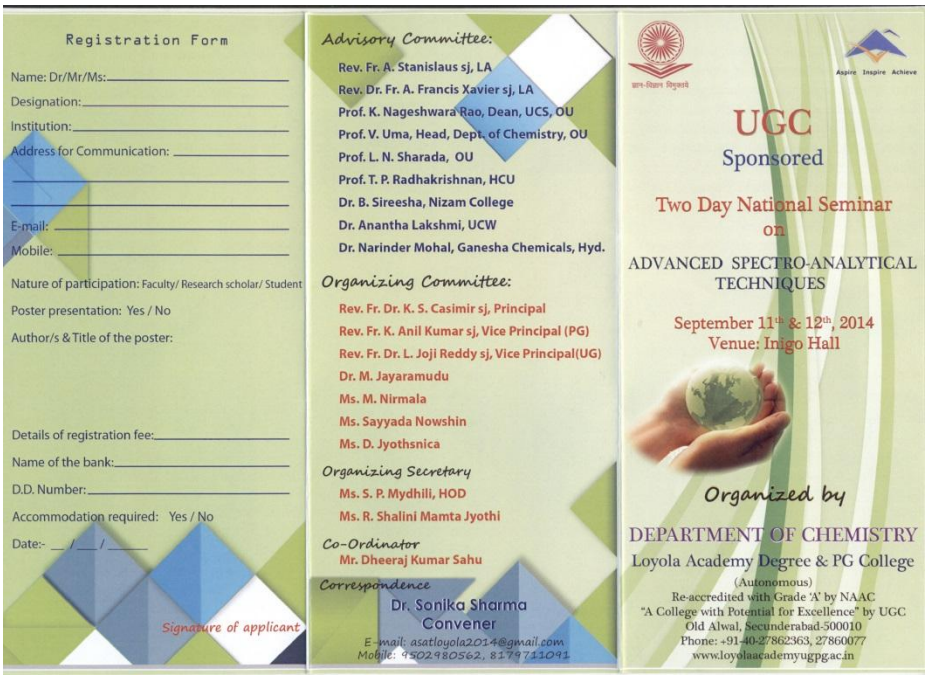
DEPARTMENT OF M.SC. ORGANIC CHEMISTRY

DEPARTMENTAL REPORT 2014-15

I. Departmental Activities:

1. Seminar

a. Concept - Two day U.G.C. sponsored national seminar on "Advanced Spectro Analytical Techniques" on 11 and 12 September, 2014
b. Purpose- To have an exposure to latest developments in nanotechnology
c. Report-
   It included invited lectures by eminent persons from academics and industry followed by poster and oral presentation competitions.
   Participants were research scholars, faculty and students from different parts of the country.
   On the third day a fieldtrip to Prathista Industries Limited was organized.
d. Reviews- This conference was a huge success.
e. Photos.



2. Industrial visit

f. Concept - One day trip for MSc II year students to IICT- Hyderabad on 4 March, 2015

g. Purpose - To have an exposure on latest methods of chemical synthesis and techniques involved in research field

   i. Report- It was a one day trip to IICT- Hyderabad On 11 October, 2018, the students visited IISc- Banglore

   ii. Students gained practical knowledge, learnt various techniques of synthesis used in research, bulk synthesis in pilot plant, Thermo Gravimetric Analysis, probe sonication, pheromone technology and visited upgrading unit, Center for NMR, Nanomaterials Laboratory, Centre for Semio Chemicals and Discovery Laboratory.

   iii. Demo on Various instruments like IR, UV, NMR, GC, HPLC, LCMS, Raman Spectrometer, Mass spectrometer is given by faculty members.

h. Reviews- It was an informative, interesting and a successful visit

i. Photos.

3. Guest Lectures

GL-1

a. Concept - Guest Lecture on "Overview of Analytical Techniques" by Dr. Vum Sharma, Analytical Division, IICT, Hyderabad on 20 September 2014 in PG-15, PG Block.

b. Purpose - To refreshe the students with basic concepts of analytical techniques and enrich them with the latest developments in this field.

c. Report – The lecture included solvent extraction of natural products, introduction on chromatography followed by discussion on High Performance Liquid Chromatography(HPLC) , Gas Chromatography(GC) and hyphenated techniques like GC-MS, LC-MS, LC-MS-MS, SMB and polarography.

d. Reviews- This lecture was informative for both faculty and students

e. Photos.

GL-2

a. Concept - Guest Lecture on Guest Lecture on "Stereochemistry- symmetry of molecules" by Dr. M.Sunitha, Lecturer in Chemistry, Govt. Polytechnic College For Women, Medak, on 18 October 2014 in PG-15, PG Block

b. Purpose - To refresh the students with basic concepts of analytical techniques and enrich them with the latest developments in this field.

c. Report – The lecture included explanation on symmetry elements, point groups and 3-dimensional arrangement of molecules. Three dimensional models were used to illustrate the examples
d. Reviews- Students got a clear idea about the topic.
e. Photos

GL-3

a. Concept- "Fundamentals of Stereochemistry" by Dr. Y.HemaSree, Asst.Professor in Organic Chemistry Nizam College, Basheerbagh, O.U. on 24 January 2015 in PG-15, PG Block
b. Purpose - To impart the students about three dimensional chemistry
c. Report – The lecture included representation of organic molecules by Fischer, Newman, Sawhorse and Wedge projections, their interconversions, organic point groups, optical activity, classification based on optical activity, racemization resolution and so on. Molecular models were used in the lecture along with power point presentation.
d. Reviews- This lecture was informative for both faculty and students
e. Photos.

GL-4

f. Concept-"Student motivation" by Mr. M. Sai Kumar, Analytical executive of Mars International India Pvt Ltd, Hyderabad on 28 February 2015 PG-15, PG Block

g. Purpose - To make students aware about industry expectations, Research, and to motivate them to gear up for career growth

h. Report – The guest speaker shared experience as student and employee. He gave tips to face interviews and motivated students towards career development. He emphasized on practical knowledge to reduce gap between academics and industries. He further discussed about developing creativity, analytical communication and presentation skills, and right approach to face GD, importance of Internal Communication and Career Guidance.

i. Reviews- This lecture was value added session, practical, effective, source of encouragement, awakening consciousness and helping in holistic growth of the students.

4. PTM

a. Concept-"Parents Teachers Meeting on 4 September 2014 PG-15, PG Block
b. Purpose - To interact with parents
c. Report – Parents of six students met lecturers and discussed about the performance, discipline and overall improvement of the students
d. Reviews- This proved to be a good platform to discuss about students with paternts and council the students.

II. Staff Achievements

Mr. Dheeraj Kumar Sahu and Ms. R. Shalini Mamata Jyothi attended a seminar on "Industry-Academia Interface" held at O.U on 6th August, 2014

III. Student Achievements

i. Ms. V.Hiranmayee was awarded Rajiv Gandhi fellow for the year 2014 by JNCASR-Bangalore.

ii. Ms. V.Hiranmayee got consolation prize for her poster " Synthesis Of Novel Composite Material Supported Bimetallic Nanoparticles For Electrocatalytic Applications" in U.G.C. sponsored two day national seminar on "Advanced – Spectro analytical Techniques" on 11-12 Sept. 2014 held in the college.

iii. Ms. V.Hiranmayee, V.Suresh and P. Shiva Nagi Reddy achieved 1st prize in Chem-Quiz at Intercollegiate chemistry exhibition conducted by R.B.V.R.Reddy Womens College on 29th and 30th December 2014.

iv. Ms. V.Hiranmayee and Mr. M. Balakrishna also participated in power point presentation competition in the same event.

v. Five students attended an one day seminar on "Academia-Industry Interface" organized by UCS, Ou on 6 August 2014

IV. Career Placements

Twenty students of M.Sc, II year 2013-2015 batch were placed in different pharma companies GVK, Asian paints, Vansanth, ITC bhadrachalam etc.

V. Research Publications

NA

VI. Book Publications

NA

DEPARTMENT OF M.SC. ORGANIC CHEMISTRY

DEPARTMENTAL REPORT 2015-16

I. Departmental Activities:

1. Seminar

a. Concept - Three day International Conference on "Emerging trends in the synthesis of Nano Particles in Agri Biotechnology–Research and Commercialization" on 25-27 February, 2016 at Loyola Academy.

b. Purpose- To have an exposure on latest methods of chemical synthesis and techniques involved in research field

c. Report- - It included invited lectures by eminent persons from academics and industry followed by poster presentation competition. Participants were research scholars, faculty and students from different parts of the country.

Reviews- Department had organized with great success.

d. Photos.

INVITATION

Preamble

Nanotechnology has started increasing applications to change our lives. It is considered as a generic technology that offers better-built, long-lasting, cost-effective and smart products that will find wide applications in agriculture and food industry. Nano particles are the best Nano materials which have predominant surface effects with at least one of its measured dimensions less than 100nm. Nanotechnologies have already revolutionized the health care, textile industry, information technology and energy sectors but their application in agriculture are meager. The concept of nano particles in agri biotechnology deals with the synthesis of nano materials with specific applications in agriculture and alied sciences.

Chief Guest

Hon'ble Dr. S. Ayyappan
Secretary, DARE & DG - ICAR, Govt. of India, New Delhi

Guests of Honor

Hon'ble Dr. Manmohan Singh
IAS - Principal Secretary, AP

Hon'ble Dr. D. Rama Rao
Present Director - NAARM & Ex. National Director - NAIP

Hon'ble Dr. William Dar
Ex. DG - ICRISAT

Hon'ble Bui Minh Tien
General Director- PVFCCO, Vietnam

Hon'ble Dr. Kodi Isparan Kandasamy
Sr. Vice President, Malaysian Biotechnology Corporation

Hon'ble Dr. P. Gopal Reddy
DVM, PhD, DACVM
Professor & Director - International Relations Tuskegee University, USA

Hon'ble DR. KVSP RAO
Scientist 'G' & Head (IT-eG) - DSIR

Hon'ble Mr. VK Jhaver
Chairman - Tropical Agrosystems India (P) Ltd.

Mentors

Dr. Jagadish Chandra Tarafdar
ICAR Emeritus Scientist

Dr. Ajit Varma,
Vice Chairman, Amity Science, Technology & Innovation Foundation (ASTIF)
Amity University, Uttar Pradesh.

Dr. Sudhir Kochhar
ARS (Rtd.) Ex. ICAR, Former National Coordinator - NAIP (ICAR)

Padmasree Prof. E.A. Siddiq
Honorary Director, Institute of Biotechnology ANGRAU, Ex.DDG - ICAR

Dr. K.R.S.Sambasiva Rao
Rector - Acharya Nagarjuna University

Programme Schedule

Inauguration of Conference & Technical Session-I : 25-02-2016
Technical Session-II : 26-02-2016
Visit to Industry & Valedictory Function at Prathista Industries Limited : 27-02-2016

Organizing Committee

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Rev Fr A. Santiago SJ
Superior

Patrons
Dr. D. Rama Rao
Director - NAARM
Rev Fr J. Thainese SJ
Correspondent
Rev Fr Dr. K.S. Casimir SJ
Principal

President
Dr. KVSS Sairam
CEO - Prathista Industries Limited

Convener
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Acting Principal - Loyola Academy

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HOD - Chemistry
Dr. A. Ravinder
HOD - Food Technology

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Ex.Vice Chancellor, ANGRAU, Hyd.

Dr. N. Sreerama Reddy
Ex. Dean of Agriculture, ANGRAU, Hyd.

Dr. Rajesh K Sharma
Vice President, Prathista Industries Limited

Dr. A. Raja Reddy
Dean of Sciences, Loyola Academy.

Important Dates

Registrations Open : 1st January 2016
Last date for Registration : 15th February 2016
Last date for Abstract/Full Length Research Paper Submission : 23rd January 2016
Confirmation of participation and request for accommodation : 15th February 2016

Registration Fees

Research Scholars / Students : Rs. 500/-
Researchers and Faculty Members : Rs. 3000/-
Industrial and Corporate Delegates : Rs. 5000/-
International Students Scholars : $ 250 / $ 500

NO Spot Registration
Agrinano2015 Exhibition
Exhibition space (3x3 meters) available for display of research activities, products, equipment etc.

Tariff

Govt. Organization, Universities, Research Institutes NGOs, Education Institute. : Rs. 5000/- (including Registration Fee for one person)

Private Institutes, Business Organizations etc. NGOs, Education Institute. : Rs. 20,000/- (including registration fee for two persons)

Remittance of Registration Fee as Bank DD / NEFT of any nationalized bank in favour of Principal, Loyola Academy, Indian Overseas Bank, A/c. No. 171501000001488. IFSC Code: IOBA0001715

For further details contact:

Mr. P. Suresh Kumar, Lecturer in Biotechnology, Loyola Academy Degree & PG College, Secunderabad.
Cell: +91 9701407475, Email ID: nanotech2k16@gmail.com

Mr. A. Somasekhar Reddy, Manager, Prathista Industries Limited, Manjeera Colony, Secunderabad.
Cell: +91 9032723459, Email ID: nanotech2k16@gmail.com

2. Industrial visit

Concept – One day trip to International Advanced Research Centre for Powder Metallurgy & New Materials (ARCI) on 22 January 2015.

e. Purpose - To have an exposure on latest instruments & techniques involved in research field

f. Report-

i. This visit to ARCI gave them an opportunity to practically learn about the various methods of synthesis of nanomaterial's especially cabon materials by Arc discharge, and CVD methods.

ii. Students had an opportunity to see these graphite materials and derivative of graphite materials differing in their shape and strength. Students were taken to centre of nanomaterial where they learnt about various other methods like plasma induction, Electro spinning Aerogel to make nanomaterial and recent developments in Lithium ion batteries.

iii. Last part of visit was made to the department of material testing and characterization. Were we learn about the microscopy like SEM, TEM, XRD, Indentation techniques and sample preparation method for above mentioned characterization methods.

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g. Reviews- We find the trip to be highly useful, motivating to students of M.Sc Organic chemistry

h. Photos.

3. Guest Lectures

GL-1

a. Concept - Guest lecture on "^{13}C NMR Spectroscopy" by Dr. N. J. Subhashini (Assistant professor, O. U) on 5 Aug, 2015 for M.Sc. II year students in PG seminar hall

b. Purpose - To bring an insight into the spectroscopic techniques

c. Report – The lecture started with all the basics of Nuclear Magnetic Resonance and later covered all the important and advanced aspects of Proton and ^{13}C NMR.

d. Reviews- Students found the lecture to be very useful since it enriched their knowledge on NMR with well-illustrated diagrams and all the relevant information.

e. Photos.

GL-2

a. Concept - A Guest lecture on "Asymmetric Synthesis" by Dr. Pavan Kumar (DST, INSPIRE Faculty, IICT, Hyderabad) on 26 September, 2015.

b. Purpose - To introduce students about research in chemistry

c. Report –

   i. The lecture started with Organo catalysis based on asymmetric synthesis. Students were given clear idea about the important factor in designing an organocatalyst and analysis of its applications under different conditions.

ii. They were later introduced to MOLBank concept. Second half of talk was on intellectual property rights, significance of patents and various types of patents

d. Review- The lecture was found to be very interesting and useful to students providing knowledge on the different aspects on asymmetric synthesis and its applications.

e. Photos.

GL-3

a. Concept - A guest lecture on "IR Spectroscopy and Nanomaterials" by Dr. N. V. Venkatraman (Assistant Professor, School of Natural Sciences, MEC, Bahadurpally, Hyderabad) on 07 Nov., 2015.

b. Purpose - To introduce students with use of IR Spectroscopy for structure elucidation by different types of IR spectroscopy and especially attennuated Total Reflection spectroscopy to know the functional group orientation in the molecule

c. Report –
   i. Lecture included latest developments in field and was well illustrated with simple and relevant examples.
   ii. During the second half of the lecture, Dr.Venkatraman, introduced the concept and importance of **Nanomaterials** and different methods of their synthesis; especially **Nano patterning**.
   iii. Brief description of the characterising techniques like atomic force microscopy and Scanning tunnelling microscopy and scanning electron microscopy was also given.

d. Review- Students found the lecture to be very useful, interesting and motivating.

e. Photos.

GL-4

a. Concept - A guest lecture on "Symmetry-Point groups" by Dr. M.Sunitha (Govt. Polytechnic College for Women, Medak) on 27 Feb., 2016.

b. Purpose - To introduce students with symmetry and point groups of molecules

c. Report –
   iv. Lecture included very good explanation from basics of symmetry to point groups withwith suitable illustrations
   v. During the second half of the lecture, the students were given molecular models for practice

d. Review- Students found the lecture to be very useful, interesting and motivating.

e. Photos.

4. **PTM-1**
   a. Concept - Parents Teachers Meeting on 4 September 2015 for M. Sc. First year students
   b. Purpose - To interact with parents and give them feedback on the students
   c. Report – Parents of 25 students attended the meeting and faculty analysed the overall improvement of the students
   d. Reviews- It is a good interactive session

   PTM-2
   e. Concept - Parents Teachers Meeting on 26 March 2016 for M. Sc. First year students
   f. Purpose - To interact with parents and give them feedback on the students
   g. Report – Parents of 16 students attended the meeting and faculty analysed the overall improvement of the students
   h. Reviews- It is a good interactive session

II. Staff Achievements

i. Dr. P. Thirupathi had published a ”Pyrene Excimer-Based peptidyl chemosensors for the selective detention of low levels of Heparin in 100% aqueous solution and serum samples” in Applied Materials and Interfaces(ACS) with an Impact factor 6.673 in June 2015.

ii. Mr. Dheeraj Kumar Sahu attended a seminar on “Emerging trends in chemical technology” held at Loyola Academy on 10-11 December 2015

III. Student Achievements

Our students Sri.Kaustubha and Asma Parveen won 2nd prize in a two day National Seminar on "Impact of Scientific Advances on Society" held at the St. Pious X Degree & PG College for Women on 18th and 19th August 2015

Three students attended two day National conference “Chem Bridge 2016 ” held at St. Anns college for women on 29and 30 January 2016

IV. Career Placements

V. Research Publications

Dr. P. Thirupathi had published a ”Pyrene Excimer-Based peptidyl chemosensors for the selective detention of low levels of Heparin in 100% aqueous solution and serum samples” in Applied Materials and Interfaces(ACS) with an Impact factor 6.673 in June 2015.

VI. Book Publications

NA

DEPARTMENT OF M.SC. ORGANIC CHEMISTRY

DEPARTMENTAL REPORT 2016-17

I. Departmental Activities:

1. Seminar

a. Concept-The Department of Chemistry (PG) jointly along with other science department organized a two days international seminar on **"**Green Chemistry for Sustainable Development: *Issues, Challenges and Prospects"* on 20 & 21 January 2017

b. Purpose-To create awareness among students, faculty and researchers about the significance of green chemistry for a safer and environment-friendly sustainable development.

c. Report- This two day programme included invited lectures by eminent international speakers from academics and industry. Oral presentations and poster presentation competitions were conducted. Full proceedings of the seminar were released in the seminar. Participants were research scholars, faculty and students from different parts of the country.

d. Reviews- seminar was successful with good outcomes.

e. Photos.

Organizing Secretary

Dr Sonika Sharma
Head, Department of Chemistry (PG)

Coordinators
Dr M.Jayaramudu
Mrs. B.LalithaKumari
Dr K.Shanthi
Mrs. N.Kavitha
Dr CH.Sirisha
Mr. V.V.S. Chalapathi Rao
Dr P.Thirupathi

List of Speakers

1. **Mr Roel R. Ravanera**, Executive Director, SEARSOLIN, Xavier University, Philippines.
2. **Prof. Steve Lanners**, University of Namur, Belgium.
3. **Prof. Praveen Martis**, University of Namur, Belgium.
4. **Mr Anoop Basnet**, St Xavier's College, Kathmandu, Nepal.
5. **Mr SagarAryal**, St Xavier's College, Kathmandu, Nepal.
6. **Prof. D. B. Ramachary**, School of Chemistry, University of Hyderabad, Hyderabad.
7. **Prof. S. Kotha**, Department of Chemistry, IIT, Bombay.
8. **Dr Manojit Pal**, Dean, Dr Reddy's Institute of Life Sciences.
9. **Dr A.V.V. S. Swami**, AcharayaNagarjuna University, Guntur, Andhra Pradesh.
10. **Dr J.V.N.S. Prasad**, Principal Scientist, Central Research Institute for Dryland Agriculture, Hyderabad.
11. **Prof. P. Chandrashekar Rao** (Retd), Prof. Jayashankar Telangana State Agricultural University, Hyderabad.

Registration:

Participants are requested to register by returning duly filled-in registration form along with registration fee
Students/Scholars: Rs 500
Faculty/Scientists/Corporate Delegates: Rs. 1000
Last date for registration: Monday, 09 January 2017

Mode of Payment
Demand Draft:
Demand draft must be drawn in favor of The Principal, Loyola Academy Degree & PG College, Secunderabad 500 010 TS. (Payable at Hyderabad)
Net Banking: A/c 171501000004237,
IFSC : IOBA0001715

Accommodation:
Accommodation will be arranged at a resonable rate.
Request to be made atleast 10 days in advance.
For details, please contact
Mr P. Sudhakar Reddy,Cell: 9490225998

Registration Form

Name: Dr/Mr/Ms :
Designation :
Institution :
Address for Communication :
E-mail :
Mobile :
Nature of participation : Faculty/ Research scholar/ Student/Corporate Delegates
Poster presentation : Yes / No
Author/s & Title of the poster:

Details of registration fee :
Name of the bank :
D.D. Number :
Accommodation required :Yes / No
Date : __ / __ / _____

Signature of applicant

Aspire Inspire Achieve
LOYOLA ACADEMY
DEGREE & PG COLLEGE
ALWAL, SECUNDERABAD 500 010, TS.

Two-Day International Seminar On

"Green Chemistry for Sustainable Development: Issues, Challenges and Prospects"

Friday, 20 & Saturday, 21 January 2017

ORGANIZED BY

DEPARTMENTS OF CHEMISTRY,
CHEMICAL TECHNOLOGY, BIOTECHNOLOGY,
AGRICULTURE SCIENCE AND RURAL DEVELOPMENT

ABOUT THE INSTITUTION

Loyola Academy (LA) is managed and administrated by the members of the Society of Jesus belonging to the "Jesuit Province Society-Hyderabad", covering both the states of Telangana and Andhra Pradesh. Appreciating the achievements and qualitative pursuit of higher educational needs, UGC had awarded LA a rare status known as a "College with Potential for Excellence" (CPE) in the year 2008 and had also extended CPE phase II projects in the year 2015. In addition to this, The National Assessment and Accreditation Council accredited this college in the year 2005 and reaccredited in 2011 and awarded 'A' Grade (3.50 out of 4.00 CGPA) in recognition of its excellent contribution to the cause of higher education.

OBJECTIVE

This seminar on "Green Chemistry for Sustainable Development" aims at creating awareness among students, faculty, and researchersabout the significance of green chemistry for a safer and environment-friendly sustainable development.

We invite papers on the following themes:

- Green Synthesis and Designing
- New Trends in Green Chemistry
- Green Chemicals and Solvents
- Industrial Application of Green Chemistry
- Green Catalysis
- Green Nanotechnology
- Green Biotechnology
- Green Pesticides
- Renewable energy
- Green Building
- Industrial Waste Management/Treatment
- Carbon Capture Technology

Presentation can be Oral/Poster. The abstract should be between 200-250 words, typed in Times New Roman, font size-12. Submission of the papers indicates that it or similar version of it has not been previously published or accepted for publication. Papers selected through peer evaluation will be published in the souvenir. The soft copy of the abstract should be e-mailed to greenchemloyola2017@gmail.com

ORGANIZING COMMITTEE

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Rev Fr A. Santiago SJ
Superior

Patron
Rev Fr J. Thainese SJ
Correspondent

Convener
Rev Fr Dr K.S.Casimir SJ
Principal

Members

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Dean Developmental Affairs & IQAC Coordinator

Ms Jacintha Vincent
NAAC Coordinator

Advisory Committee

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Head, Department of Chemistry, Osmania University, Hyderabad, TS, INDIA

Prof V. Uma
Dean of Sciences, Osmania University, Hyderabad,TS, INDIA

Prof D. B. Ramachary
School of Chemistry, University of Hyderabad, Hyderabad,TS, INDIA

Dr H. Surekha Rani
Department of Bio-Technology, Osmania University, Hyderabad,TS, INDIA

2. Industrial visit

a. Concept - One day trip for MSc I year students to Hyderabad Central University on 27 February 2017
b. Purpose - To have an exposure on latest methods of chemical synthesis and techniques involved in research field

c. Report- Demo on various instruments like single crystal XRD, Powder XRD, NMR, EPR, SEM, HRMS (High Resonance Mass Spectrometer), LC-MS, FTIR were given by the university faculty members
d. Reviews- It was an educational trip which enlightened immensely
e. Photos.

3. Guest Lectures

GL-1

a. Concept - Guest Lecture on "Total synthesis of biologically active Macrolides" by Dr. R. Vengal Rao, Scientist, Division of Medicinal Chemistry, GVK Bio-Sciences, Hyderabad on 10 September 2016in PG seminar hall.
b. Purpose - To refreshe the students with basic concepts of analytical techniques and enrich them with the latest developments in this field.
c. Report – The lecture included solvent extraction of natural products, introduction on chromatography followed by discussion on High Performance Liquid Chromatography(HPLC) , Gas Chromatography(GC) and hyphenated techniques like GC-MS, LC-MS, LC-MS-MS, SMB and polarography.
d. Reviews- This lecture was informative for both faculty and students
e. Photos.


GL-2

a. Concept - Guest Lecture on "Knowledge acquisition in natural sciences" by Prof. Harjinder Singh, IIIT-Hyderabad, 27 March 2017 in PG seminar hall.

b. Purpose - To refresh the students with basic concepts of analytical techniques and enrich them with the latest developments in this field.

c. Report – The lecture included solvent extraction of natural products, introduction on chromatography followed by discussion on High Performance Liquid Chromatography(HPLC) , Gas Chromatography(GC) and hyphenated techniques like GC-MS, LC-MS, LC-MS-MS, SMB and polarography.

d. Reviews- This lecture was informative for both faculty and students

e. Photos.


4. PTM-1

a. Concept - Parents Teachers Meeting on M.Sc II Year on 27 August 2016

b. Purpose - To interact with parents and give them their ward's feedback

c. Report – Parents attended the meeting and faculty analysed the overall improvement of the students

d. Reviews- It is a good interactive session

5. PTM-2

e. Concept - Parents Teachers Meeting for M.Sc I Year on 4 February 2017.

f. Purpose - To interact with parents and give them their ward's feedback
g. Report – Parents attended the meeting and faculty analysed the overall improvement of the students
h. Reviews- It is a good interactive session

II. Staff Achievements

i. Dr. P Thiruapthi has been granted a Minor Research Project from UGC-New Delhi for 2016-2018

ii. Dr. P Thiruapthi served as guest faculty for Osmania University P.G. College, Jogipet, Medak, Telangana and Osmania University P.G. College, Narspur, Medak, Telangana in 2016-2017.

iii. Mrs S.P.Mydhili won best poster in 3 day international seminar on "ICRACACE-16" at **JNTUH**, Hyderabad on 11-13 July 2016.

iv. Dr. Sonika Sharma was invited as resource person for international conference on "Green Chemistry" held in St. Aloysius College, Manglore on 27and 28 February, 2017.

v. Dr. P Thirupathi attended a one day international seminar on "Innovative Scientific Approaches for a Sustainable Environment" at **St.Pious X Degree** & **PG College** for Women, Hyderabad on 14th March, 2017.

vi. Mr Dheeraj Kumar Sahu participated in two day symposium on "Two Decades of Ion Beam Analysis" at BARC, Hyderabad on 23 and 24 March, 2017.

III. In-House Projects

a. Four students M.Sc II Year carried out their project work under guidance of Dr. P. Thirupathi at Loyola Academy.

IV. Student Achievements

i. Three student of M.Sc I Year received consolation prize in the poster competitions in an International Seminar held at Loyola Academy Degree& PG College, Secunderabad

ii. 13 students presented posters in International seminar on **"**Green Chemistry for Sustainable Development: *Issues, Challenges and Prospects"* on 20 & 21 January 2017 at Loyola Academy Degree& PG College, Secunderabad.

iii. 6 students attended National seminar - (Tech EX 2017) at ARCI, Balapur, Hyderabad 28 February 2017.

iv. 4 students attended International seminar on "Innovative scientific approaches for sustainable development" St. Pious X Degree & PG College, Hyderabad on 14 March 2017

V. Research Publications

I. Dr P. Tirupathi published a research article:

P. Thirupathi**, Noole Venkatagiri, and Chepyala Krishna Reddy,* "Amberlyst-15 as a Green and Efficient Reusable Catalyst for Friedal-Crafts Alkylation of Activated Arenes with *N*-Sulfonyl Aldimines and Synthesis of Triarylmethanes, ***Chemistry Select, 2018, 3, 9911 – 9915

VI. Book Publications

i. Lasya Maganti, Sonika Sharma and T.P. Radhakrishnan Book Chapter on "*Polyelectrolyte-templated Langmuir/Langmuir-Blodgett Films"* in the book on **Molecular Materials** Editors: Sanjay Malhotra, Jordi Fraxedas, B. L. V. Prasad April, 2017, Forthcoming by CRC Press**,** ISBN 9781482245950 - CAT# K23560

DEPARTMENT OF M. SC. ORGANIC CHEMISTRY

DEPARTMENTAL REPORT 2017-18

I. Departmental Activities:

1. Industrial visit

a. Concept - One day trip for MSc II year students to **National Centre for Compositional Characterisation of Materials (NCCM)**- Hyderabad on 27 March 2018

b. Purpose - To have an exposure on latest analytical methods for characterization of materials

c. Report- Students visited Ultra trace analysis (destructive technique), Bulk analysis (destructive technique) and Surface analysis (non-destructive technique). The students learnt principles and handling of UV-Visible Spectrophotometer, Inductively coupled plasma mass spectrometer (ICP-QMS), High performance liquid chromatography (HPLC), Gas chromatograph (GC), etc.

d. Reviews- It was an industrial trip which enlightened the students immensely

e. Photos.

2. Guest lectures

GL-1

a. Concept - Guest lecture conducted for I & II year students on 23 October 2017 at PG Seminar Hall on "*Symmetry- A Nature's Weapon for Existence*" by Dr. Sashikanth, Sreevani Women's PG College, Malakapet, Hyderabad
b. Purpose - To have an exposure for the students on symmetry in nature
c. Report – The three hour presentation gave a good insight on symmetry and its importance in nature
d. Reviews- Students showed positive response
e. Photos.


GL-2

a. Concept - Guest lecture conducted for I & II year students on 29 March, 2018 at PG Seminar Hall on "*Quantum Chemistry and its Applications Towards Technology*" by Prof. P Veera Somaiah, UCS OU, Hyderabad
b. Purpose - To know about Quantum Chemistry and its Applications
c. Report – The three hour presentation included important concepts like energy of hydrogen atom and illustrative examples of quantum chemistry
d. Reviews- Students showed positive response
e. Photos.

3. Parent Teacher Meeting

PTM-1

a. Concept - Parent Teacher Meeting for MSc II year students was conducted on on 16 September 2017 and for M.Sc I Year on 03 March., 2018.
b. Purpose - To interact with parents and give feedback of the students and also get suggestions from them for the improvement of the department
c. Report- Parents and students met all the staff members on one to one basis.
d. Reviews- It is useful for the improvement of the students

PTM-2

e. Concept - Parent Teacher Meeting was conducted for M.Sc I Year on 03 March., 2018.
f. Purpose - To interact with parents and give feedback of the students and also get suggestions from them for the improvement of the department
g. Report- Parents and students met all the staff members on one to one basis.
h. Reviews- It is useful for the improvement of the students

4. In-house Projects:

a. Concept - Three months (22 December 2017 to 21 March 2018) in-house projects for II year students as part of the curriculum
b. Purpose - To get hand on experience and research exposure in chemistry
c. Report- Five students of M.Sc II Year carried out their project work under guidance of Dr. P Thiruapthi
d. Two Students of M.Sc. II Year carried out their project work under guidance of Dr. S. P. Mydhili. All the seven students submitted their project report for the completion of course work.
e. Reviews- Successfully completed their 3months project with proper utilization of departmental infrastructure.

5. Planet

a. Concept- MSc I year students attended Pulse Polio immunization Programme as a part of outreach programme in Secunderabad on 27 March 2018
b. Purpose - To inculcate social responsibilities among students
c. Report- Students explained the neighbourhood about the importance of this programme.
d. Photos.

5. <u>Staff Achievements</u>

a. **Resource Persons/Guest Faculty**

Dr. P Thiruapthi served as guest faculty for Osmania University P.G. College, Jogipet, Medak, Telangana and Osmania University P.G. College, Narspur, Medak, Telangana in **2017-2018.**

b. **Reviewer**

Dr. P Thiruapthi serving as an expert for reviewing research article for journal like ***Inorganica Chimica Acta***, and ***Luminescence,*** Elsevier publication, Netherlands**.**

6. <u>Student Achievements</u>

i. Mr. N. Ajay Kumar, Mr. M. Madhusudhan and Mr. Ch. Sai shiva Reddy of MSc I year participated in one day national seminar on "Nanotechnology: Emerging issues and applications" on 26 February, 2018 organised at St. Pious X Degree and PG college for women, Hyderabad

TAS

National Seminar

NANOTECHNOLOGY

Emerging Issues and Applications

Certificate

This is to certify that Mr/Mrs/Ms N. Ajay Kumar

Loyola degree and pg college has participated in a National Seminar on **"NANOTECHNOLOGY - Emerging Issues and Applications"** organized by Telangana Academy of Sciences in Association with Department of Microbiology, St. Pious X Degree & PG College for Women, Nacharam, Hyderabad on 26th February, 2018.

Convener
Telangana Academy of Sciences, Hyderabad

Co-Convener
Department of Microbiology
St. Pious X Degree & PG College for Women

Principal
St. Pious X Degree & PG College for Women
Nacharam, Hyderabad

TAS

National Seminar

NANOTECHNOLOGY

Emerging Issues and Applications

Certificate

This is to certify that Mr/Mrs/Ms M. Madhusudhan

Loyola degree and pg college has participated in a National Seminar on **"NANOTECHNOLOGY - Emerging Issues and Applications"** organized by Telangana Academy of Sciences in Association with Department of Microbiology, St. Pious X Degree & PG College for Women, Nacharam, Hyderabad on 26th February, 2018.

Convener
Telangana Academy of Sciences, Hyderabad

Co-Convener
Department of Microbiology
St. Pious X Degree & PG College for Women

Principal
St. Pious X Degree & PG College for Women
Nacharam, Hyderabad

National Seminar

NANOTECHNOLOGY

Emerging Issues and Applications

Certificate

This is to certify that Mr/Mrs/Ms Sai Shiva Reddy

loyola degree and pg college has participated in a National Seminar on

"NANOTECHNOLOGY - Emerging Issues and Applications" organized by Telangana Academy of Sciences in Association with Department of Microbiology, St. Pious X Degree & PG College for Women, Nacharam, Hyderabad on 26th February, 2018.

Convener
Telangana Academy of Sciences, Hyderabad

Co-Convener
Department of Microbiology
St. Pious X Degree & PG College for Women

Principal
St. Pious X Degree & PG College for Women
Nacharam, Hyderabad

7. Career Placements

a. The following students were placed in different companies through campus placements:

S.No.	Student Name	Company name	Salary (Amount in Rs)
1	G . Sravanthi	Clearsynth Labs	186000
2	K. Lydia Grace	Enal Drugs	114000
3	N.Shekhar	Aurorels Labs	156000
4	L.Raju	Aurorels Labs	156000
5	P.Rajashekar Reddy	Symphony Pharma	144000
6	P.Yellam	Symphony Pharma	144000
7	K.Ganesh	Enal Drugs	114000
8	R.Sravani	Enal Drugs	114000
9	R.Shruthi	Alba Nova Life Sciences	144000
10	B.Tarun Kumar	Nova Agritech Ltd	160000
11	E.Sriram	Enal Drugs	114000

12	N.Jayasree	Enal Drugs	114000
13	N.Rekha	Alba Nova Life Sciences	144000
14	S .Bhagya Latha	Enal Drugs	114000
15	B.Harinath	Aurorels Labs	156000

8. Research;

a. Dr. P Thiruapthi has been granted the first slab for of the money for Minor Research Project from UGC-New Delhi for 2017-2018.

9. Seminars attended:

a. Dr. P Thirupathi attended a Two day international seminar on INTEGRATED INTERNATIONAL IMMERSION CONFERENCE, "Igniting Novel Ideas to Generate Opportunities" (INIGO) at Loyola Academy Degree & PG College, Alwal Hyderabad on 23-24 Feb, 2018.

b. Publications

i. Full proceedings in "International Seminar on Green Chemistry for Sustainable Development: *Issues, Challenges and Prospects" on* Interaction of Trans-Resveratrol with liposomes, SP Mydhili, Y. V. Mahalakshmi, Rekala Shalini M. Jyothi, published in **2018**.

Synthesis, Characterization and Antimicrobial Activity of series of 2-(5-phenyl-1,3,4-oxadiazol-2-yl)-*N*-((1-aryl-1*H*-1,2,3-triazol-4-yl)methyl)anilinesUsing click chemistry

Noole Venkatagiri, Thotla Krishna, Ponnaboina Thirupathi, Kedika Bhavani* and Chepyala Krishna Reddy*

Department of Chemistry, Osmania University, Hyderabad-500007, Telangana, India.

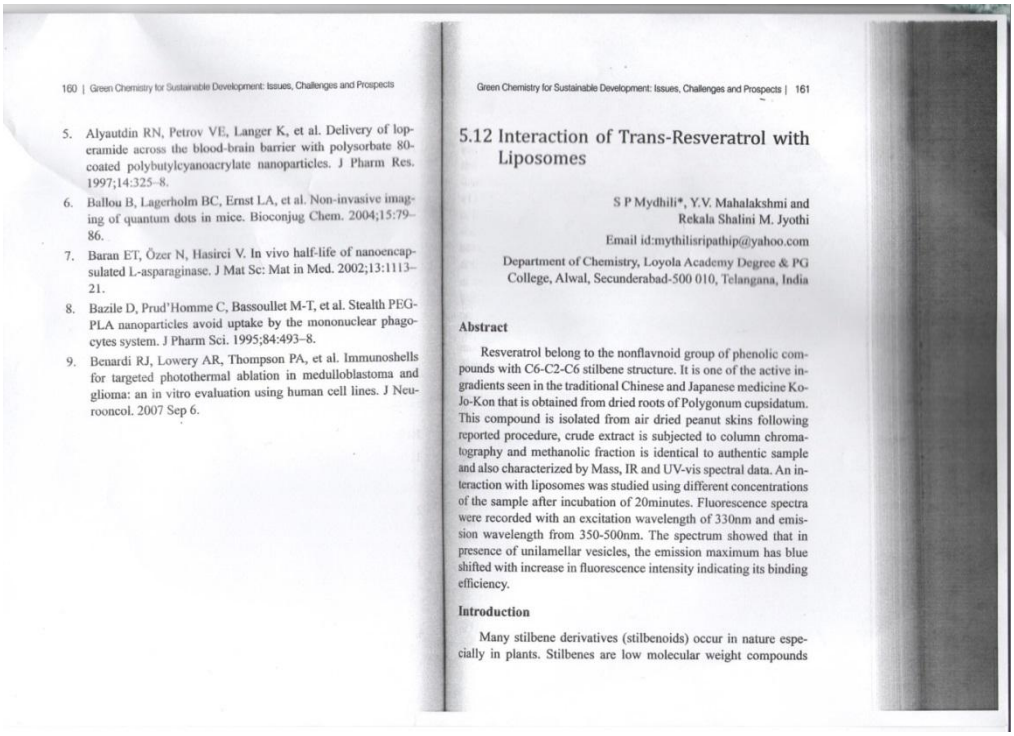
Email: krreddych@gmail.com, kedikabhavani@gmail.com

Abstract

A series of new triazolyl derived 1,3,4-oxadiazoles **7a**-**7l** was synthesized in good yields, using cupper-catalyzed alkyne–azide cycloaddition reaction between a variety of substituted aryl/alkyl azides and compound 2-(5-phenyl-1,3,4-oxadiazol-2-yl)aniline. The structure of the intermediates and the final compounds were synthesized and confirmed using spectral techniques, FT-IR, ^{1}H NMR, ^{13}C NMR and Mass spectrometry. The synthesized compounds along with the **4** were tested for *in vitro* antimicrobial activity. The compounds were found to possess moderate antibacterial activity and potent antifungal activity against the tested strains.

Keywords: Triazolyloxadiazoles, 1,2,3-Triazole, 1,3,4-Oxadiazole, Click reaction, Microorganisms, Antibacterial and Antifungal activity.

Accepted in Russian Journal of General Chemistry in 2018, 88, **Page number not assigned**



5. Alyautdin RN, Petrov VE, Langer K, et al. Delivery of loperamide across the blood-brain barrier with polysorbate 80-coated polybutylcyanoacrylate nanoparticles. J Pharm Res. 1997;14:325–8.
6. Ballou B, Lagerholm BC, Ernst LA, et al. Non-invasive imaging of quantum dots in mice. Bioconjug Chem. 2004;15:79–86.
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8. Bazile D, Prud'Homme C, Bassoullet M-T, et al. Stealth PEG-PLA nanoparticles avoid uptake by the mononuclear phagocytes system. J Pharm Sci. 1995;84:493–8.
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5.12 Interaction of Trans-Resveratrol with Liposomes

S P Mydhili*, Y.V. Mahalakshmi and Rekala Shalini M. Jyothi
Email id:mythilisripathip@yahoo.com
Department of Chemistry, Loyola Academy Degree & PG College, Alwal, Secunderabad-500 010, Telangana, India

Abstract

Resveratrol belong to the nonflavnoid group of phenolic compounds with C6-C2-C6 stilbene structure. It is one of the active ingradients seen in the traditional Chinese and Japanese medicine Ko-Jo-Kon that is obtained from dried roots of Polygonum cupsidatum. This compound is isolated from air dried peanut skins following reported procedure, crude extract is subjected to column chromatography and methanolic fraction is identical to authentic sample and also characterized by Mass, IR and UV-vis spectral data. An interaction with liposomes was studied using different concentrations of the sample after incubation of 20minutes. Fluorescence spectra were recorded with an excitation wavelength of 330nm and emission wavelength from 350-500nm. The spectrum showed that in presence of unilamellar vesicles, the emission maximum has blue shifted with increase in fluorescence intensity indicating its binding efficiency.

Introduction

Many stilbene derivatives (stilbenoids) occur in nature especially in plants. Stilbenes are low molecular weight compounds

10. Book Publications

i. Dr P. Tirupathi and Dr. Sonika Sharma edited Proceedings of "International Seminar on Green Chemistry for Sustainable Development: *Issues, Challenges and Prospects"* in **2018**

Chief-Editors:
Dr. Sonika Sharma, *M.Sc., Ph.D*
Dr. P. Thirupathi, *M.Sc., Ph.D*

Editorial Committee:
Dr. M. Jayaramudu, *M.Sc, Ph.D*
Dr. K. Krishan Mohan, *M.Sc., Ph.D*
Dr.Ch. Sirisha, *M.Sc, Ph.D*
Dr.B.Showbhagya Lakshmi, *M.Sc., Ph.D*

Compiled by:
Dr. N. Maria Das, *M.A., Ph.D*

Proceedings of "International Seminar on Green Chemistry for Sustainable Development: *Issues, Challenges and Prospects*"

Chief-Editors:
Dr. Sonika Sharma, *M.Sc., Ph.D*
Dr. P. Thirupathi, *M.Sc., Ph.D*

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2018

The present book is an outcome of the International Seminar on "Green Chemistry for Sustainable Development: *Issues, Challenges and Prospects*" organised jointly by Department of Chemistry, Chemical Technology, Biotechnology and Agricultural Science & Rural Development of Loyola Academy Degree & PG College, Secunderabad, Telangana, India. Green Chemistry as multidisciplinary field has immense potential in addressing current issues related to energy, environment, health and agriculture. This book includes papers related to various subthemes of Green Chemistry such as Green Nanotechnology, New Trends in Green Chemistry, Green Agrochemicals, Industrial Waste Management/Treatment *etc.* It also caters the growing interest of research scholars, students and teaching faculty to the role of Green chemistry for sustainable development and discusses the latest trends in the interdisciplinary areas of the Green Chemistry.

Dr. Sonika Sharma, is currently working as Head, Department of Chemistry, Loyola Academy Degree and PG College, Secunderabad, Telangana, India. She obtained her undergraduate and postgraduate degrees in Chemistry (Honours) from Panjab University, Chandigarh and Ph.D. from University of Hyderabad, Hyderabad. She is a recipient of World Laboratory Wilhelm Simon Fellowship to persue her postdoctoral work in Department of Materials, Swiss Federal Institute of Technology, Zurich, Switzerland. Her research interests include synthesis and study of interactions of funtionalised amphiphilic molecules in bilayers and thin films. She published 11 research papers in reputed international journals and authored a book chapter in "Molecular Materials" published by premier global publisher from CRC Press. She has given invited lectures and presented many papers in various national and international seminars. She has over 9 years of teaching experience at PG level.

Dr P Thirupathi is presently working as Lecturer in Chemistry at Loyola Academy Degree & PG College, Secunderabad, TS, India. He obtained his Master degree (Organic Chemistry) from Osmania University, Hyderabad. He received his Ph.D degree from Osmania University (Research work carried out at CSIR-Indian Institute of Chemical Technology, Hyderabad under the guidance of eminent natural product chemist Dr Biswanath Das). He worked as a Postdoctoral Research Associate and later as Assistant Professor at Department of Chemistry, Inha University, Incheon, Republic of Korea. His research interests include isolation and synthesis of naturally occurring bioactive molecules, development of new synthetic methodologies for C-C bond formation, design and development of new fluorescent sensors for the detection of various analytes. He has published 45 research articles in national and international journals. Apart from these, he is reviewer for reputed journals like Tetrahedron, Spectrochemica Acta (best reviewer award), Bioorganic Medical Chemistry Letters, Organic& Bimolecular etc. He has given several lectures in various national and international conferences. He has over 8 years of research and teaching experience at UG and PG level. He is currently pursuing a UGC funded minor research project.

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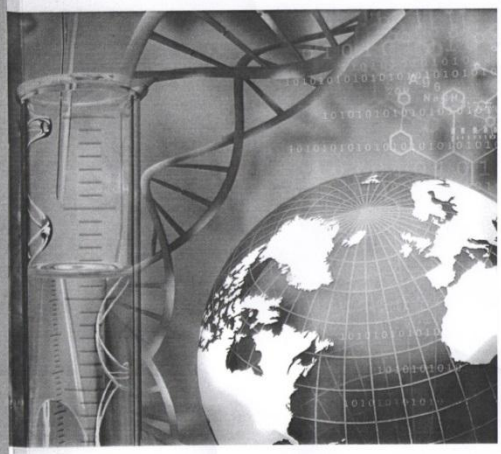
Proceedings of International Seminar on "Green Chemistry for Sustainable Development: *Issues, Challenges and Prospects*"

Aspire Inspire Achieve
LOYOLA ACADEMY
DEGREE & PG COLLEGE
Telangana State, India



PROCEEDINGS OF INTERNATIONAL SEMINAR ON
GREEN CHEMISTRY FOR SUSTAINABLE DEVELOPMENT:
Issues, Challenges and Prospects

DEPARTMENT OF M.SC. ORGANIC CHEMISTRY
DEPARTMENTAL REPORT 2018-19

I. Departmental Activities:

1. Orientation programme

a. Concept - Orientation programme for I year students on 25 August, 2018 at Loyola hall
b. Purpose - To acquaint the students with rules and regulations of the the college
c. Report – Rector blessed the students, Principal and Vice principal extended their welcome and addressed the students
d. Reviews- Students showed positive response which is evident in their behaviour and discipline
e. Photos.

2. Flash Mob (Club activity)

a. Concept - Flash Mob by MSc II year students on 25 August, 2018 at PG block
b. Purpose - To enlighten the students of the college about water conservation
c. Report- This event brought out the hidden talents of the students. Introduction to the event was through a group dance followed by mime.
d. Reviews- Got a good response from the viewers
e. Photos.

3. Industrial visit

a. Concept - Five day trip for MSc II year students to IISc- Banglore and Sami Laboratories- Banglore from 10 October, 2018 to 15 October, 2018

b. Purpose - To have an exposure on latest methods of chemical synthesis and techniques involved in research field

c. Report- It was a five day trip to Bengaluru, Mysore and Ooty.

i. On 11 October, 2018, the students visited IISc- Banglore wherein they were introduced to latest analytical instrumental techniques being used for Characterisation of new synthesized compounds.

ii. On 12 October, 2018, the students visited Sami Laboratories- Bengaluru known for isolation and synthesis of phytochemicals and formulation of drugs.

iii. On 13&14 October, 2018, the students enjoyed a pleasure trip to Mysore and Ooty

d. Reviews- It was an educational trip which enlightened immensely

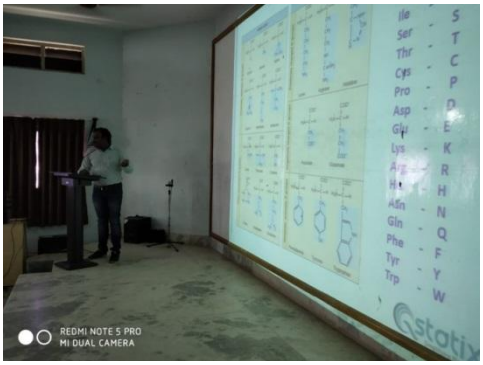
e. Photos.

4. PG Resonance

a. Concept - PG Resonance on 26 &27 October, 2018
b. Purpose - To bring out the hidden talents in the students
c. Report – Students activelyparticipated in various events like dance, drama, songs, mime, rangoli, mehendi, cooking without fire etc. The students were able to bag I&II prizes in few events
d. Reviews- The students were rejuvenated by the cultural atmosphere
e. Photos.

5. Guest lectures GL-1

a. Concept - Guest lecture conducted for I students on 6 March 2018 at PG Seminar Hall on "*Significance of molecular docking in drug design*" by Dr. T. Karunakar, Qstatix Analysis Pvt.Ltd, Hyderabad
b. Purpose - To introduce the students the concept of Molecular modelling and its significance
c. Report – The three hour presentation gave a good insight the significance of molecular modelling, theory behind it and also various computational programmes that support these studies
d. Reviews- The students learnt about latest developments of this area in research field
e. Photos.



6. Parents Teachers Meeting

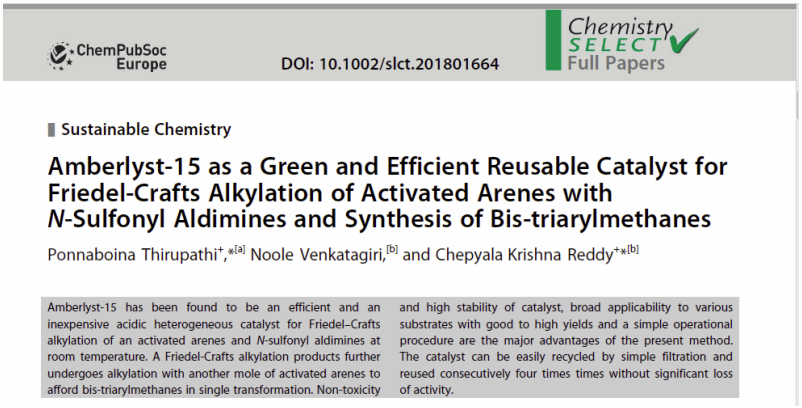
a. Concept - Parents Teachers Meeting on 1 December 2018
b. Purpose - To interact with parents and give them feedback on the students
c. Report – Parents of 35 students attended the meeting and faculty analysed the overall improvement of the students
d. Reviews- It is a good interactive session

7. In-house Projects:

a. Concept - Three months (22 December 2018 to 21 March 2019) in-house projects for II year students as part of the curriculum
b. Purpose - To get hand on experience and research exposure in chemistry
c. Report- Six students of M.Sc II Year carried out their project work under guidance of Dr. P Thiruapthi
d. Reviews- Successfully completed their 3months project with proper utilization of departmental infrastructure.

II. Staff Achievements

i. Dr. P. Tirupathi published 2 research articles in international journals-Chemistry Select and Russian Journal Of General Chemistry



ChemPubSoc Europe

DOI: 10.1002/slct.201801664

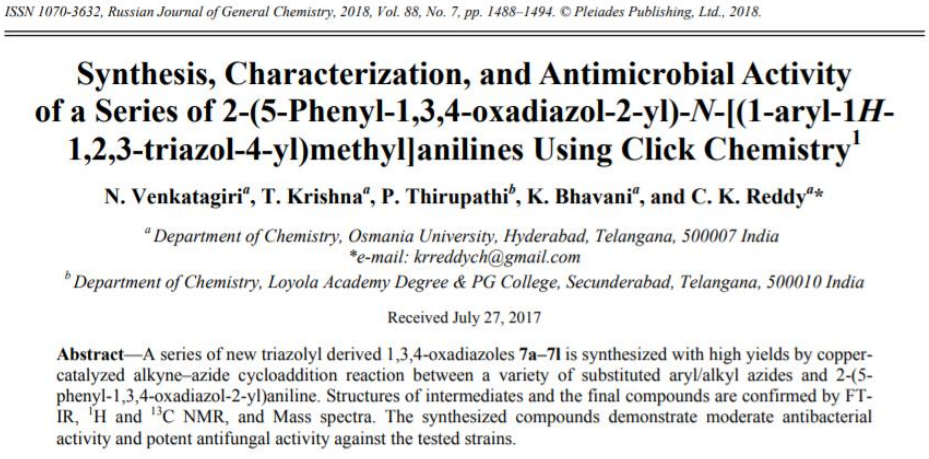
Chemistry SELECT Full Papers

Sustainable Chemistry

Amberlyst-15 as a Green and Efficient Reusable Catalyst for Friedel-Crafts Alkylation of Activated Arenes with *N*-Sulfonyl Aldimines and Synthesis of Bis-triarylmethanes

Ponnaboina Thirupathi+,*[a] Noole Venkatagiri,[b] and Chepyala Krishna Reddy+*[b]

Amberlyst-15 has been found to be an efficient and an inexpensive acidic heterogeneous catalyst for Friedel–Crafts alkylation of an activated arenes and *N*-sulfonyl aldimines at room temperature. A Friedel-Crafts alkylation products further undergoes alkylation with another mole of activated arenes to afford bis-triarylmethanes in single transformation. Non-toxicity and high stability of catalyst, broad applicability to various substrates with good to high yields and a simple operational procedure are the major advantages of the present method. The catalyst can be easily recycled by simple filtration and reused consecutively four times times without significant loss of activity.



ISSN 1070-3632, Russian Journal of General Chemistry, 2018, Vol. 88, No. 7, pp. 1488–1494. © Pleiades Publishing, Ltd., 2018.

Synthesis, Characterization, and Antimicrobial Activity of a Series of 2-(5-Phenyl-1,3,4-oxadiazol-2-yl)-*N*-[(1-aryl-1*H*-1,2,3-triazol-4-yl)methyl]anilines Using Click Chemistry[1]

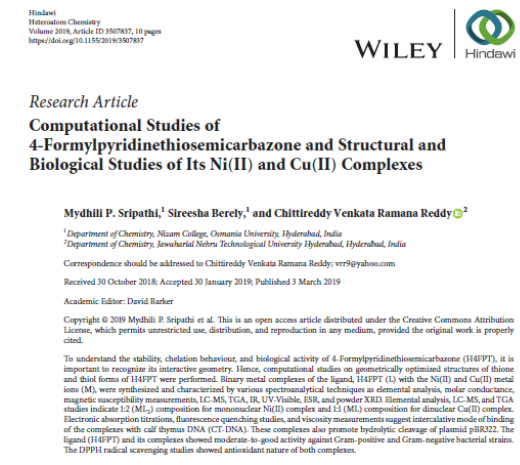
N. Venkatagiri[a], T. Krishna[a], P. Thirupathi[b], K. Bhavani[a], and C. K. Reddy[a]*

[a] *Department of Chemistry, Osmania University, Hyderabad, Telangana, 500007 India*
**e-mail: krreddych@gmail.com*
[b] *Department of Chemistry, Loyola Academy Degree & PG College, Secunderabad, Telangana, 500010 India*

Received July 27, 2017

Abstract—A series of new triazolyl derived 1,3,4-oxadiazoles **7a–7l** is synthesized with high yields by copper-catalyzed alkyne–azide cycloaddition reaction between a variety of substituted aryl/alkyl azides and 2-(5-phenyl-1,3,4-oxadiazol-2-yl)aniline. Structures of intermediates and the final compounds are confirmed by FT-IR, ^{1}H and ^{13}C NMR, and Mass spectra. The synthesized compounds demonstrate moderate antibacterial activity and potent antifungal activity against the tested strains.

ii. Dr.S.P. Mydhili published Two research articles in international journals-Heteroatom chemistry and Russian Journal of General Chemistry



Hindawi
Heteroatom Chemistry
Volume 2019, Article ID 3507837, 10 pages
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WILEY Hindawi

Research Article

Computational Studies of 4-Formylpyridinethiosemicarbazone and Structural and Biological Studies of Its Ni(II) and Cu(II) Complexes

Mydhili P. Sripathi,[1] Sireesha Berely,[1] and Chittireddy Venkata Ramana Reddy[2]

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[2]Department of Chemistry, Jawaharlal Nehru Technological University Hyderabad, Hyderabad, India

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Academic Editor: David Barker

To understand the stability, chelation behaviour, and biological activity of 4-Formylpyridinethiosemicarbazone (H4FPT), it is important to recognize its interactive geometry. Hence, computational studies on geometrically optimized structures of thione and thiol forms of H4FPT were performed. Binary metal complexes of the ligand, H4FPT (L) with the Ni(II) and Cu(II) metal ions (M), were synthesized and characterized by various spectroanalytical techniques as elemental analysis, molar conductance, magnetic susceptibility measurements, LC-MS, TGA, IR, UV-Visible, ESR, and powder XRD. Elemental analysis, LC-MS, and TGA studies indicate 1:2 (ML_2) composition for mononuclear Ni(II) complex and 1:1 (ML) composition for dinuclear Cu(II) complex. Electronic absorption titrations, fluorescence quenching studies, and viscosity measurements suggest intercalative mode of binding of the complexes with calf thymus DNA (CT-DNA). These complexes also promote hydrolytic cleavage of plasmid pBR322. The ligand (H4FPT) and its complexes showed moderate- to- good activity against Gram-positive and Gram- negative bacterial strains. The DPPH radical scavenging studies showed antioxidant nature of both complexes.

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Synthesis, Antioxidant, and Antibacterial Studies of Zn(II), Cd(II), and Hg(II) Complexes with 3-Formylpyridinethiosemicarbazone and Its N^4-Methyl Analogue

S. P. Mydhili[a], B. Sireesha[b], and Ch. Venkata Ramana Reddy[c]*

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[b] Department of Chemistry, Nizam College, Osmania University, Hyderabad, India
[c] Department of Chemistry, Jawaharlal Nehru Technological University Hyderabad, Hyderabad, India
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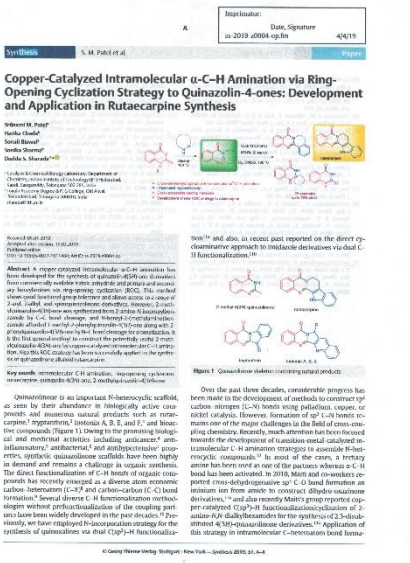
Received February 6, 2019; revised April 7, 2019; accepted April 18, 2019

Abstract—Evaluation of stability constants of the complexes formed in solution by the biologically important ligands and metal ions can aid in understanding the application of metal complexes in chelation therapy. Hence, complexation equilibrium studies of the ligands (L), 3-formylpyridinethiosemicarbazone (H3FPT) and 3-formylpyridine-N^4-methylthiosemicarbazone (H3FP4MT) with Zn(II) and Cd(II) metal ions (M) are carried out in 70% v/v DMF–water medium at 0.1M KNO_3 ionic strength and the stability constants are determined pH-metrically at 303 K. The binary complexes are formed in 1 : 1 (M : L) ratio and are fairly stable. The binary complexes of H3FPT and H3FP4MT (L) with Zn(II), Cd(II) and Hg(II) ions are synthesized and characterized by various analytical and spectral techniques including elemental analysis, molar conductance, LC-MS, TGA, IR and ^{1}H NMR spectroscopy. According to the accumulated information, the complexes are polymeric (ML_n), with $n > 2$, except that of Hg(II)–H3FP4MT, which is ML_2. The antioxidant activity of the ligands and their Zn(II) and Hg(II) complexes demonstrate higher activity than their corresponding ligands Cd(II) complexes. Antibacterial activity of the ligands and the complexes is tested against gram positive: *Staphylococcus aureus, Bacillus subtilis* and gram negative: *Escherichia coli* and *Klebsiella pneumonia* bacterial strains. Activity of complexes is determined to be higher than that of the corresponding free ligands.

Keywords: metal complexes, pH-metry, stability constant, characterization, antioxidant, antibacterial

iii. Dr. Sonika Sharma published a research article in international journal-Molecules.



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Synthesis S. M. Patel et al. Paper

Copper-Catalyzed Intramolecular α-C–H Amination via Ring-Opening Cyclization Strategy to Quinazolin-4-ones: Development and Application in Rutaecarpine Synthesis

Shrinett M. Patel[a]
Harika Chadal[a]
Sonali Biswal[a]
Sonika Sharma[a]
Dabbiru S. Sharada*[a,b]

[a] Catalysis & Chemical Biology Laboratory, Department of Chemistry, Indian Institute of Technology (IIT) Hyderabad, Yeddumailaram, Telangana 502 205, India
[b] Organic & Medicinal Chemistry Laboratory, Birla Institute of Technology & Science (BITS) Pilani, Hyderabad Campus, Jawahar Nagar, Shameerpet Mandal, Ranga Reddy District, Telangana 500 078, India

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Abstract A copper catalyzed intramolecular sp^{3}C–H amination has been developed for the synthesis of quinazolin-4(3*H*)-one derivatives from commercially available benzoic anhydride and primary and secondary benzylamines via ring-opening cyclization (ROC). This method shows good functional group tolerance and allows access to a range of 2-aryl-, 2-alkyl-, and spiroquinazolinone derivatives. Moreover, 2-methylquinazolin-4(3*H*)-one was synthesized from 2-amino-*N*-isopropylbenzamide by C–C bond cleavage, and 9-benzyl-2-(methylsulfanyl)-acridin-9(10*H*)-one by N–C bond cleavage in one step with 2-phenylquinazolin-4(3*H*)-one by N–C bond cleavage in one step. It is the first general method to construct the potentially useful 2-methylquinazolin-4(3*H*)-one by oxygen-catalyzed intramolecular C–H amination. Also this ROC strategy has been successfully applied in the synthesis of rutaecarpine alkaloid natural product.

Key words intramolecular C–H amination, oxygenating catalysis, heterocycles, quinazolin-4(3*H*)-ones, 2-methylquinazolin-4(3*H*)-one

Quinazolinone is an important *N*-heterocyclic scaffold, as seen by their abundance in biologically active compounds and numerous natural products such as rutaecarpine,[1] mypiratethin,[2] luotonin A, B, E, and F,[3] and bisquinazolinone alkaloids.[4] Owing to the promising biological and medicinal activities including anticancer,[5] anti-inflammatory,[6] antibacterial,[7] and antihypertensive[8] properties, synthetic quinazolinone scaffolds have been highly in demand and remains a challenge in organic synthesis. The direct functionalization of C–H bonds of organic compounds has recently emerged as a diverse atom economic carbon–heteroatom (C–$X^{[9]}$) and carbon–carbon (C–C) bond formation.[10] Several diverse C–H functionalization methodologies without prefunctionalization of the coupling partners have been widely developed in the past decades.[10] Previously, we have employed *N*-incorporation strategy for the synthesis of quinoxalines via dual C(sp^3)–H functionalization[11a] and also, in recent past reported on the direct cyclodeaminative approach to imidazole derivatives via dual C–H functionalization.[11b]

Figure 1 Quinazolinone skeleton containing natural products

Over the past three decades, considerable progress has been made in the development of methods to construct sp^2 carbon–nitrogen (C–N) bonds using palladium, copper, or nickel catalysis. However, formation of sp^2 C–N bonds remains one of the major challenges in the field of cross-coupling chemistry. Recently, much attention has been focused towards the development of transition-metal catalyzed intramolecular C–H amination strategies to assemble *N*-heterocyclic compounds.[12] In most of the cases, a tertiary amine has been used as one of the partners whereas α-C–H bond has been activated. In 2018, Maiti and co-workers reported cross-dehydrogenative sp^3 C–O bond formation an iminium ion from amide to construct dihydro-oxazinone derivatives,[13a] and also recently Maiti's group reported copper-catalyzed C(sp^3)–H functionalization/cyclization of 2-amino-*N*,*N*-dialkylbenzamides for the synthesis of 2,3-disubstituted 4(3*H*)-quinazolinone derivatives.[13b] Application of this strategy in intramolecular C–heteroatom bond forma-

ii. Mrs. R. Shalini Mamatha Jyothi cleared TS-SET in July, 2018

iii. Mrs. S. P. Mydhili was awarded her doctoral degree in August, 2018.

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
HYDERABAD - 500 085, TELANGANA STATE, INDIA

TS 1361404

H.T No. 1103PH0484

Ms S P Mythili

D/o S P Veerabhadra Sastry

having fulfilled the academic requirements in July - 2018

has this day been admitted by the Executive Council to the Degree of

Doctor of Philosophy

Chemistry

Topic: "Interaction of Transition Metal Ions with Substituted Pyridine Thiosemicarbazones : Computational and Biological Studies".

Given under the Seal of the University

Date: 26-04-2019

DIRECTOR OF EVALUATION | REGISTRAR | VICE CHANCELLOR

III. Student Achievements

Mr. K. Narender Reddy of 2016-18 batch cleared his CSIR-UGC NET examination

IV. Career Placements

a. The Following companies came for campus placements:
b. Nine Students of M.Sc, II year 2017-2019 batch attended the interview at Vimta Labs., awaiting for the result.
c. Twenty Students of M.Sc, II year 2017-2019 batch attended the interview at Hetero Labs., awaiting for the result.

V. Book Publications NA

DEPARTMENT OF M.SC. ORGANIC CHEMISTRY

DEPARTMENTAL REPORT 2019-20

I. Departmental Activities:

1. Orientation programme

a. Concept - Orientation programme for I year students on 19th Sept., 2019 at Loyola hall

b. Purpose - To acquaint the students with rules and regulations of the college

c. Report – Rector blessed the students, Principal and Vice principal extended their welcome and addressed the students

d. Reviews- Students showed positive response which is evident in their behaviour and discipline

2. Industrial visit

a. Concept - Five day trip for MSc II year students to NCL and C-MET-Pune from 26 September to 30 September 2019

b. Purpose - To have an exposure on latest developments in material science at CMET-Pune and analytical techniques involved in research field at NCL-Pune

c. Report- On 26 September 2019 at C-MET Pune, the visit started with a talk on E-Waste management. The students and the faculty were toured and explained about the functionalities of the various facilities which include Synthesis of Nano-materials by plasma technique facility, Li Ion battery fabrication facility, Solar cell fabrication lab, LTCC Packaging facility and Synthesis Lab.

d. 27 September 2019 at NCL-Pune, students observed and learned about the working of various instruments like X-PES, TEM, single XRD, mass spectrometry, HPLC, SEM and Ramam spectroscopy. Instrumentation, working, principle and applications of these were explained in detail. This was followed by sightseeing tour alibagh, mahabaleswar and Lonavala

e. Reviews- It was an knowledgeable educational trip

f. Photos.

Industrial visit to NCL and C-MET-Pune

3. PG Resonance

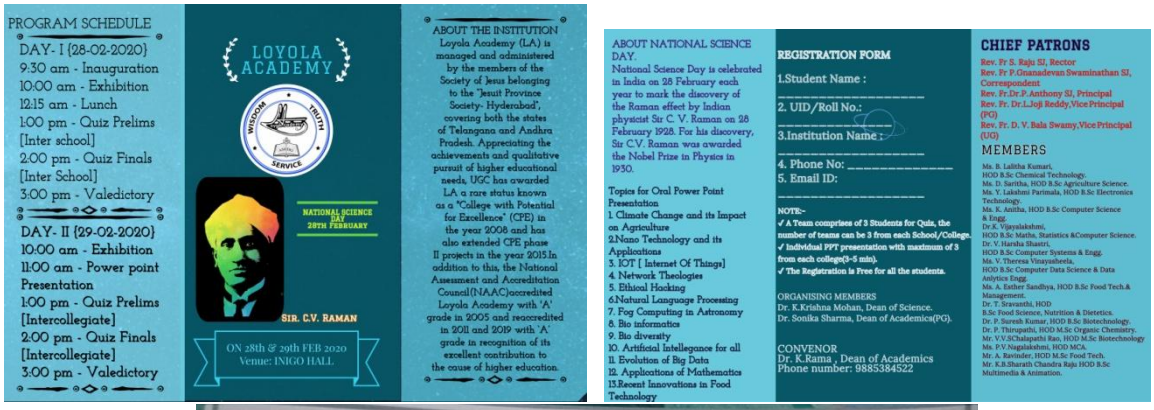
a. Concept - PG Resonance on 25th &26th January, 2019
b. Purpose - To bring out the hidden talents in the students
c. Report – Students activelyparticipated in various events like dance, drama, songs, mime, rangoli, mehendi, cooking without fire etc. The students were able to bag I&II prizes in few events
d. Reviews- The students were rejuvenated by the cultural atmosphere
e. Photos.

4. **Ongoing In-house Projects:**

a. Concept - Two months (25 February 2019 to 3 May 2020) in-house projects for II year students as part of the curriculum
b. Purpose - To get hand on experience and research exposure in chemistry
c. Report- Two students each of M.Sc II Year carrying out their project work under guidance of Dr. P Thiruapthi and Dr S,P,Mydhili

5. National Science Day:

a. Concept - National Science Day on 28 and 29 February 2020 in association with other science departments
b. Purpose - To encourage student towards science and technology
c. Report – Students actively participated and presented science models and demonstrated science experiments
d. Reviews- The students were encouraged and showed enthusiasm towards subject
e. Photos-


PROGRAM SCHEDULE

DAY- I {28-02-2020}
9:30 am - Inauguration
10:00 am - Exhibition
12.15 am - Lunch
1:00 pm - Quiz Prelims [Inter school]
2:00 pm - Quiz Finals [Inter School]
3:00 pm - Valedictory

DAY- II {29-02-2020}
10:00 am - Exhibition
11:00 am - Power point Presentation
1:00 pm - Quiz Prelims [Intercollegiate]
2:00 pm - Quiz Finals [Intercollegiate]
3:00 pm - Valedictory

LOYOLA ACADEMY

NATIONAL SCIENCE DAY 28TH FEBRUARY

SIR. C.V. RAMAN

ON 28th & 29th FEB 2020
Venue: INIGO HALL

ABOUT THE INSTITUTION

Loyola Academy (LA) is managed and administered by the members of the Society of Jesus belonging to the 'Jesuit Province Society- Hyderabad', covering both the states of Telangana and Andhra Pradesh. Appreciating the achievements and qualitative pursuit of higher educational needs, UGC has awarded LA a rare status known as a "College with Potential for Excellence" (CPE) in the year 2008 and has also extended CPE phase II projects in the year 2015.In addition to this, the National Assessment and Accreditation Council(NAAC)accredited Loyola Academy with 'A' grade in 2005 and reaccredited in 2011 and 2019 with 'A' grade in recognition of its excellent contribution to the cause of higher education.

ABOUT NATIONAL SCIENCE DAY.

National Science Day is celebrated in India on 28 February each year to mark the discovery of the Raman effect by Indian physicist Sir C. V. Raman on 28 February 1928. For his discovery, Sir C.V. Raman was awarded the Nobel Prize in Physics in 1930.

Topics for Oral Power Point Presentation

1. Climate Change and its Impact on Agriculture
2.Nano Technology and its Applications
3. IOT [Internet Of Things]
4. Network Theologies
5. Ethical Hacking
6.Natural Language Processing
7. Fog Computing in Astronomy
8. Bio informatics
9. Bio diversity
10. Artificial Intellegance for all
11. Evolution of Big Data
12. Applications of Mathematics
13.Recent Innovations in Food Technology

REGISTRATION FORM

1.Student Name : _____
2. UID/Roll No.: _____
3.Institution Name : _____
4. Phone No: _____
5. Email ID: _____

NOTE:-
✓ A Team comprises of 3 Students for Quiz, the number of teams can be 3 from each School/College.
✓ Individual PPT presentation with maximum of 3 from each college(3-5 min).
✓ The Registration is Free for all the students.

ORGANISING MEMBERS
Dr. K.Krishna Mohan, Dean of Science.
Dr. Sonika Sharma, Dean of Academics(PG).

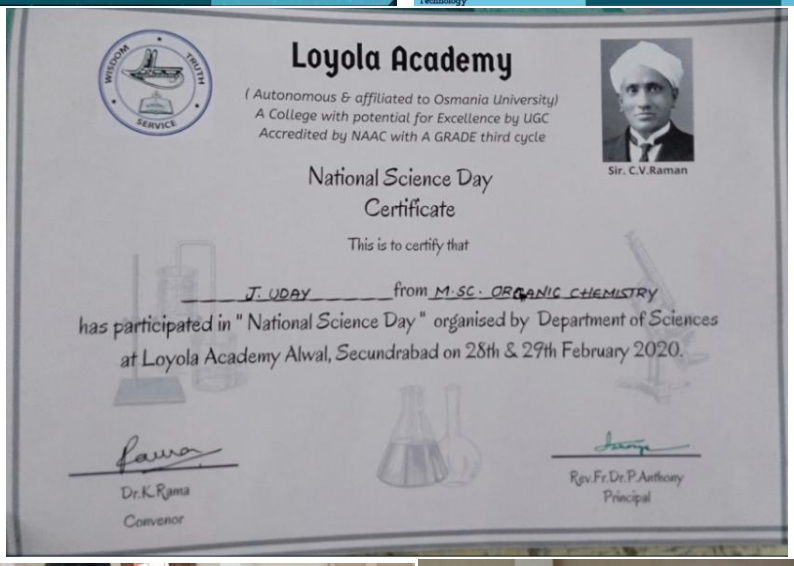
CONVENOR
Dr. K.Rama , Dean of Academics
Phone number: 9885384522

CHIEF PATRONS

Rev. Fr S. Raju SJ, Rector
Rev. Fr P.Gnanadevan Swaminathan SJ, Correspondent
Rev. Fr.Dr.P.Anthony SJ, Principal
Rev. Fr. Dr.L.Joji Reddy,Vice Principal (PG)
Rev. Fr. D. V. Bala Swamy,Vice Principal (UG)

MEMBERS

Ms. B. Lalitha Kumari, HOD B.Sc Chemical Technology.
Ms. D. Saritha, HOD B.Sc Agriculture Science.
Ms. Y. Lakshmi Parimala, HOD B.Sc Electronics Technology.
Ms. K. Anitha, HOD B.Sc Computer Science & Engg.
Dr.K. Vijayalakshmi, HOD B.Sc Maths, Statistics &Computer Science.
Dr. V. Harsha Shastri, HOD B.Sc Computer Systems & Engg.
Ms. V. Theresa Vinayatheela, HOD B.Sc Computer Data Science & Data Anlytics Engg.
Ms. A. Esther Sandhya, HOD B.Sc Food Tech.& Management.
Dr. T. Sravanthi, HOD B.Sc Food Science, Nutrition & Dietetics.
Dr. P. Suresh Kumar, HOD B.Sc Biotechnology.
Dr. P. Thirupathi, HOD M.Sc Organic Chemistry.
Mr. V.V.SChalapathi Rao, HOD M.Sc Biotechnology
Ms. P.V.Nagalakshmi, HOD MCA.
Mr. A. Ravinder, HOD M.Sc Food Tech.
Mr. K.B.Sharath Chandra Raju HOD B.Sc Multimedia & Animation.


Loyola Academy

(Autonomous & affiliated to Osmania University)
A College with potential for Excellence by UGC
Accredited by NAAC with A GRADE third cycle

Sir. C.V.Raman

National Science Day
Certificate

This is to certify that

J. UDAY from M.SC. ORGANIC CHEMISTRY

has participated in " National Science Day " organised by Department of Sciences at Loyola Academy Alwal, Secundrabad on 28th & 29th February 2020.

Dr.K.Rama
Convenor

Rev.Fr.Dr.P.Anthony
Principal

5. National Webinar:

a. Concept - A two day National Webinar-Techno Science-2020 on 27 and 28 May 2020 February 2020

b. Platform-Zoom and Youtube live stream (two sessions)

c. Purpose - To empower students and faculty on latest analytical techniques and their applications in various fields
d. Report – Students, faculty from our college /other colleges and research scholars from various orgnizations from all over India actively participated.
e. Reviews- A successful webinar
f. Photos-

II. Staff Achievements

1. The faculty attended an FDP programme on "Research Methodology" organized by IQAC and Research Committee on 28th January 2020 at Loyola Academy


FACULTY DEVELOPMENT PROGRAMME(FDP)
ON
"RESEARCH METHODOLOGY"
Organized by
Internal Quality Assurance Cell(IQAC) and Research Committee
Loyola Academy
This certificate is presented to
Dr/Mr/Ms. Hiteraj Kumar Kahu ....from. Loyola Academy..
for participating in Facuty Development Programme on
"RESEARCH METHODOLOGY" held on 28th January,2020
at Loyola Academy, Alwal, Secunderabad- 10.
K. Vijayalakshmi
Dr. K. Vijayalakshmi
Convener
Mr. P.V.R. Sai Prasad
IQAC Co-ordinator
Rev. Fr. Dr. P. Anthony SJ
Principal


FACULTY DEVELOPMENT PROGRAMME(FDP)
ON
"RESEARCH METHODOLOGY"
Organized by
Internal Quality Assurance Cell(IQAC) and Research Committee
Loyola Academy
This certificate is presented to
Dr/Mr/Ms. G. P. Mythili .....from. Loyola Academy.
for participating in Facuty Development Programme on
"RESEARCH METHODOLOGY" held on 28th January,2020
at Loyola Academy, Alwal, Secunderabad- 10.
K. Vijayalakshmi
Dr. K. Vijayalakshmi
Convener
Mr. P.V.R. Sai Prasad
IQAC Co-ordinator
Rev. Fr. Dr. P. Anthony SJ
Principal

2. The faculty attended an FDP programme on "MOODLE" organized by IQAC at Loyola Academy on 14th and 15th February 2020

3. Dr. Sonika Sharma attendedn Attended a NAtionla Symposium on " Covergence of Chemistry and Materials" on 17-18 Dec, 2019, BITS-Pilani -Hyd campus

4. Dr. Sonika Sharma Participated in NPTEL Workshop conducted on 25 th Jan. 2020 at IIT-Madras

III. Student Achievements

1. Ms. N Paranathi and Ms. K Lavanya of batch 2018-20 were selected for summer project fellowship sponsored by Indian Institute of Madras (IITM), Tamilnadu, India.
2. Ms M. Pavithra and J. Anusha presented a poster in
3. 32 students did summer projects in English/Chemistry from 15th may to 15th June 2019.
4. 22 students presented models, 6 students participated in science Quiz and 1 student gave oral presentation in National Science Day organized by Department of Sciences at Loyola Academy on 28th and 29th February 2020.

IV. <u>Career Placementst</u>

Eight students were placed in diff erent companies like Sai Life Sciences, Daicel Chiral, GVK Bio Sciences, Vimta Labs.