

## INTERNATIONAL SEMINAR ON RECENT ADVANCES IN CHEMICAL SCIENCE 09-08-2017



The department of Physics and Chemistry jointly organized an International Seminar on Recent Advances in Chemical Science on 09.08.2017. The programme began with Prayer by our students. Prof. Dr. K Venkatramanan, Head, Department of Physics delivered the welcome address. Prof. Dr. G. Srinivasu, Registrar of our University delivered the Presidential Address. Our Registrar and Prof. K.C. Srinivasu, Director of Advanced Research Centre honoured the Chief Guest with the shawl and memento. Prof. K.C. Srinivasu, Former Scientist, IGCAR Kalpakkam and Director of Advanced Research Centre felicitated the gathering. Dr. K. Sivakumar, Head, Department of Chemistry introduced the Speaker Prof. Dr. P.V. Ramachandran, Professor of Organic Chemistry, Purdue University delivered his keynote address on the topic "Amino boron and Applications". Prof. Dr. K. Sivakumar proposed vote of thanks. The programme concluded with National anthem.

## RESEARCH COLLOQUIUM 13.10.2017



The department of Physics conducted Research Colloquium, an activity under the banner of Physics Society on 13.10.2017 at 12pm at Physics Research lab. Our Head, Prof. Dr. K. Venkatramanan initiated the seminar and Prof. C.V. Venkatakrishnan acted as a Chairperson. In the colloquium, 1 year M.Sc Students gave presentations on various topics and the details of presentation are given below:

- ★ D. Anbukani (Agrophysics)
- ★ S. Kanimozhi (Bullet Train)
- ★ S. Sharmila (Reusable Lunch Vehicle)
- ★ B. Logeswaran (3d Scanner and Printer)

## A. PAPER PRESENTED BY THE STUDENTS :

S.No	NAME OF THE STUDENT	PAPER PRESENTATION	PLACE	DATE
1	J.Murali (M.Phil)	A study of thermal and acoustic properties of Disodium tartrate	ICFM-2017, Dept. of Physics, SCSVMV	02/03-03/03/2017
2	Shantanu Patra (II-M.Sc)	An investigation of optical and mechanical properties of doped Thiourea (TUAC) single crystals	ICFM-2017, Dept. of Physics, SCSVMV	02/03-03/03/2017
3	Shantanu Patra (II-M.Sc)	Optical and thermal properties of doped KDP crystal	ICFM-2017, Dept. of Physics, SCSVMV	02/03-03/03/2017
4	Shantanu Patra (II-M.Sc) & R.Kanimozhi (I-M.Sc)	Growth and characterization of a non-linear optical crystal: Thiourea doped Cadmium chloride single crystal	ICFM-2017, Dept. of Physics, SCSVMV	02/03-03/03/2017
5	Shantanu Patra (II-M.Sc)	Studies on non-linear optical single crystal of Alizarine doped BHT	ICFM-2017, Dept. of Physics, SCSVMV	02/03-03/03/2017
6	Shantanu Patra (II-M.Sc)	Growth and characterization of KDP doped single crystal	ICFM-2017, Dept. of Physics, SCSVMV	02/03-03/03/2017
7	Durgesh Kumar Nayak (II-M.Sc)	Homo -Lumo Analysis of Dasatinib	ICFM-2017, Dept. of Physics, SCSVMV	02/03-03/03/2017
8	Amrathan (II-M.Sc)	Optical and morphological study of ZnS nanoparticles and Ceria based bilayer films by hydro thermal method	ICFM-2017, Dept. of Physics, SCSVMV	02/03-03/03/2017
9	P.Pushpamangai (II-M.Sc)	Vibrational Spectroscopic Investigations of 2,4 Dimethoxyacetophenone	ICFM-2017, Dept. of Physics, SCSVMV	02/03-03/03/2017
10	A.Jeelan	Green synthesis of Silver nanoparticles using extracts from dry and fresh euphorbia hirta leaves - A comparative study	ICFM-2017, Dept. of Physics, SCSVMV	02/03-03/03/2017

## B. PAPER PRESENTED BY THE STUDENTS :

S. No	Name of the student(s)	Title	Place	Date
1	S.Janarthanan (M.Phil - PT)	Stability studies on Silver nanoparticles synthesized by green method using Phyllanthus Niruri and Solanum Nigrum leaf extracts	International Conference on Nano- A New World of Science organized by School of Science Vidya Sagar Women's College, Chengalpatt	22/09/2017
2	E.Dharmu (M.Phil - PT)	Morphology studies on Silver nanoparticles synthesized by green method using Tridax Procumbens and Ocimum Teniflorum leaf extracts	International Conference on Nano- A New World of Science organized by School of Science Vidya Sagar Women's College, Chengalpatt	22/09/2017
3	R. Kanimozhi and S.Durgadevi (II-M.Sc)	Studies of Thiourea doped Cadmium Chloride (TCC) single crystal	4 <sup>th</sup> National Conference on Materials for Modern world - organized by Dept. of Physics, Eswardi Engg. College, Chennai	14/09/2017
4	Sweety (M.Phil) and S.Durgadevi (II-M.Sc)	Optical and Thermal Properties of dye doped Tyrosine single crystal	4 <sup>th</sup> National Conference on Materials for Modern world - organized by Dept. of Physics, Eswardi Engg. College, Chennai	14/09/2017
5	Thirunavakarasu (M.Phil - PT)	Experimental and theoretical vibrational study of $\alpha$ -acetyl- $\gamma$ -butyrolactone	4 <sup>th</sup> National Conference on Materials for Modern world - organized by Dept. of Physics, Eswardi Engg. College, Chennai	14/09/2017
6	R. Kanimozhi (II-M.Sc)	Highest occupied and lowest unoccupied molecular orbital study of 5,7-Dichloroquinolin-8-ol	International Conference on Nano- A New World of Science organized by School of Science Vidya Sagar Women's College, Chengalpatt	22/09/2017
7	R. Kanimozhi (II-M.Sc)	Natural bonding orbital analysis of 5,7-Dichloro-8-Hydroxyquinoline	International Conference on Nano- A New World of Science organized by School of Science Vidya Sagar Women's College, Chengalpatt	22/09/2017

## PAPER PUBLISHED BY THE STUDENTS

S.No	Name of the student(s)	Title	Name of the Journal	ISBN / ISSN No	Year	Page No
1	S.Janarthanan (M.Phil - PT)	Stability studies on Silver nanoparticles synthesized by green method using Phyllanthus Niruri and Solanum Nigrum leaf extracts	Proceedings of International Conference on Nano- A New World of Science	ISBN :978 93 81899 81 6	2017	96-100
2	E.Dharmu (M.Phil - PT)	Morphology studies on Silver nanoparticles synthesized by green method using Tridax Procumbens and Ocimum Teniflorum leaf extracts	Proceedings of International Conference on Nano- A New World of Science	ISBN :978 93 81899 81 6	2017	101-105
3	R. Kanimozhi and S.Durgadevi (II-M.Sc)	Studies of Thiourea doped Cadmium Chloride (TCC) single crystal	Proceedings of 4 <sup>th</sup> National Conference on Materials for Modern world	ISBN : 9788189843168	2017	76-82
4	Sweety (M.Phil) and S.Durgadevi (II-M.Sc)	Optical and Thermal Properties of dye doped Tyrosine single crystal	Proceedings of 4 <sup>th</sup> National Conference on Materials for Modern world	ISBN : 9788189843168	2017	83-87
5	Thirunavakarasu (M.Phil - PT)	Experimental and theoretical vibrational study of $\alpha$ -acetyl- $\gamma$ -butyrolactone	Proceedings of 4 <sup>th</sup> National Conference on Materials for Modern world	ISBN : 9788189843168	2017	67-75
6	R. Kanimozhi (II-M.Sc)	Highest occupied and lowest unoccupied molecular orbital study of 5,7-Dichloroquinolin-8-ol	Proceedings of International Conference on Nano- A New World of Science	ISBN :978 93 81899 81 6	2017	34-37
7	R. Kanimozhi (II-M.Sc)	Natural bonding orbital analysis of 5,7-Dichloro-8-Hydroxyquinoline	Proceedings of International Conference on Nano- A New World of Science	ISBN :978 93 81899 81 6	2017	38-42

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## DEPARTMENT OF PHYSICS

## SRI CHANDRASEKHARENDRA SARASWATHI VISWA MAHAVIDYALAYA

(University u/s 3 of UGC Act 1956) (Accredited with "A" by NAAC)  
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# Spectra

Annual Newsletter of the Department of Physics

Volume 2

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*Sri Jayendra Saraswathi Swamigal*

&

*His Holiness*

*Sri Vijayendra Saraswathi Swamigal*

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## About the department

Department of Physics serves with the dynamic mission to achieve excellence in both academic and research perspectives. Physics acts as the core of Science, as most of the inventions are brought forth by it. The department has awarded 12 Ph.Ds and more than 150 M.Phil degrees. The teachers and scholars of the department have published around 130 research articles so far. The research activities of the department include synthesis of nano particles and characterization, study of molecular structure and composition through spectroscopic analyses, molecular interaction studies through ultrasonic investigation, synthesis and characterization of thin films by physical vapour deposition, crystal growth techniques, mineralogical and heavy metal analyses, etc. Thin film coating unit (PVD), Gaussian 09 software, Brookfield Viscometer, Sieve Shaker and Ultrasonic interferometer for solids and liquids are available for research. The department of Physics extends its instrumentation facilities to other departments and institutions.

### USP of the Department

- ◆ UG, PG and research degrees
- ◆ Qualified and research oriented faculty
- ◆ Well stocked department Library
- ◆ Funding from Government of India
- ◆ Well equipped laboratory
- ◆ Advanced instrumentation techniques
- ◆ Publication in high impact journals
- ◆ Research consultancy services
- ◆ Seminars and workshops by experts

### Opportunities

- ◆ Scientific Positions (IGCAR, IISc, IITs, BHEL, BARC, BSNL....)
- ◆ Teaching Positions (Universities, Colleges & Schools)
- ◆ Research Positions (Universities & Colleges)
- ◆ Various Jobs in Public / Private sectors (IT / Banking)

### Courses Offered :

B.Sc., M.Sc., M.Phil., Ph.D.,

### Research Areas :

Applied Spectroscopy, Computational Spectroscopy, Crystal growth, Nano Technology, Thin Films, Ultrasonics.

This newsletter features various activities of the department of Physics for the academic year 2016-17

### NATIONAL SCIENCE DAY (NSD)-(21.03.2016)



National science Day was celebrated by the faculty of science on 21.03.2016 at SCSVMV Campus. The Programme started at 3.00 p.m. Prof.Dr. K. Venkatramanan, Professor and Head, Dept. of Physics welcomed the gathering and explained the importance of celebrating national science day. Prof. Dr. S. Balaji, Dean, Faculty of Science addressed the gathering with inspiring speech. The chief guest of the function Prof. Dr. M.N. Ponnuswamy, Emeritus Professor, Department of Crystallography and Biophysics, University of Madras delivered special address. Prof.Dr.K.Sivakumar, Head, department of Chemistry proposed vote of thanks. Around 120 students participated in the function.

### FIFTH NATIONAL WORKSHOP ON INSTRUMENTATION TECHNIQUES IN PHYSICS (PINTECH' 16) 26.10.2016

The Department of Physics organised FIFTH NATIONAL WORKSHOP ON INSTRUMENTATION TECHNIQUES IN PHYSICS [PINTECH' 16] on 26-10-2016. Prof.Dr.K.Venkatramanan, Convener - PINTECH'16 and Head, Department of Physics welcomed the gathering. Dr.K.Rajalakshmi, Organizing Secretary - PINTECH'16 and Asst. Prof. of Physics narrated the objectives of the workshop. Prof. Dr. V.S.Vishnu Potty, Hon'ble Vice-Chancellor of our University delivered the Presidential address. The Chief Guest of the function Dr.S.Uhanna, Professor of Physics, Sri Venkateswara University, Tirupati addressed the gathering and inaugurated the workshop. Prof. Dr.S.Balaji, Prof & Dean (Faculty of Science) felicitated the gathering. The first keynote address was delivered by Dr.S.Uhanna and the second keynote address was delivered by Dr.K.J.Sreeram Principal Scientist, Head-Integrated Chemical/Physical Testing Lab, Scientist-in-charge - Centralized Sophisticated Instruments Laboratory, CSIR-Central Leather Research Institute, Chennai,



### VIGILANCE AWARENESS WEEK(31-10-2016-05-10-2016)



The department of Physics and NSS Wing of SCSVMV jointly observed "Vigilance Awareness Week" on 09.11.2016. Prof.Dr.K.Venkatramanan, Head, Department of Physics welcomed the gathering and explained the procedure to take oath online. Dr.M.Sundarrajan, Assistant Professor of Physics and NSS Programme Coordinator briefed the objectives of this programme. Prof.Dr.G.Srinivasu, Registrar, SCSVMV, delivered the Presidential address. The Chief Guest Shri.T.Sivapatha Sekaran, Deputy Superintendent of Police, Vigilance and Anti-Corruption, Kanchipuram addressed the gathering on the theme

"Essentials of Vigilance Awareness towards Building the Mightier Nation". Special address was delivered by Shri.V.Ganesan, Inspector of Police, Vigilance and Anti-Corruption, Kanchipuram and he inspired with his great words the need to eradicate Corruption in building stronger India. Prof. C.V.Venkatakrishnan, Professor of Physics, gave a motivating speech on eradicating corruption and insisted that it is the need of the day.

### INAUGURATION OF PHYSICS SOCIETY 15-11-2016

The inauguration of PHYSICS SOCIETY and prize distribution for the winners of IMPULSE-2016 was held on 15-11-2016 at 2.15 pm at Physics Laboratory.

Ms.S.Vasanthi and Ms.C.Padmavathy of I B.Sc. rendered prayer song. Welcome address was given by the President of the Physics Society Mr.Shantanu Patra of II M.Sc (Physics). Faculty advisor to the Physics Society, Prof.C.V.Venkatakrishnan explained the need for the development of a new Physics Society "for the students by the students".

He also introduced the office bearers of the Physics Society for the academic year 2016-2017. Prof.Dr. K.Venkatramanan, Head of the department addressed the gathering and congratulated the office bearers of the society. The Secretary of the Physics Society Mr.B.Prasanna of I M.Sc (Physics) announced the forthcoming activities of the society. A seminar on the topic "Physics of Everyday Life" were presented by Ms.M.Pavithra of I B.Sc and Mr.P.Boopathy Rajan of II B.Sc (Physics).



### PARENT TEACHER MEETING (23-11-2016)



Parent-Teacher meeting was conducted on 23rd November 2016 by the department of Physics. Around 50 parents of UG and PG students attended the meeting. Individual interaction with faculty members was arranged subject wise for discussing academic and personal matters of their wards. Suggestions were exchanged for better improvement of students in academic and personal disciplines. A common meeting with faculties and parents was convened by Prof.C.V. Venkatakrishnan on behalf of the head of the department. Various courses and research facilities available at the department and achievements of the department were explored to the parents.

### INTERNATIONAL WORKSHOP ON FUNCTIONAL MATERIALS [IWFWM 2016] 29-11-2016.

An International workshop on Functional Materials was organised by the Department of Physics, SCSVMV University on 29th November 2016. Prof. Dr. K.Venkatramanan, Convener and Head, Dept. of Physics welcomed the gathering. Prof. V.Ragavendran, Organizing secretary explained the objectives of the workshop. Prof. Dr.V.S.Vishnu Potty, Hon'ble Vice Chancellor of the University presided over the function. Prof.Dr. S.Balaji, Dean (Science) felicitated the gathering. Prof. Dr. A.L.Roy Vellaisamy, Department of Physics and Materials Science, City University of Hong Kong, Hong Kong delivered a talk on "Functional materials for energy harvesting and Opto-electronics" and Prof. Dr.K.K.R. Datta, SRM Research Institute, SRM University, Chennai delivered a talk on "Functional Nanomaterials: Fluorographene Hybrids and Yellow Emitting Carbon Dots". Prof. V.Ragavendran, Organizing secretary - IWFWM 2016 proposed vote of thanks. Around 120 participants comprising of students, research scholars and faculty members from various academic and research institutions participated and benefitted from the workshop.



### INTERACTION AND RESEARCH CONSULTANCY WITH PROFESSORS FROM KASETSART UNIVERSITY AND KING MONGKUT UNIVERSITY, THAILAND (10.12.2016)

A meeting was arranged for interaction with the delegates from Kasetsart University, Thailand and King Mongkut's University of Technology, Thailand who visited our University campus on 10.12.2016. Prof.Dr.K.Venkatramanan, Head of our department welcomed the delegates Prof. Dr. Sirikanjana Thongmee, Department of Physics, Kasetsart University, Bangkok, Thailand, Prof. Dr. Trinet Yingsamphancharoen, Department of Welding Engineering



### INTERNATIONAL SEMINAR ON ASTROPHYSICS (ISAP-2017) (10-01-2017)



An International Seminar on Astrophysics was organized by the department of Physics 10.01.2017. Prof.Dr.K.Venkatramanan, Head of our department welcomed the gathering. Prof.Dr.G.Srinivasu, Registrar of our University honored the guest and delivered the presidential address. Prof. Dr. S. Balaji, Dean, Faculty of Science, SCSVMV Sri. Jayaraman Ravindran, Finance Officer of our university gave their felicitation. Prof. V. Ragavendran, Organizing Secretary - ISAP 2017, Assistant Professor of Physics, SCSVMV introduced the chief guest to the gathering. Prof. Dr. Vijaysarathy Bharadwaj from Astrophysics and Cosmology Research Unit, University of KwaZulu-Natal, Durban, South Africa was the chief guest of the programme.

He delivered a keynote address on the topic "An introduction to Astrophysics: From planets to galaxy clusters". Around 100 students of our University participated in the seminar. Prof. V. Ragavendran, Organizing Secretary - ISAP 2017, Assistant Professor of Physics, SCSVMV proposed vote of thanks.

### WELLNESS TRAINING PROGRAMME ORGANIZED BY DEPT OF PHYSICS IN ASSOCIATION WITH SJS MEDICAL CENTRE

A Wellness Training programme was organized by the Department of Physics, SCSVMV University in association with SJS Medical centre on 17th February 2017 for the benefit of UG and PG students of department of Physics. Prof. C.V.Venkatakrishnan, Professor, Dept. of Physics welcomed the gathering and explained the objectives of the workshop. Mr.Aruraj, Physical trainer from Kh3 Wellness centre delivered a talk on "How to make oneself Physically fit" followed by training sessions to the UG and PG students of the department of Physics. Prof. V.Ragavendran, Organizing secretary of this programme proposed vote of thanks. Around 80 participants comprising of students and faculty members from the department participated and benefitted from the workshop. Prof.V.Ragavendran, Asst. Prof. of Physics and Dr.Sainathan, Medical officer, SJS medical centre of SCSVMV University acted as organizing secretaries and made arrangements for the workshop.



### INTERNATIONAL CONFERENCE ON FUNCTIONAL MATERIALS (ICFM 2017) (02-03-17-03-03-2017)



Prof. Dr. K.Venkatramanan, Head, Department of Physics delivered the welcome address. The Dr.R.Raja, Organising Secretary (ICFM 2017) and Assistant Professor briefed on the objectives of the conference. Prof.Dr.V.S.Vishnu Potty, Vice Chancellor honoured the Chief Guests Prof. Robert Li, Professor & Associate Dean, City University of Hong Kong and Prof.Dr.A.L.Roy Vellaisamy Conference Chair-ICFM 2017, City University of Hong Kong. The Presidential Address was delivered by our Vice-Chancellor. Prof.Dr.G.Srinivasu,

Registrar of our University released the Book of Abstracts-ICFM 2017 and the same was received by the dignitaries. Prof. Robert Li addressed the gathering followed by felicitations by our Registrar, Prof.Dr.S.Balaji, Dean (Science) and Prof.Dr.A.L.Roy Vellaisamy. Prof. K.V.S.N.Murthy (Dean - Education) and Prof.G.Srinivasu (Director-SICAR) attended the inaugural function.

### WELCOME CEREMONY 19/07/2017

Senior students of our department organized Freshers' day on 19th July, 2017, 11 am at Adi Sankara Auditorium to welcome 1 year B.Sc students of our department. All students and faculty members attended the welcome meeting. The function started with prayer by Ms. Srivitha of I year B.Sc Physics. Prof. Dr. K. Venkatramanan, Head of the department welcomed the gathering. He explained the importance and merits of studying Physics and advised the students to concentrate in studies. Newly joined students of our department gave self-introduction. In order to bring out the innate talent of the students, various interesting games and cultural programmes were conducted by senior students. Dr.M.Sundarrajan, Assistant Professor proposed Vote of Thanks and appreciated the students for their excellent arrangements and orderly execution of the programme.



### INAUGURAL FUNCTION (05-07-2017)



The inaugural function of the students admitted into Faculty of Science for the academic year 2017-18 was held on 05.07.2017 at International Library hall around 9.45am. Prof.Dr.S.Balaji, Dean (Science), welcomed the gathering. Prof. V.S.Vishnu Potty, Hon'ble Vice Chancellor delivered Inaugural address. Prof. Dr.G. Srinivasu, Registrar, Sri.G.Ramachandran, CAO, and Sri J.Ravindran, Finance officer felicitated the gathering. Prof.Dr.T.Venugopal, Dean (Arts & Humanities) proposed vote of thanks.

### SPECIAL ACHIEVEMENTS

- ◆ The Department of Physics, SCSVMV received the "The Second Best Department Award" during the Teachers' Day Celebration 2016-2017.
- ◆ Mr. V.Ragavendran, Asst. Prof. of Physics received "Best Teacher award" for the year 2016-2017.
- ◆ Dr.M.Sundarrajan, Asst. Prof. of Physics, Dr. R.Raja, Mrs. J.Suganthi & Dr. K. Rajalakshmi, Assistant Prof. of Physics received "Appreciation award" during the 2016-2017.

