

Science and Engineering Research Board

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Brief report

SERB Sanction / File No : SSY/2019/000841

Date: 25-Oct-2019

1. Name of Academic Institution under : ST. GREGORIOS COLLEGE,
whose auspices the Seminar was organized KOTTARAKARA
2. Title of the Seminar : 'GREEN APPROACHES TOWARDS
CHEMICAL SYNTHESIS'
3. Duration / Period of the organized event : November 7th & 8th, 2019
4. Grant Sanctioned : Rs. 70000/-
5. Summary of the event :

The registration of the seminar titled "Green Approaches towards Chemical Synthesis" was started at 08.30 am, Thursday, 07th November 2019, in the lawn, in front of the seminar hall. Ms. Pinky Abraham, Assistant Professor of the department along with 12 students from MSc chemistry class was involved in this duty of registration. Registered delegates include post graduate students of the college (20), students from various colleges in the nearby towns (40), students from M. G. university Kottayam (40) as well as research scholars from nearby research centres and universities (12). There was also a good response of participation from the undergraduate students of the college (40). There was a good teacher participation from the host department (13), other departments of the college (5) and from other colleges (19).

The inaugural function started with prayer song and the welcome address was delivered by Dr. Francis Chacko, Head, Department of Chemistry. The whole seminar was inaugurated by Prof. S. Subramanian, currently Adjunct Professor, former Professor of Chemistry, IIT Madras, on 07th November 2019 at 09:45 am in the Seminar Hall of the college, presided by the Principal Dr. Suman Alexander. The abstract of the seminar was also released by Prof. S. Subramanian by 10.15 am. During his inaugural speech he appreciated the title of

seminar and mentioned the importance of Green chemistry for a future sustainable development. After that the administrator of the college Rev. Fr. K. Mathewkutty felicitated the function and vote of thanks was delivered by the convener, Dr. Binil P. Sasidharan. There were a total of around 200 participants for the inaugural session which include teachers and interested students from various departments, as well as the registered delegates.

The inaugural session was completed by 10:45 and after a short tea break, the technical session was started. Technical session 1 was started at 11:00 am chaired by Ms. Anju Alex, Asst. Professor of the department. The first lecture of the session was delivered by Prof. S. Subramanian titled “*The evolution of magnetic spectroscopy resonance from physics to chemistry to biology to medicine—an amazing journey*” which was very impressive and a motivational one (11:00 am -12:00 noon). The second lecture of the session was chaired by Dr. Rajesh Kunjanpillai, Asst. Professor of Chemistry, St. Albert’s College, Ernakulam. The lecture was delivered by Dr. Irishi N. N. Namboothiri, Department of Chemistry IIT, Bombay, titled “*organocatalysis: a paradigm shift in asymmetric synthesis*” which showed the diverse asymmetric synthetic strategies using organocatalysts (12:00 noon – 01:00 pm). This inspiring lecture could invite wide attention among the audience.

After the lunch break (01:00 pm – 02:00 pm), the next session was started at 02:00 pm chaired by Dr. Binil P. Sasidharan, convener of the Seminar. The lecture was delivered by Dr. I. Ibnusaud, Professor & Director, IIRBS, M.G. University, Kottayam titled “*Diversity oriented synthesis using garcinia and hibiscus acids*” which inspired the audience though the diverse strategies for the synthesis of pharmacological molecules from readily available natural products of Kerala (02:00 pm - 3:00 pm). After the talk, his interactions with the audience was excellent and he shared a lot of experiences to the students which would benefit them for present academics and their future career. Oral presentations by research scholars from nearby colleges (research centres) and universities were started at 03:20 pm and ended at 05:00 pm. There were 8 presentations during this session and were judged by Dr. Thomas Mathew, Head, Department of Chemistry, St. Johns College Anchal, Kerala and Dr. Shaji Varghese, Assistant Professor, Department of Chemistry, Marthoma College, Thiruvalla, Kerala. There was also a tea break from 03:30-03:45 during this session.

The second day of the seminar was started at 09:30 am and chaired by Dr. Remya R., Asst. Professor of Chemistry. The first plenary lecture of the day was delivered by Dr. S. Baskaran, Institute Chair Professor, Department of Chemistry, IIT Madras titled

“Reversal of polarity by SET oxidation: domino synthesis of heterocyclic ring system” which could show how heterocyclic compounds could be synthesized using greener strategies (09:30 am – 10:30 am). The talk was an inspiration for all the participants. The next lecture was chaired by Ms. Pinky Abraham, Asst. Professor of Chemistry. The lecture was delivered by Dr. Dipankar Srimani, Asst. Professor, Department of Chemistry, IIT Guwahathi, titled *“Application of acceptorless dehydrogenation and hydrogen auto-transfer in sustainable synthesis”* which showed different dehydrogenative coupling reactions and borrowing hydrogen catalysis through organometallic Ru and Mn catalysts (10:30 am-11:30 am). The talk was very motivational and the strategy of production of many important molecules was very interesting to the entire audience. Following this there was a short tea break (11:30 am – 11:45 am).

The next session was chaired by Dr. Manu V., Assistant Professor of Chemistry. The lecture was delivered by Dr. Rajesh Kunjanpillai titled *“Nickel(II) catalyzed Michael type hydroamination of activated olefins using arylamines”* was an inspirational talk which showed the use of catalytic amounts of Lewis acids for the difficult kinds of Michael-type hydroaminations to yield many interesting molecules (11:45 am - 12:45 pm). After the lunch break (12:45 pm – 01:45 pm), the session was started at 01:45 pm chaired by Mr. Shiju Thomas, Assistant Professor of Chemistry. The lecture was delivered by Dr. Jai Anand Garg titled *“Organometallic gold complexes for light emitting applications and energy sustainability using homogeneous catalysts”* which could transfer the idea of organogold compounds for energy applications (01:45 - 02:45). Participants could realize greener strategies for energy applications and it inspired them.

Oral presentations and poster presentations by teachers and students from nearby colleges were started at 02:45 pm and ended at 03:45 pm. There were 12 oral presentations and 12 poster presentations and during this session. The Oral presentations were judged by the same teachers who judged it in the previous day. The Poster presentations were judged by Dr. Manoj E, Assistant Professor, Department of Applied Chemistry, CUSAT. Kochi and Dr. Sunil Sekhar A.C, Department of Chemistry, U.C College, Aluva, Kerala. Ms. Jyothi Lekshmi M.V from Centre for Nano and Material Science (CNMS), Bangalore, Karnataka won the best oral presentation award and Ms. Kripa K. Nair, Department of Chemistry, St. Johns College Anchal, Kerala, won the best poster presentation award.

After a short tea break (03:45 pm – 04.00 pm), there was an interactive session for the participants with the resource persons of the day (04.00 pm – 04:30 pm). Many students, research scholars and teachers got the opportunity to discuss their concerns regarding the subject matters and research activities with the resource persons. The last session of the whole seminar was a valedictory function presided by the Principal Dr. Suman Alexander (04:30 pm – 0530 pm). Participants got the opportunity for presenting their feed backs and all of them appreciated the organizing committee and SERB for executing such a wonderful seminar in the small town of Kottarakara. The vote of thanks was delivered by the Co-convener, Dr. Remya R., Asst. Professor, Chemistry.

We take this opportunity to whole heartedly thank the resource persons came from many parts of the country, the Principal, she was with us throughout the whole seminar, management of the college, participants, presenters, judges of the competitions, various committee members and other supported people.

It is our pleasure to thank the Science and Engineering Research Board (SERB), Govt. of India, for their financial support for conducting this national seminar. We believe that this seminar could make interest and motivation to many students, research scholars and teachers of the region in the lines of bringing true research to solve some of the fundamental problems faced by our society.



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(Convener Signature)

Participation Information:

S. No	Participation in the event	Nos
I	Key-not speakers	7
II	Senior Scientist	5
III	Young Scientist	2
IV	Postgraduate Students	74
V	Undergraduate Students	30
VI	Industry persons and research scholars	15
VII.	Faculties for nearby colleges	18

Photographs Section

1. Inaugural Session



2 General Photograph



3. General Photograph



4. General Photograph



5. General Photograph



6. General Photograph



7. General Photograph



8. General Photograph



9. General Photograph



10. General Photograph



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