

# ANNEXURE-I

## P. NATARAJAN

### Address :

Emeritus professor,  
National Centre for Ultrafast Processes,  
University of Madras,  
Taramani Campus,  
Chennai - 600 113.

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### Personal Data:

Full Name : Paramasivan Natarajan

Date of Birth : September 17, 1940

Marital Status : Married - Two children

### Education:

University of Southern California, U.S.A.	Ph.D. Chemistry	1971
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Banaras Hindu University, Varanasi, U.P.	M.Sc. Chemistry	1963
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University of Madras	B.Sc. Chemistry	1959
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## **Professional Experience:**

Department of Inorganic Chemistry, University of Madras.	Senior Professor and Head	1998 - 2001
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<b>Member - Syndicate University of Madras Nominated by Her Excellency Governor of Tamil Nadu</b>		<b>1998 - 2001</b>
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Department of Inorganic Chemistry, University of Madras.	Professor and Head	1982 - '98
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<b>Central Salt &amp; Marine Chemicals Research Institute, Bhavnagar-364 002, Gujarat, India</b>	<b>Director (On -lien from University of Madras, Madras)</b>	<b>1991 - '96</b>
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Department of Chemistry University of Madras PG Centre, Tiruchirapalli	Professor and Head	1977 - '82
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Department of Physical Chemistry, University of Madras	Reader	1974 - '77
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Wayne State University, U.S.A.	Post-doctoral Fellow (with J.F. Endicott )	1971 - '72
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University of Southern California, U.S.A.	Ph.D. (with A.W. Adamson)	1966 - '71
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University of Southern California, U.S.A.	Teaching Assistant	1966 - '67
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University of Southern California, U.S.A.	Research Assistant	1967 - '70
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University of Southern California, U.S.A.	NSF Traineeship	1970 - '71
JIPMER, Pondicherry	Lecturer	1965 - '66
Banaras Hindu University, Varanasi	CSIR Junior Research Fellow	1964 - '65
Department of Chemistry N.G.M. College, Pollachi	Lecturer	1963 - '64
Government Arts College, Madras.	Lecturer	1959 - '61

### **Research Areas:**

Inorganic Photochemistry, Photophysics of Coordination Compounds;

Flash photolysis studies of organic and inorganic systems using lasers; fast reaction kinetics; Ultrafast Processes.

Photochemistry of Macromolecules; Photochemistry in constrained media like zeolites and silicates.

Solar energy conversion by chemical methods;

Catalysis - Thermal and PhotoChemical

Photoelectrochemistry;

Radiation Chemistry; Pulse Radiolysis.

**Number of Publications** : 107

**Number of Patents** : 4

## Professional Visits Abroad:

- 1996 Deputation as a leader of the Indian Delegation for the joint Indo-Egyptian workshop on Oceanography and Fisheries at Cairo, Egypt (June).
- 1995 Conference and visiting Scientist Poland and U.S.A. 11<sup>th</sup> International Symposium on Photochemistry and Photophysics of Co-ordination Compounds (ISPPCC) at Krakow, Poland and presented a Lecture (July). Institute of Physical Chemistry, Warsaw, Poland
- 1993 Deputation as a leader of 4 member CSIR team to visit R & D labs in France, UK and USA (March-April).
- 1992 XIVth IUPAC Symposium on Photochemistry, K.U.Leuven, Belgium - Presented a paper (July).
- 1990 XIIIth IUPAC Photochemistry conference and IUPAC Photochemistry Commission meeting, Warwick, U.K - Presented a Paper (July).
- 1987 Tokyo Conference on Macromolecular Metal Complexes, Tokyo, Japan - Presented an invited lecture (October).
- 1987-88 Visiting Professor, Radiation Laboratory University of Notre Dame, U.S.A.
- 1986 International Conference on Chemical Conversion and Utilisation of Solar Energy, Paris, France - Presented a Paper (August).
- 1983 Visiting Scientist, Institut de Chimie Physique Ecole Polytechnique Federale, Lausanne, Switzerland (July-August).
- 1983 International Photochemistry Conference - Presented

a paper, Maryland, U.S.A. (August).

- 1981 International Solar Energy Conference, Brighton  
U.K. Commonwealth Foundation Fellow - Presented a  
paper (September).
- 1979-80 Visiting Professor - Radiation Laboratory,  
University of Notre Dame, U.S.A.
- 1976 UNDP Fellowship to U.S.A. to visit various  
Universities for two months (Sep.-Nov.).
- 1966-71 Ph.D. and Post-doctoral work, U.S.A.

### **Honours and Awards:**

DST-Ramanna Fellowship – 2006-2009

Pandit Jawaharlal Nehru Chair, University of Hyderabad, 2004

Acharya P.C.Ray Memorial Award 1999 – Indian Chemical Society

Sir M. Visweshwaraiah Chair visiting Professor, University of Mysore, 1999

Fellow of the Indian Academy of Sciences

Fellow of the Indian National Science Academy

Fellow of the International Union of Pure and Applied Chemistry

Shanti Swarup Bhatnagar Prize in Chemical Sciences - 1984

Best Teacher Award - Tamil Nadu Government - 1984

U.G.C. National Lecturer 1986 - '87

Fellow of the Tamil Nadu Academy of Sciences

Fellow of Society of Bio-Sciences

Fellow of Gujarat Academy of Sciences

U.G.C. National Fellowship 1989 - '91

Sigma XI - Scientific Research Society

**Endowment Lectures and Chair Positions:**

Pandit Jawaharlal Nehru Chair, University of Hyderabad, 2004

UGC- D.C.Kothari Endowment Lecture, Pondicherry Central University, 2003

Acharya P.C.Ray Memorial Award 1999 – Indian Chemical Society

Sir M.Visweshwaraiah Chair visiting Professor University of Mysore, 1999

Jawaharlal Nehru Birth Centenary Lecture Award, Indian National Science Academy – 1998.

Machado Endowment Lectures - Madurai Kamaraj University, 1987.

Lourdou Yeddanapalli Memorial Lecture - University of Madras, Loyola College

**Membership in Professional Societies:**

International Union for Pure and Applied Chemistry - Photochemistry Commission, 1986 - '91 and 1991 - '93.

Commission on Spectrochemical and other Optical Procedures for Analysis (V.4), 1998 - 2000.

American Chemical Society

New York Academy of Sciences

Editorial Board, Indian Journal of Chemistry, 1986 - '91

Editorial Board, Proceedings of Indian Academy of Sciences - Chemical Sciences 1986 - '89

**Research Supervisions:**

M.Phil. - Five (Degree awarded)

Ph.D. - Twenty eight (Degree awarded)                      Two (Under Supervision)

### **Sponsored Research Projects Undertaken:**

U.G.C. Project "Photochemistry of Coordination Compounds"

-Rs.1.64 lakhs - 1977 - '80.

D.S.T. GRS Project "Investigation of Photogalvanic

Potentials" - Rs.9.67 lakhs - 1979 - '82.

D.S.T. SERC Thrust Area Programme "Electron Transfer Reactions

of Coordination Compounds" - Rs.15.8 lakhs - 1983 - '86.

C.S.I.R. Project "Photodegradation of Monomeric and Polymeric Systems"

- Rs.0.50 lakh.

U.G.C. COSIST Programme to Strengthen the Infrastructure of

the Department of Inorganic Chemistry - Phase I - Rs.49.1

lakhs - 1985 - '90.

U.G.C. COSIST Programme to Strengthen the Infrastructure of

the Department of Inorganic Chemistry - Phase II - Rs.50.0

lakhs - 1991 - '96.

DST SERC Thrust Area Programme, "Study of Excited States in

Chemistry and Biology" Rs.13.8 lakhs - 1987 - '91.

DST SERC Thrust Area Programme, "Photochemistry of mono

and dinuclear complexes of first row transition metals and

complexes of unusual oxidation states" - Rs.16.276 lakhs - 1991 - '94.

DST SERC Project "Studies on the photochemistry of macrocyclic

complexes of nickel, manganese and chromium and their applicatons"

- 31.00 lakhs - 1998-2001.

DST supported "National Centre for Ultrafast Processes" under IRPHA

Programme - 1997-2002 - 3.11 crores (State Govt. contribution 100.00 lakhs)

DST SERC project “ Photophysics and Photochemistry of Ni(II) and Co(III) complexes in zeolites in presence of organic dyes and semiconductor nanoparticles”-20 .0 lakhs-2001-2004

DST supported “ Femtosecond upconversion” under IRPHA programme-75 .0 lakhs- 2003-2005

DST – Ramanna Fellowship – 2006-2009 – Rs.40.20 lakhs

### **Conferences, Seminars and Workshops Organised:**

1. Director of the UGC sponsored All India Winter School on "Recent Trends in Photochemistry" - December 1983 - First ever course conducted on the topic.
2. Director of the National Seminar conducted on "Advances in Photochemistry and Applications" - February 1985.
3. Convener of the seminar "Photochemistry, Laser Chemistry and Photobiology - Fundamentals and applications" held during January 7 - 9, 1991.
4. Director of UGC winter school on "Fast Reactions in Chemistry" held during January 10 - 24, 1991.
5. Chairman, National Seminar on “Ultrafast Processes in Biology, Chemistry and Physics” March 11-13, 1999.
6. Director of Indian Academy of Sciences sponsored Refresher Course on “Lasers and its Applications in Chemical Sciences” January 19-31, 2004.