



**P. Murugan**  
**Principal Scientist**

### Contact

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### Academic Qualifications

**M.Sc., Ph.D (Physics)**

### Experience

**17 Years**

### Research Experience

**22 Years**

### Additional Responsibilities

- ❖ Served as a board of studies member for Department of Physics, Kalusalingam University, Virudhunagar District
- ❖ Served as a board of studies member for Department of Physics, Yadava College, Madurai
- ❖ Guide for Summer Research Fellows of Academies of Sciences
- ❖ Serving as Joint Secretary, CECRI Staff Club

## Areas of Research

- ❖ Materials design for energy and environmental applications
- ❖ Structural and electronic properties of catalytic clusters, Metal clusters supported oxide surfaces, Exchange-spring magnet, Li-ion Batteries
- ❖ Designing of Surface and Interfaces
- ❖ Electronic Structure calculations
- ❖ High Performance Computing Systems and Machine Learning

## Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	PhD	4	4
Projects	PG	5	0

## Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books/chapters/ monographs/manuals
65	30	0	40	2

## Funded Research Projects

### Ongoing Major Research Projects

S.No	Title & Role	Funding Agency	Amount (Rs. In lakhs)	Duration
1.	Exploring Alternative Materials for Anode of Lithium Ion Battery by First Principles Calculations	DST-SERB	29.2	3 Years

## Completed Major Research Projects

S. No.	Title& Role	Funding Agency	Amount (Rs. In lakhs)	Duration
1	Nanostructures of Metal Chalcogenides for Catalytic and Electrochemical Applications - First Principles Approach	DST	13.2	3 years
2	First principles study on local atomic structure, magnetic ordering and interface effects in exchange coupled multilayer systems	DRDO	14.9	3 years
3	Centre for excellence for computational chemistry : An integrated tool for multi-scale simulation to design materials, process and simulation of molecule recognition process in Biology (NWP-56)	CSIR	8.0	2 years
4	TAPSUN – Technology and Products for Solar Energy Utilization through Networks (Member)	CSIR	6800	5 years
5	A Multi-Scale Simulation and Modeling Approach to Designing Smart Functional Materials for use in Energy, Electrochemistry and Bio-mimetics (MSM) (Co-PI)	CSIR	129	5 years
6	Dye Sensitized Solar Cell (DSC) – Experimental and Theoretical Approach (member)	MNRE	200	5 years

### Patents

1. NIL

### Distinctive Achievements / Awards

- ❖ **JST – Post doctoral fellow (2003-07).**
- ❖ **Qualified** UGC-CSIR LS 2001
- ❖ **Qualified** Graduate Aptitude Test in Engineering (GATE 1996)
- ❖ Fellow of the Academy of Sciences, Chennai
- ❖ DST-Finland visiting Fellow

## Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized: 4

## Events Participated

### Conferences / Seminars / Workshops:

International Seminars: 70+

National Seminars: 50+

## Membership in Professional Bodies

- ❖ The Society for Advancement of Electrochemical Science and Technology (SAEST–Life member)
- ❖ Materials Research Society of India (Life member)
- ❖ Magnetic Society of India

## Resource persons in various capacities

Number of Invited / Special Lectures delivered: More than 40

## Others

1. No. of PhD Thesis Evaluated: more than 10
2. No. of PhD Public Viva Voce Examinations conducted: 7

## Publications

Google Scholar citations: 960\*  
h- Index: 16\*

\*(As on September 2020)