materials Research Society (E-MRS)-Spring Meeting, Strasbourg.
S. Korea	Aug. 2002	Second Asian Conference on Crystal Growth and Crystal Technology (CGCT-2), Hanyang University, Seoul.
JAPAN	May 2004	Exchange visit under the MoU between National Institute for Materials Science (NIMS) and Anna University.
JAPAN	June 2005	Exchange visit under the MoU between National Institute for Materials Science (NIMS) and Anna University.
SINGAPORE	September 2005	Visit to Nanyang Technological University and National University of Singapore for Collaboration
CHINA	October 2005	Third Asian Conference on Crystal Growth and Crystal Technology, Beijing.
AUSTRALIA	April 2006	Visit to The University of Western Australia, The University Melbourne, The University of Adelaide to establish collaborative research programmes
CHINA	May 2006	Visit to Electronic Science University of China, Chengdu, Nanjing University and Wuhan University for signing MoU for research collaboration.
JAPAN	September 2006	International Student Seminar on Materials and Prospects for Nanotechnology, Nagoya Institute of Technology.
NORWAY	November 2006	Visit to Norwegian Geotechnical University and NANSEN Environmental and Remote Sensing Centre for signing MoU for research collaboration
HOLLAND	November 2006	Visit to University of Amsterdam for signing MoU for research collaboration
GERMANY	November 2006	Visit to University of Luneburg for signing MoU for research collaboration
ITALY	November 2006	Visit to Ploitechnic di Torino, University of Torin and University of Pisa for signing MoU for research collaboration
JAPAN	December 2006 to	Visiting Professor at Shizuoka University, Hamamatsu

	March 2007	and Japan-India Workshop at National Institute for Materials Science, Tsukuba.
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### **Awards & Recognition:**

- Fellow of Tamil Nadu Academy of Sciences
- Executive Council Member: The Asian Society for Crystal Growth and Crystal Technology (ASCGCT)
- Coordinator, MoU between Anna University and various Institutions in Japan.
- CSIR-Visiting Research Associate for research at NPL, New Delhi (1993)
- Selected for Young Physicists Colloquium by the Indian Physical Society (1993)
- Certificate of Achievement by Leica Cambridge Ltd, UK for SEM Training (1995)
- Best paper Award, "Seminar on Materials and Characterization", CECRI (1998)
- DAAD Sandwich Model Fellowship to visit Germany (2000)
- Science & Technology Agency (STA) Fellowship, Japan (1999-2001)
- Special Researcher, National Institute for Materials Science, Japan (2001-2003)
- Japanese Government Award for Foreign Expert (May-June 2004)
- Best paper Award, "International Conference on Spectrophysics", Chennai (2005).
- Visiting Scientist, National Institute for Materials Science, Japan (June-July 2005)
- Visiting Professor, Shizuoka University, Japan (December 2006-March 2007).

### **Membership in Professional bodies:**

1. Indian Association for Crystal Growth
2. Electron Microscope Society of India
3. Materials Research Society of India
4. Indian Physics Association.
5. Indian Physical Society

### **Other Academic Credentials:**

Number of Publications in International/National Journals : 138

Papers presented in International/National conferences : 194

Invited Lectures in International/National Conferences : 73

Workshop/Conference/Seminars attended : 102

### **Books/Proceedings**

Advanced Materials for Optoelectronics-(2005)- Eds. R. Jayavel & K. Kitamura  
 Proceedings of Indo-Japan Workshop on Crystal Growth and Applications of  
 Advanced Materials for Optoelectronics, Vijay Nichole In prints P.Ltd. Chennai.