

	<p><b>Name</b> : Dr. A. Leo Rajesh</p> <p><b>mail ID</b> : aleorajesh@gmail.com</p> <p><b>Mobile No</b> : 9444122070</p> <p><b>Designation</b> : Assistant Professor</p>	
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### 1. Skills

Completed Diploma in computer applications with distinction.

Got competent skill in C - Language.

Ability to organize curricular and co- curricular events in a meticulous manner.

### 2. Achievements / Awards / Recognition

- For the papers published in national and international journals and received a citation index of 149 in scopus. h- index :6
- Best paper award in the national conference on “Recent advances in molecular interactions” organized by PSG college of Arts and Science, Coimbatore.

### Global competency contributing to the international standing of the college

Reviewer for Solar Energy Materials

Reviewer for Journal of Materials Science: Materials in Electronics

Energy Sources, Part A: Recovery Utilization and Environmental effects

Reviewer for Journal of Crystal growth

Reviewer for Journal of Visualized Experiments

### Organizing Colloquia (Conference / Workshop / Seminar

National symposium on crystal growth and characterization (Sep – 2005-Loyola college)

Organizing Secretary in National Conference on Advanced Materials (Feb - 2014), Department of Physics, St.Joseph's College, Tiruchirappalli- 02.

Organizing Secretary in National Conference on Advanced Materials (Oct - 2016), Department of Physics, St.Joseph's College, Tiruchirappalli- 02.

Joint Organizing Secretary in International Conference on Advanced Materials (Dec - 2017), Department of Physics, St.Joseph's College, Tiruchirappalli- 02.

#### 4. Consultancy

Registered guide for M.Phil candidates in Alagappa University, Karaikudi.

#### 5. Research – Publications (International / National / Regional)

S.NO	Name & Title of the Paper	Journal Name, Year, Vol. , Page .No and ISSN or ISBN
<b>2017 – 2018</b>		
1	Effect of Zn/Sn molar ratio on the microstructural and optical properties of $Cu_2Zn_{1-x}Sn_xS_4$ thin films prepared by spray pyrolysis technique	Physica B: Condensed Matter, 2018, 533 and 0921-4526

**2016-2017**

1	Growth and Characterization of L-Glycine thourea nonlinear optical single crystal for optoelectronic applications	Journal of Material Science: Materials in Electronics, 2017, 28 and 1573-482X
2	Investigating the effects of solvent for the preparation of CuSbS <sub>2</sub> nanoparticles by solvothermal method	AIP Conference Proceedings, 2017, 1832 and 1551-7616
3	Solution processed p-type Cu <sub>2</sub> ZnSnS <sub>4</sub> thin films for absorber layer	Journal of Inorganic and Organometallic Polymers and Material, 2017, 27 and 1574-1451
3	Effect of precursor on the efficient formation of ZnS thin films for buffer layer	International Research Journal of Engineering and Technology, 2017,4 and 2395-0096
4	Synthesis and characterization of ZnS nanostructured thin films using chemical spray pyrolysis	International journal for research in science engineering and technology, 2017, 4 and 2395-0096
5	Growth and characterization of L-Glycine Sodium Nitrate single crystal for electro-optic application	Internatioanl Journal of Scientific Research in Science and Technology , 2017, 3 and 2395-602X
6	Synthesis and characterization of Cerium doped CaMnO <sub>3</sub> nanoparticles	Internatioanl Journal of Scientific Research in Science and Technology ,2017,3 and 2395-602X

7	Non-vacuum based preparation of heterojunction thin film layers for photovoltaic application	Internatioanl Journal of Scientific Research in Science and Technology, 2017,3 and 2395-602X
8	Sphere-like CuSbS <sub>2</sub> nanoparticles synthesized by solvothermal method for photovoltaic application	Internatioanl Journal of Scientific Research in Science and Technology, 2017,3 and 2395-602X
9	Role of ZnO as a transparent layer in thin film solar cell using spray pyrolysis technique	Internatioanl Journal of Scientific Research in Science and Technology, 2017,3 and 2395-602X
10	Temperature dependent solvothermal synthesis of Cu-Sb-S nanoparticles with tunable structural and optical properties	Materials Research Bulletin, 2017, 95 and 0025-5408

11	Growth and characterization of L-Alanine sodium nitrate single crystal for second and third order NLO applications	International journal for research in science engineering and technology, 2016, 3 and 2394-739X
12	Synthesis, Growth and characterization of NLO single crystal: L-Histidine tetrafluoroborate	Journal of Chemical and Pharmaceutical Sciences, 2016,9 and 125-128
13	Depth Wise Radiological Analysis of Sediment Sands in Cauvery and Kollidam Rivers in Tiruchirappalli District Tamilnadu , India	International Journal of Scientific Research in Environmental Sciences, 2016,4(1) and 2322-4983

14	Crystal growth and DFT insight on sodium para-nitrophenolate para-nitrophenol dihydrate single crystal for NLO applications	Journal of Molecular Structure, 2016, 1125 and 0022-2860
15	Synthesis, growth and characterization of L-Alanine Potassium Chloride single crystal: a phase-matchable semi-organic material for second and third order NLO applications	Journal of Material Science: Materials in Electronics, 2016,28and 0957-4522
16	Synthesis and characterization of organic nonlinear optical material: urea para-nitrophenol	Journal of Material Science: Materials in Electronics, 2016,27 and 0957-4522
17	Synthesis and characterization of semi-organic nonlinear optical material: Sodium para-nitrophenolate para-nitrophenol dihydrate	Optik, 2016, 127 and 0030-4026
	<b>2015-2016</b>	
1	Synthesis and Characterisation of Cu <sub>2</sub> ZnSnS <sub>4</sub> nanoparticles by Solvothermal Method	International Conference on Nanomaterials and Nanotechnology, 2015 and 978-93-85436-76-5
2	Synthesis, Structural, Optical, Mechanical and Electrical Properties of Semi-Organic Nonlinear Optical Material: Lithium Para-Nitrophenolate Trihydrate	Journal of Chemical and Pharmaceutical Sciences, 2015, special Issue 11 and 0974-2115
3	Effect of annealing on cobalt oxide nanoparticles for concentrated solar power system	Journal of Chemical and Pharmaceutical Sciences, 2015, special Issue 11 and 0974-2115

4	The post annealed effect on the optical properties of Cu <sub>2</sub> ZnSnS <sub>4</sub> Nanomaterials	International Journal on Applied Bioengineering, 2015, 9 and 0973-9084
5	Synthesis, structural, spectral and optical characterization of Barium Bis-Paranitrophenolate paranitrophenol Tetrahydrate (BBPT) NLO single crystal	International Research Journal of Engineering and Technology, 2015, 2 and 2395-0072

**2014-2015**

1	The influence of deposition temperature in the photovoltaic properties of spray deposited CZTS thin films	Solar Energy.2014,14 and 038092X
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**2012-2013**

1	The influence of Deposited Temperature in the Photovoltaic properties of spray Deposited CZTS thin film	Solar Energy (accepted for publication)
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**2011-2012**

1	Growth and characterization of novel semi organic nonlinear optical crystals of L	
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**2009 -2010**

1	“Growth and characterization of non- linear optical benzoyl glycime single crystal”	Convergence – vol- 6, No. 1-4 PP 21-24(2004)
2.	Growth and spectroscopic investigations on sodium paranitro phenolate dehydrate (NPNa) single crystal	Convergence – vol- 7, No. 1-4 PP 59-64(2005)
3.	“ Sodium paranitro phenolate dehydrate : A novel semi organic material for NLO applications”	Convergence – vol- 5, No. 1-4 PP 29-39(2003)
4	“ Growth and characteriztaion of a new non – linear optical semi organic lithium paranitro phenolate trihydrate single crystal”	J.Crystal growth, vol- 262, pp 531-535 (2004)

5	“ Growth and solvent effects of a promising non-linear optical sodium paranitro phenolate dehydrate single crystal”	J.Materail science and Technology, vol- 20 (5), PP 505 (2004)
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### Projects under funding (Completed / Ongoing)

S.No	Title of the project	Type	Status	Funding Agency	Duration	Amount	Year
1.	Fabrication of eco-friendly and cost effective thin film solar cell with an optimized Cu <sub>2</sub> ZnSnS <sub>4</sub> material	MA	O	UGC-DAE CSR Kalpakkam	3 Years	7,68,600	2015

### Ph D Supervised

S. No.	Scholar's Name	Title of the Thesis	Declaration
1	S. Thiruvenkadam	Studies on Spray Deposited Cu <sub>2</sub> ZnSnS <sub>4</sub> and CuSbS <sub>2</sub> Thin Films for Photovoltaic Application	Awarded
2	R. HARIPRASATH	Environmental Radiation In And Around Trichy District	Awarded
3	S.Selvakumar	Investigation on the Growth and Characterization of para-nitrophenoxide Derivative Single Nonlinear Optical applications	Awarded



### 9. Ph D Under Supervising

<b>S. No.</b>	<b>Scholar's Name</b>	<b>Title of the Thesis</b>	<b>Declaration</b>
1	Arockia Avila	Studies on the growth and characterization of amino acid based nonlinear optical single crystals for electro –optic applications	Thesis Submitted
2	Bincy John	An Investigation on the role of solvothermal synthesis and non-vacuum based deposition of cu-sb-s nanoparticles as an absorber material in solar cell applications.	Thesis Submitted
3	G. Genifer Silvena	Investigation on Optimizing Cu <sub>2</sub> ZnSnS <sub>4</sub> and ZnS Layered Thin Films Prepared by Spray Pyrolysis Technique for Optoelectronic Application.	Thesis Submitted
4	S. Berbeth Mary	Nanoscience.	
5	M. Francis	Crystal Growth	
6	R. Anne Sarah Christinal	Thin Film Photovoltaic Cell	

### 10. Education

<b>Degree</b>	<b>Subject</b>	<b>College, University</b>	<b>Year</b>	<b>Class / Division / Grade</b>
Ph.D.	Physics	Loyola College, Madras University	2006	Highly commended.

M.Phil.	Physics	Loyola College, Madras University	2002	First
M.Sc.	Physics	St. Joseph's College, Bharathidasan University	2000	First

B.Sc.	Physics	Loyola College, Madras University	1998	First
DCA	Computer applications	LIBA- Informatics Center. Loyola College.	1998	Distinction

### 11. Research Thesis

<b>Degree</b>	<b>Thesis / Dissertation</b>
Ph.D	Growth and characterization of semi organic NLO crystals.
M.Phil	Growth and characteristaion of organic NLO crystals.

### 12. In-service Training attended (Orientation / Refreshers)

<b>Course</b>	<b>Place</b>	<b>Date</b>
Orientation Course	Academic Staff College, Pondicherry	20-05-2009 to 16-06-2009
Refresher Course	UGC - Academic Staff College Bharathidasan University, Trichy	2014-11-06

### 13. Technical / Skill Training

Undergone a short term course on “Optical spectroscopy” Conducted by SAIF – IIT , Chennai.

Attended a Workshop on “Communication skills and teaching methods” conducted by Loyola college, Chennai.

Attended a National Seminar on “ Information, communication technologies with human face “ organized by Loyola College, Chennai

<b>14. Books / Manuals / Course Materials created</b>

<b>15. Additional service rendered</b>
Mentor for the 2008 batch students throughout their course.
Mentor for 2012 batch.
Arranged many educational tours for the students and accompanied them for the same.
Serving as a doctoral committee member in parent as well as other institutions
Delivered guest lectures in various renowned institutions.
Acted as a resource person for workshops related to crystal growth and Nanosciences and technology in many institutions.
Mentor for UG class

<b>15. As a member in different capacities helped in conducting</b>
National symposium on crystal growth and characterization (Sep – 2005-Loyola college)
Indep – Member in disciplinary committee for three years – 2009, 2010,2012
Indep – Member in the committee for arranging judges for various events in the year 2011.

## **16. Contribution in Curriculum Development**

Been a part of curriculum development cell for the academic year 2012 – 13.

Framed the syllabus for the subject Nanoscience and Nanotechnology for the PG students.

Offered a paper – Principles of Nanotechnology for M.Phil course(since 2009)

Offered a Paper – In crystal growth for M.Phil course(since 2008)