

# CHEM FRONTIER

Issue 2, 2021

## in this issue >>>

*New initiatives in 2020-21*

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*Academic activities of Faculties*

*Association Activities*

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*Student activities*



## Vision of the Department

- Integral formation of the students with scientific skills and social responsibilities

## Mission

- To provide facilities for academic excellence, training in soft and professional skills and job placement.
- To enable the students to become agents of social transformation by imparting skills in research.



## Editor-in-Chief

**Dr. S. Rayappan**  
Assistant Professor &  
Head



## Editor

**Dr. M. Amalraj**  
Assistant Professor

## PG Department of Chemistry

**Arul Anandar College (Autonomous)**  
(Reaccredited by NAAC at 'A' Grade with a CGPA of 3.66)  
(DST-FIST Sponsored College)

**(Affiliated to Madurai Kamaraj University)**  
**Karumathur – 625 514, Madurai District.**



## Message from the Editor-in-Chief,

Greetings.....

In the second issue of our Newsletter Chem Frontier, I would like to reflect on the Department's progress over the previous year. Reflecting on 2020-21 academic year, Covid-19 has created unprecedented disruption to education systems across the world. Although there are several obstacles during the last academic year, our faculty and students continue to impress with their resilience and give their best towards the growth of the Department.

Through adversity, the Department of Chemistry has been productive. For the first time, an international virtual webinar, online E-Quiz and Virtual Orientation Program for I year undergraduate students were organized successfully. Programs like Mendeleev's Commemorate Day and National Science Day were celebrated after the college that admits students in offline. Students of Department of Chemistry have actively participated in various virtual

activities and won prizes besides research activities of PG students by receiving internship, Best Poster Presentation Award, Best Presentation Award and Innovator Research Award.

In other exciting news, Prof. Dr. A. R. Venkitaraman Scholarship Program was initiated to provide financial assistance for postgraduate students of Department of Chemistry and two of postgraduate students are benefited for this academic year.

Despite the challenges posed by the pandemic, the students and faculties of Department of Chemistry performed well in many aspects. Moving ahead, we hope to stay connected with our alumni and well-wisher of the Department and this newsletter is part of that effort. We look forward to hearing from you in the future, and until then, we will strive to be ever better.

**Dr. S. Rayappan**  
(Editor-in-Chief)

# CHEM FRONTIER issue 2, 2021

## Highlights of the Department

- Offers UG and PG degree programmes
- Well qualified Faculties with Ph.D. and NET/SET Qualification
- Well-equipped UG and PG laboratories
- Organizing conferences, seminars, webinars and invited lectures.
- Orientation Program for Fresher
- Conducting NET/SET/GATE/JAM coaching classes
- Remedial classes for weak students
- Industrial visit for final year UG and PG students
- Celebrating National Science Day and Mendeleev Commemorate Day
- Conducting CHEMFEST (Inter-collegiate competitions) for students
- Organizing Alumni Meet every year
- Encouraging the students to participate in co-curricular activities
- Financial assistance to poor students by Alumni and Faculties
- Endowment Fellowship offered by Faculty

## New initiatives in 2020-21

- Release of the First issue of Newsletter 'Chem Frontier'
- Inauguration of Prof. ARV Fellowship for Post graduate students
- Virtual Webinar and e-Quiz

## Welcoming our New Faculty

**Dr. F. Michael Raj** joined the Department of Chemistry in 2020 as an Assistant Professor. He has completed his under graduation, post-graduation and doctorate degree at Loyola College, Chennai. He has published 8 research articles in reputed journals and also contributed a book chapter. His research area is Electrochemistry and Materials Chemistry.

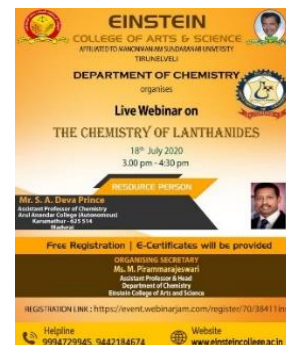


**Mr. M. Murugapandi** who served as Assistant Professor in the Chemistry Department since 2018 got posted as PG assistant through PG-TRB in December 2020. The Department of Chemistry thanks him for his service and wishes him bright career. Mr. K. Ganesan was appointed in place of Mr. M. Murugapandi and the Department of Chemistry welcomes Mr. K. Ganesan to the Department of Chemistry.

## Department of Chemistry welcomes Dr. F. Michael Raj to the Department.

## Activities and Achievements of the Faculties

- ✓ **Dr. S. Rayappan**, Assistant Professor and Head, was invited as the External Examiner for M.Phil Project Viva Voce at Jayaraj Annapackiyam College, Theni District on 18-11-2020. Further, he was setting question paper for external examination of various colleges.
- ✓ **Dr. N. Savitha Devi** published a Research article in **Chemistry Select (2018)** that has been recognized as the **top cited and most downloaded** from India during this academic year 2020-21 by **Wiley International Publications in the year 2018.**
- ✓ **Dr. M. Amalraj** received seed money grant of Rs. 9000/- provided by Arul Anandar College (Autonomous) during December 2020 for the proposal entitled "**Catalytic hydrogen production from sodium borohydride hydrolysis using metal oxide (M = Co, Ni, Cu) / carbon core-shell nanocomposites**".
- ✓ **Mr. S. A. Deva Prince** was invited as the resource person for the Webinar on "**The Chemistry of Lanthanides**" organized by Einstein College of Arts and Science, Tirunelveli on 18-7-2020.
- ✓ **Dr. A. John Jeevagan** along with our M.Sc. students M. Kavitha and S. Jeyaraj published a research article entitled "Green synthesis of silver nanoparticles using Biophytumsensitivum extract and its electrocatalytic activity towards dioxygen reduction" in **Materials Today: Proceedings** with an impact factor of 1.24. (<https://doi.org/10.1016/j.matpr.2021.02.605>).





# CHEM FRONTIER issue 2, 2021

- ✓ **Dr. M. Amalraj** presented his research work entitled “Electrochemical Investigation of Oxygen Evolution Reaction at Metal Oxide (M = Ni, Co & Ni/Co) / Carbon Core Shell Nanocomposite Modified Electrodes” and won the **Best Paper Presentation** in the International Virtual Conference on “*Futuristic Research in Nanotechnology*” Organized by Faculty of Allied Health Sciences, Chettinad Academy of Research and Education, Kelambakkam, Chennai on 25<sup>th</sup> March 2021.
- ✓ **Dr. M. Amalraj** was invited as the resource person for the orientation program and delivered a talk on “**Fundamentals of Science**” organized by Sri Venkateswara College of Technology, Oragadam, Kanchipuram District on 8 September 2020.
- ✓ **Dr. M. Amalraj** has registered for NPTEL/MOOC online courses entitled ‘Symmetry and Group Theory’.
- ✓ The faculties of the Department had attended many webinars and virtual workshops to enrich their knowledge.

materialstoday:  
PROCEEDINGS

Available online 12 March 2021

In Press, Corrected Proof



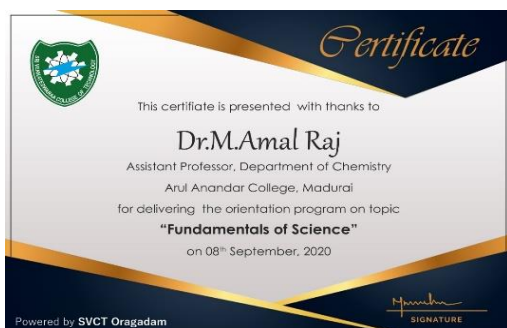
## Green synthesis of silver nanoparticles using *Biophytum sensitivum* extract and its electrocatalytic activity towards dioxygen reduction

M. Kavitha <sup>a</sup>, S. Jeyaraj <sup>a</sup>, P. Muthukumar <sup>b</sup>, A. John Jeevagan <sup>a</sup>

<sup>a</sup> Department of Chemistry, Arul Anandar College, Karumathur, Madurai, Tamil Nadu, India

<sup>b</sup> Department of Chemistry, Bannari Amman Institute of Technology, Erode, Tamil Nadu, India

Available online 12 March 2021.



## Academic Events and Association Activities

Although, all aspects of life in the Department of Chemistry were significantly affected by COVID, the tireless work of faculty and the cooperation of students makes the Department to organize various academic and association activities via online and offline modes.

The hybrid teaching-learning platform with a mixture of virtual and in-person experiences for theory and practical courses were implemented throughout the academic year 2020-21. The teaching learning methodology of odd semester of the academic year 2020-21 was fully gone through via virtual platform whereas for even semester, both virtual and in-person teaching was implemented. Separate Google Classroom and WhatsApp group were created for various classes and the assignments, study materials, e-contents, e-books, recorded video lectures etc., were posted in Google Classroom by the individual faculties.

# CHEM FRONTIER issue 2, 2021

## Release of First Issue of Newsletter “Chem Frontier”

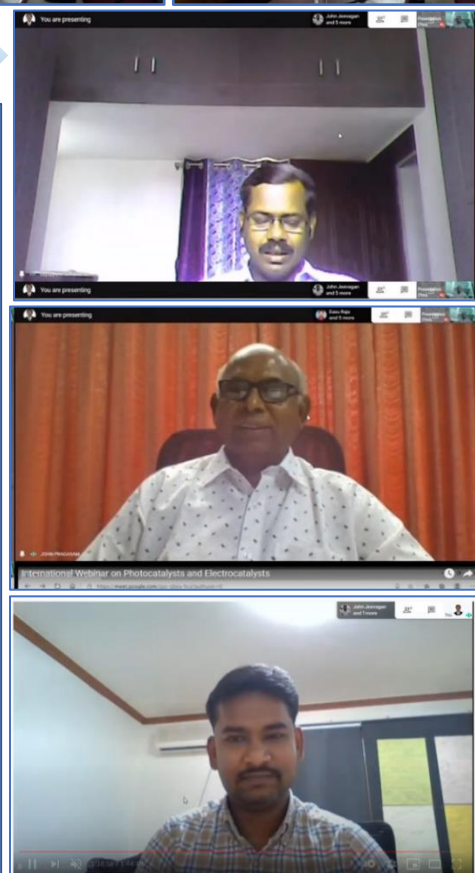
For the documentation purpose and also to highlight the academic activities of the Department, it was decided to release the Newsletter during the academic year 2019-20. The newsletter was prepared for the academic year 2019-20. The newsletter was prepared by **Dr. S. Rayappan** (*Chief-Editor*) and **Dr. M. Amalraj** (*Editor*) along with the help of Faculty of the Chemistry Department. The first issue of the Newsletter ‘**CHEM FRONTIER**’ was released by **Rev. Dr. Godwin Rufus S.J.**, Principal and the first copy was received by **Rev. Dr. John Pragasam S.J.**, Rector on Awards Committee meeting held on 28-10-2020. The newsletter highlights the vision and mission, brief history, best practices, milestones and academic achievements and activities of the faculties, the achievements of the students, the contribution of the retired faculties and alumni. The first issue can be viewed in e-format in the official college website.



## International Webinar on Photocatalysts and Electrocatalysts

In order to facilitate students, faculties and researcher to share and learn knowledge during the pandemic, PG Department of Chemistry, Arul Anandar College (Autonomous), Karumathur, Madurai has organized *International Webinar on Photocatalyst and Electrocatalysts* on 29-07-2020 between 10.00 am – 12.00 pm. **Dr. Prabhakaran Arunachalam**, Assistant Professor, Electrochemical Science Research Chair, Chemistry, Science College, King Saud University, Riyadh – 11451, Kingdom of Saudi Arabia and **Dr. N. Clament Sagaya Selvam**, Research Professor, School of Chemical Engineering, Sungkyunkwan University, South Korea has been invited as Resource Persons. **Dr. S. Rayappan**, Convenor, welcomed the participants and the speakers and also highlighted the dynamics of the webinar. **Rev. Dr. John Pragasam S.J.**, Rector, Arul Anandar College felicitated the webinar and highlighted the need of online platform during the pandemic. **Dr. N. Savitha Devi**, introduced the speakers of the webinar. Dr. Prabhakaran Arunachalam presented the topic entitled “**Advanced Materials for Electrochemical and Photo electrochemical Applications**” and Dr. N. Clament Sagaya Selvam presented the topic entitled “**Electrocatalysis for Sustainable Hydrogen Fuel Generation: Fundamentals and Application**”.

**Dr. A. John Jeevagan**, Organizing Secretary, proposed the vote of thanks. Almost 100 participants attended the webinar via live streaming in YouTube. The whole webinar was live streamed in YouTube (<https://youtu.be/afbQkvcsINk>).



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Karumathur - 625 016, Madurai District.

**International Webinar on Photocatalysts and Electrocatalysts**

**Dr. Prabhakaran Arunachalam**  
Assistant Professor,  
Electrochemical Science Research Chair,  
Chemistry, Science College,  
King Saud University, Riyadh - 11451,  
Kingdom of Saudi Arabia  
Topic: "Advanced Materials for Electrochemical  
and Photo electrochemical Applications"

**Dr. N. Clament Sagaya Selvam**  
Research Professor,  
School of Chemical Engineering,  
Sungkyunkwan University,  
South Korea  
Topic: "Electrocatalysis for Sustainable Hydrogen  
Fuel Generation: Fundamentals and Application"

**Convenor:** Dr. S. Rayappan,  
Assistant Professor and Head,  
PG Department of Chemistry, A.A.C.,  
Karumathur

**Organizing Secretary:** Dr. A. John Jeevagan,  
Assistant Professor,  
PG Department of Chemistry, A.A.C.

**Co-ordinator:** Dr. M. Amalraj,  
Assistant Professor,  
PG Department of Chemistry, A.A.C.



Client Software is presenting

Stanley Meyer Says... Idea - 1996 at USA

'Car runs on Water' Magic!!!

March 20, 1998- at US

Did Stanley Meyer die because he knew how to turn water into fuel?

WATER POWERED Car





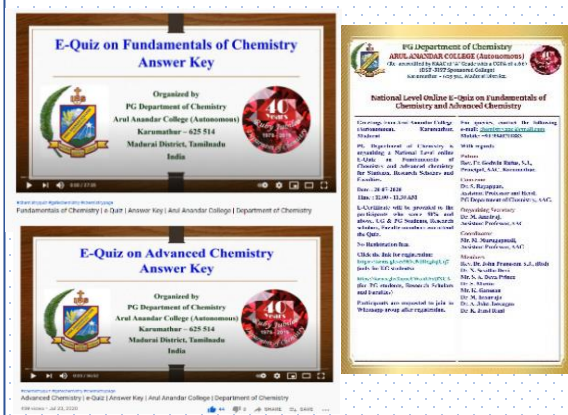
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## Online E-Quiz on Fundamentals of Chemistry and Advanced Chemistry

PG Department of Chemistry, Arul Anandar College (Autonomous), Karumathur, Madurai has conducted *National Level Online E-Quiz on Fundamentals of Chemistry and Advanced Chemistry* via Google forms on 20-07-2020 at 11.00 – 11.30 am. Almost 120 participants in each quiz were attended from all over India. The answer key for both the quiz along with the explanation for each question were prepared in video format by **Dr. M. Amalraj**, Organizing Secretary and has been shared to all participants as YouTube link.

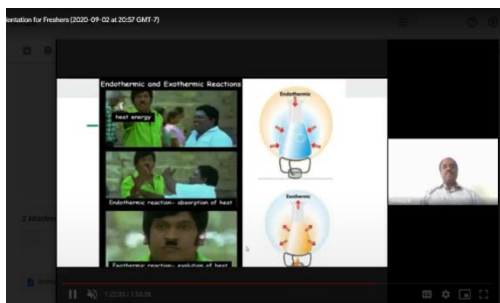
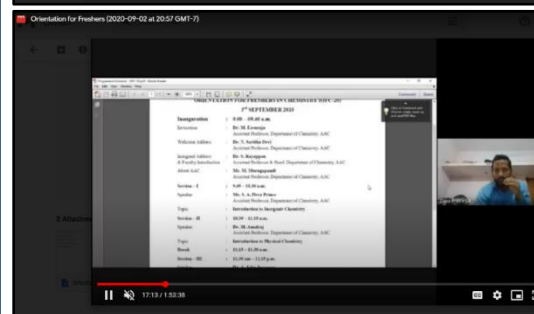
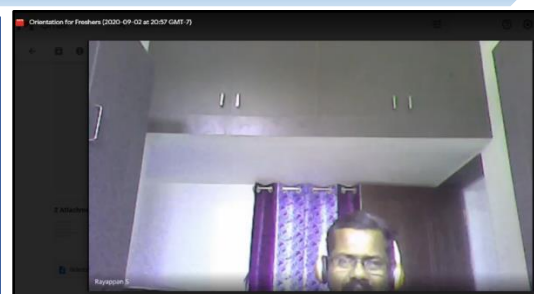
<https://youtu.be/Ddq7775nJY0> for Fundamentals of Chemistry

<https://youtu.be/HTMeShhHm9E> for Advanced the Chemistry



## Orientation Programme for Fresher

The Department of Chemistry organizes Orientation programme for undergraduate and postgraduate students every year. This year, due to COVID situation, orientation programme was organized in virtual mode via Google Meet between 9.00 am and 1.00 pm on 3 September 2020. **Mr. S. A. Deva Prince** and **Dr. A. John Jeevagan** took the initiative in organizing the orientation programme. The orientation program began with an invocation by **Dr. M. Easuraja**. Then, **Dr. N. Savitha Devi**, Assistant Professor welcomed the Department Head, faculties and the students for the orientation programme. **Dr. S. Rayappan**, Assistant Professor and Head delivered the inaugural address by highlighting the significance of B.Sc. Chemistry program and also introduced the faculties of Department to the students. **Mr. M. Murugapandi**, Assistant Professor and also an alumnus of AAC shared his experience about Department of Chemistry, Arul Anandar College. In the first technical session, **Mr. S. A. Deva Prince** delivered a talk on “Introduction to Inorganic Chemistry” and also trained the students how to draw the periodic table. Then **Dr. M. Amalraj** delivered a talk on “Introduction to Physical Chemistry”. **Dr. N. Savitha Devi** highlighted the topic “Introduction to Organic Chemistry”. Finally, **Dr. A. John Jeevagan** talked on “Higher Studies & Job Opportunities in Chemistry”. **Mr. S. A. Deva Prince**, Organizing Secretary, proposed the vote of thanks. An entry level test was also conducted by **Dr. A. John Jeevagan** and **Dr. M. Amalraj** via Google forms.





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## Mendeleev Commemorate Day Celebration

In order to honour Dmitri Mendeleev, PG Department of Chemistry has initiated to celebrate *Commemorate day of Dmitri Mendeleev – The Father of Periodic Table* from 2020. In this year, Commemorate day of Dmitri Mendeleev program was organized on 10-2-2021 at 11.30 am at AV hall, Arul Anandar College, Karumathur. The programme began with an invocation followed by the welcome address by **Dr. S. Rayappan**, Assistant Professor and Head. The inaugural address was delivered by **Rev. Dr. John Pragasam S.J.**, Rector, AAC and highlighted the contribution of Dmitri Mendeleev in developing the periodic table. He also thanked the Guest of Honour **Dr. S. Ponnudurai**, Retired Professor, Department of Chemistry, H.H. The Rajah's College, Pudukkottai and his spouse for inaugurating the Prof. ARV scholarship programme for PG students. Then, the Guest of Honour **Dr. S. Ponnudurai** motivated the students with his inspirational words and highlighted the reason for starting the scholarship programme. Then, **Dr. M. Amalraj**, Assistant Professor, AAC gave a special lecture on the topic entitled “*Why Mendeleev is Father of Periodic Table?*” and highlighted the extraordinary prediction of Mendeleev in formulating the periodic table. Then **Mr. S. A. Deva Prince**, Assistant Professor, AAC gave a special lecture on “*An Introduction to Periodic Table*” and explained how to write the modern periodic table and to classify various elements into s, p, d and f block elements.



## Inauguration of Prof. ARV Scholarship

A new scholarship program was initiated for M.Sc. Chemistry Students by **Dr. Mohamed Ibrahim** Ph.D., Senior Scientist, USA, **Dr. Prapha Ibrahim**, Ph.D., Senior Scientist, USA, **Prof. S. Ponnudurai**, HOD of Chemistry (Retired), H. H. Rajah's College, Pudukkottai – 622 001 on 15-2-2021 to honour his professor **Prof. Dr. A. R. Venkitaraman**, Professor and Head (Retired), Department of Chemistry, The American College, Madurai.

**Rev. Dr. Godwin Rufus S.J.**, Principal, Arul Anandar College welcomed and thanked Prof. S. Ponnudurai and his spouse for the campus for inaugurating **Prof. Dr. A. R. Venkitaraman** Scholarship. **Dr. S. Rayappan**, Assistant Professor and Head, introduced the two students deserved for receiving the scholarship to Prof. S. Ponnudurai. Then, Prof. S. Ponnudurai and his spouse were honoured with a shawl by Rev. Dr. Godwin Rufus S.J., and Dr. N. Savitha Devi, respectively. Further, **Prof. S. Ponnudurai** shared why he initiated Prof. ARV scholarship and also explained why he choose the students of Arul Anandar College for this scholarship. Then, he gave a cheque each of **Rs. 25,000/-** to **Mr. V. Sunildass** and **Ms. V. Alphonsa Rainy**, I M.Sc. Chemistry, Department of Chemistry, Arul Anandar College. Finally, **Dr. S. Rayappan**, thanked Prof. S. Ponnudurai, his spouse, and the management to inaugurate the scholarship programme. Rev. Fr. Anbarasu, Vice Principal, Dr. A. Sundararaj, Deputy Principal, Dr. Duraisingam, Vice Principal, Mr. S. A. Deva Prince and Dr. M. Amalraj were present during this inauguration of scholarship programme.





# CHEM FRONTIER issue 2, 2021

## Science Day Celebration 2021

Chemistry Association, Department of Chemistry organizes National Science Day Celebration at February 28, every year since 2018. This academic year, the celebration of National Science Day was coupled with Women's Day celebration on 9-3-2021. **Prof. Dr. V. S. Vasantha**, Registrar, Madurai Kamaraj University, Madurai was invited as guest of honour for the programme. The programme began with an invocation. **Dr. N. Savitha Devi**, Assistant Professor, Department of Chemistry delivered the welcome address. **Rev. Dr. John Pragasam S.J.** Rector felicitates the program and introduce the guest of honour. **Dr. A. Sundararaj**, Deputy Principal honoured the guest of honour with a memento. Then, **Prof. Dr. V. S. Vasantha** delivered her lecture on Biosensors. In addition, she highlighted the inspiring women in science to motivate the girl students to go for higher studies and explained the various job and higher education opportunities with scholarships available in India. **Dr. M. Amalraj** delivered the vote of thanks.



## Science Day Celebration 2021

Department of Chemistry is happy and proud to announce that our students are good in academic as well as co-curricular activities even during the pandemic period. The Department along with the students have strived harder for excellence and have achieved positive and brilliant results in majority of our activities.

## Internship Program – UGC Stride Fellowship

**Mr. R. Rahul**, II M.Sc. Chemistry has applied for **UGC-STRIDE-IRCECCB 1<sup>st</sup> Internship for Post-Graduate Students – 2020-21** at Madurai Kamaraj University, Madurai. He got selected for the Studentship of ₹ 10,000 for the entire project entitled “*Facile synthesis of visible light driven Sn<sub>3</sub>O<sub>4</sub> supported bimetallic PdNi co-catalyst and its photocatalytic activity for hydrogen production*” under the guidance of **Dr. A. John Jeevagan**. He has carried out his project work at Madurai Kamaraj University and Arul Anandar College during February 2021 to April 2021.

From: ugc stride <ugcstride@nic.in>  
Date: 16 February 2021 at 12:55:47 PM IST  
To: ugc stride <ugcstride@nic.in>  
Subject: Internship Programme under UGC-STRIDE/IRCECCB, MKU-Reg

Dear Student,

Coverage from UGC-STRIDE/IRCECCB, MKU

**Congratulations!** We are happy to inform you that your application has been shortlisted for participation in the “UGC-STRIDE-IRCECCB 1<sup>st</sup> Internship for Post-Graduate Students – 2020-21”. This Internship programme will provide comprehensive support including laboratory facilities, chemicals and consumables for the period of 3-3 months and within this time period the proposed work needs to be completed.

The selected candidates should carry out the proposed research work at the resource centre at Madurai Kamaraj University campus. Studentship of ₹ 10,000 (for the entire project period) will be directly credited to the student's personal account upon undertaking the project in the centre. Food and Accommodation will be arranged to the needed candidates upon prior request with nominal charges. Proposed project should be completed and the final report has to be submitted during the month of April, 2021. Certificate will be provided only for the participants who have successfully submitted the final report.

In this regard, kindly confirm your participation in this Internship programme by replying to this mail. A Bonafide Certificate from your Head of the Department should be submitted on or before 17.02.2021. We are looking forward for your active participation in the coming 1<sup>st</sup> Internship for Post-Graduate Students – 2020-21.

Regards,

Prof.S.Chandrasekaran,

Co-ordinator, UGC STRIDE Programme,

Dept. of Plant Sciences,

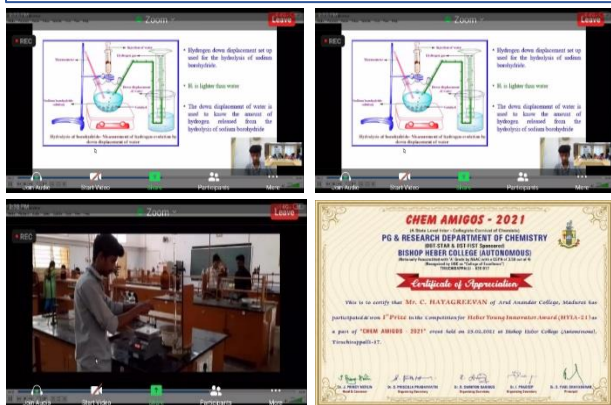
School of Biological Sciences,

Madurai Kamaraj University,

Madurai - 625 021.

## Best Innovator Research Award

**Mr. C. Hayagreevan**, II M.Sc. Chemistry has participated **CHEM AMIGOS 2021** online virtual e-competition conducted by PG & Research Department of Chemistry, Bishop Heber College, Trichy as part of National Science Day celebration. He has presented a video to highlight his project work entitled “*Catalytic hydrogen production using sulfonated silica for sodium borohydride hydrolysis*”. The video was displayed during the virtual National Science Day celebration and won I prize. **Mr. C. Hayagreevan** received **Best Innovator Award** and also received the cash prize of Rs. 3000/.



## Best Poster Presentation Award

**J. Nishonth Antony** (19CHE511, M.Sc) won the **Best Poster Presentation Award** for presenting his project work entitled “*pH responsive Anthocyanin Filter Paper as a Visual Indicator for Volatile Gases and Food Deterioration*” in the International Virtual Conference on Futuristic Research in Nanotechnology organized by Chettinad Academy of Research and Education, Kelambakkam-03, Tamil Nadu, India on 25.03.2021.



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## Research Article Published by Students

Our M.Sc Students, **Ms. K. Kavitha** (18CHE505), **Mr. S. Jeyaraj** (18CHE503) has published their M.Sc. project work as a research paper entitled "*Green synthesis of silver nanoparticles using Biophytumsensitivum extract and its electrocatalytic activity towards dioxygen reduction*" in *Materials today: Proceedings*, (<https://doi.org/10.1016/j.matpr.2021.02.605>) under the guidance of **Dr. A. John Jeevagan**.

## Best Paper Presentation by Students

Our B.Sc. Student **Ms. S. Snega** (18CHE140) has participated and secured **I prize in Paper Presentation** Contest in State Level ChemFest 2020 organized by the Department of Chemistry, Sri Parasakthi College for Women, Coutrallam on 24.10.2020.



## Internship Program at IISER, Kolkatta

Our student **Mr. V. Sunil Dass** (20CHE522) got selected for the **Summer Research Program 2021** at IISER Kolkatta under the guidance of Prof. S. Raja Sanmugam, IISER, Kolkatta. ([Summer Research Programme 2021 \(iiserkol.ac.in\)](http://Summer_Research_Programme_2021(iiserkol.ac.in))). The internship program was carried out via online mode and the student has learned about the polymer chemistry and its application. He has also submitted a internship report to IISER, Kolkatta.

From: Summer Research Programme <[summer\\_research@iiserkol.ac.in](mailto:summer_research@iiserkol.ac.in)>  
Date: Thu, 13 May, 2021, 11:34 am  
Subject: [URGENT] Summer Research Program (through online mode) 2021 at IISER Kolkata: communicate to your supervisor  
To: Summer Research Programme <[summer\\_research@iiserkol.ac.in](mailto:summer_research@iiserkol.ac.in)>  
Cc: Susmita Roy <[susmita.roy@iiserkol.ac.in](mailto:susmita.roy@iiserkol.ac.in)>, Arnab Kumar Sadhukhan <[arnab\\_sadhukhan@iiserkol.ac.in](mailto:arnab_sadhukhan@iiserkol.ac.in)>

Dear candidate,

Congratulations again for your selection for IISER KOLKATA Summer Research Program 2021!

Please note that YOU MUST email your supervisor (see this for details: [https://www.iiserkol.ac.in/~summer\\_research/result.php](https://www.iiserkol.ac.in/~summer_research/result.php)) that you agree to join him/her and DO NOT reply to this email-id ([summer\\_research@iiserkol.ac.in](mailto:summer_research@iiserkol.ac.in)). Otherwise, the supervisor has no way to know that you are planning to join him/her in the programme. Consequently, your candidature will be canceled as the supervisor will start looking for an alternative candidate.

So, please email your supervisor immediately (if you have not done it already)!

Stay safe,  
Best wishes,  
Dr. Kripabandhu Ghosh and Dr. Susmita Roy

Coordinators, Summer Research Program 2021

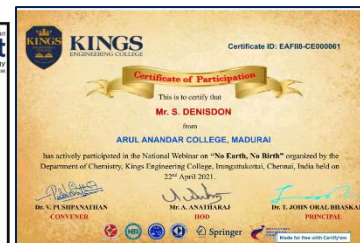
## MOOC and vitural programs

Our students have registered the online courses conducted by **MOOC/NPTEL**. The list of students who registered for MOOC/NPTEL courses: Ms. Alphonsa Rainy (20CHE504), Ms. J. EvangalineJenet (20CHE507), Ms. K. Joniyo Deepthi (20CHE510), Ms. J. KirubaAlency (20CHE512), M. Sambika (20CHE518), G. Samuel Joseph (20CHE519) and Mr. M. Manoj (20CHE524).

Many students have attended virtual programs like webinar, online courses conducted by various institutes, online workshop and online E-Quiz besides their regular academic activities.

## Sports activites

In addition, our students have won many events in the intradepartmental sports competitions particularly won **runner up** in **Cricket** event conducted at Arul Anandar College.

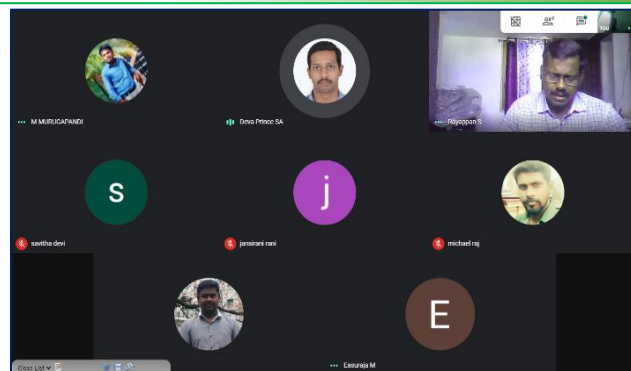




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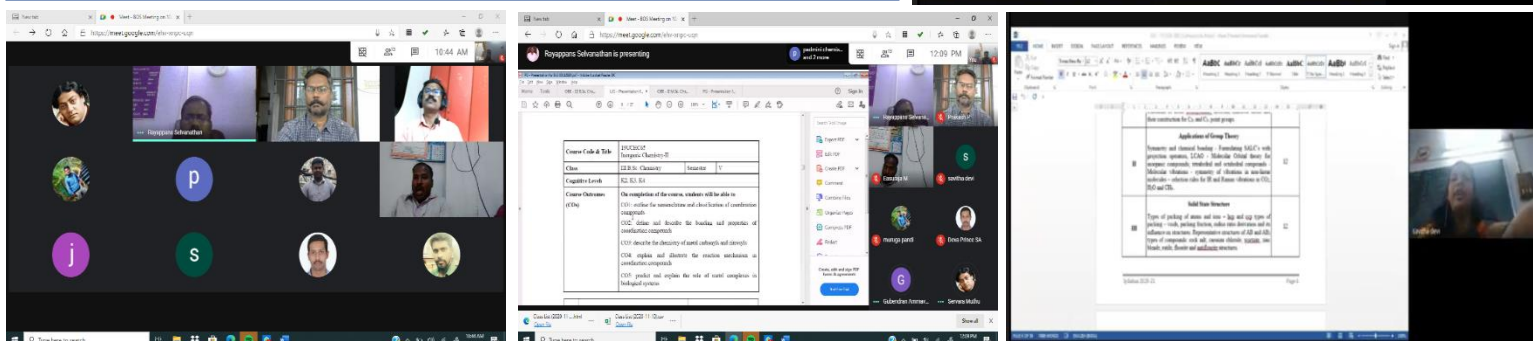
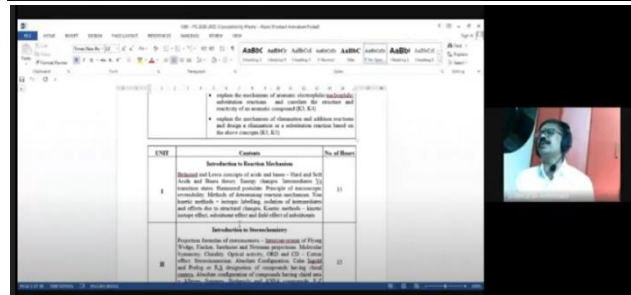
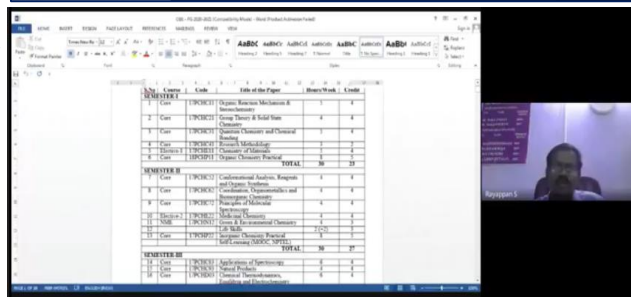
## Department Meeting

In order to plan the academic and association activities, several meetings were arranged via virtual mode and also at the Department during the academic year 2020-21. Department meeting were held on 22-07-2020, 10-08-2020, 14-08-2020, 22-08-2020, 25-09-2020, 24-10-2020 and 05-11-2020 via virtual mode (Google Meet) and 8-2-2021, 12-2-2021, 8-3-2021 and 19-4-2021. Dr. S. Rayappan convened the Department and the minutes of the meeting were recorded by Dr. M. Amalraj.



## Board of Studies Meeting

Besides the Department meetings, BoS meeting was also held in online on 14-10-2020 to revise and approve I & II semester of PG programme under OBE pattern for students admitted from the academic year 2020-2021 onwards. On 10-11-2020, BoS meeting was organized to revise and approve the syllabus for the V & VI semester of UG programme under OBE pattern for students admitted from the academic year 2019-2020 onwards and III & IV semester of PG programme under OBE pattern for students admitted from the academic year 2020-2021 onwards. **Dr. V. Padmini**, (University Nominee), MKU, **Dr. A. Gubendran**, SN College, **Dr. P. Prakash**, Thiagarajar College and **Mr. B. Servaramuthu**, Vivekananda College came as external experts and gave their valuable inputs. **Dr. S. Rayappan** acted as the chair person for the BoS meetings.



## e-Contents

**Dr. M. Amalraj** created a YouTube channel for posting the e-contents in various topics of chemistry. The YouTube channel link is [https://www.youtube.com/channel/UC2\\_2s7NZoNYvSM8QBNTvuRw](https://www.youtube.com/channel/UC2_2s7NZoNYvSM8QBNTvuRw). He has prepared e-contents on Introduction to Electrochemistry, Nernst Equation, Equilibrium constant, Conformations of Cyclohexane, Baeyer Strain theory, Conformational Isomerism, Chemistry Meme videos and etc.,

**Dr. M. AMALRAJ**

**Angle Strain in Cyclohexane**

In cyclohexane, C-C-C bond angle is 120°. This revealed that normal tetrahedral angle of 109.5° between any two bonds is expanded to 120°.

**θ - Angle strain**

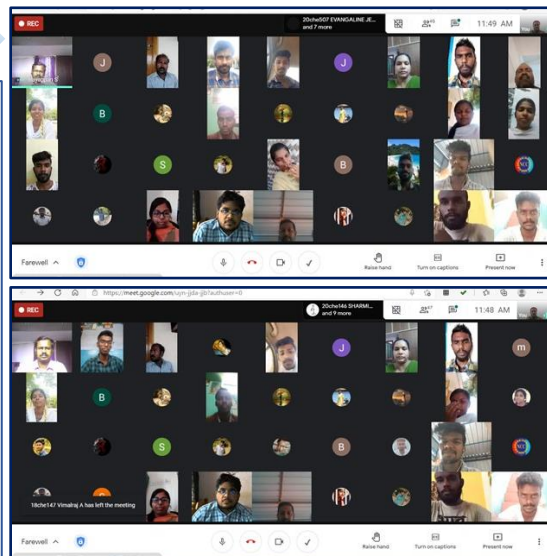
Calculation of Angle strain

$$\theta = 120 - \theta = 109.5$$
$$2\theta = 109.5 - 120$$
$$\theta = -10.5 / 2$$
$$\theta = -5.25^\circ (\text{Expansion})$$

# CHEM FRONTIER issue 2, 2021

## Virtual Farewell for II M.Sc. and III B.Sc.

The farewell meet for outgoing students was arranged virtually on 05-05-2021 at 10 am, since mass gathering was restricted to avoid the spread of COVID-19. I M.Sc. and I and II B.Sc. students took the initiative to conduct the farewell celebration to outgoing students. The meeting begins with prayer and then, **Dr. S. Rayappan**, Head welcomed the students, shared his experience with outgoing students and also congratulated them to have bright future. Then the faculties of the Department shared their experience and moments of II M.Sc. and III B.Sc. students during their stay at Department. Then the outgoing students shared their experience at Arul Anandar College and thanked all the professors for the support. Video prepared by **Mr. Gokula Krishnan** (II B.Sc.) was displayed as a token of love for their seniors. Finally, the meeting was concluded with the vote of thanks proposed by **Dr. M. Amalraj**.



## Placement Details

The post-graduate students of Arul Anandar College find jobs in reputed companies. The following students who completed studies during 2019-20 academic year in the Department of Chemistry got placed in various companies during 2020-21. In addition, Mr. Jeyaraj, joined at VIT for doing his doctoral degree.

S. No	Name of the Student	Name and Address of the Company	Month & Year
1	Mr. Nagarajan	SPIC, Tuticorin	Mar, 2021
2	Mr. Tamil Selvam	Piramal Pharma Solutions, Chennai	Mar, 2021
3	Mr. R. Sethupathi	CECRI, Karaikudi	June 2021
4	Mr. S. Denisdon	Agri Nutrition, Trichy	Aug, 2021

## Alumni Update Form

### Are you an Alumnus of the Department?

We are very interested in hearing about the accomplishments of our alumni in the Department of Chemistry. If you have news to share you can contact the Department via e-mail ([chemistry@aacni.edu.in](mailto:chemistry@aacni.edu.in)) so that we can share your information with the rest of our readers.

Let us know what you have been up to since leaving Arul Anandar College by filling out our alumni form: Google form link.

<https://forms.gle/2tdBPrvp5P5WnywT6>

We look forward to hearing from you!

## Department Contact

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Dr. S. Rayappan  
Assistant Professor and Head  
(Editor-in-Chief)


Dr. M. Amalraj  
Assistant Professor  
(Editor)

## Members of the Editorial Board

Dr. N. Savitha Devi (Member)  
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Dr. K. Jansi Rani (Member)  
Dr. A. John Jeevagan (Member)  
Dr. F. Michaelraj (Member)

***“We think this newsletter just says a lot about Chemistry between Students and the Department!”***

Department of Chemistry thanks the management of Arul Anandar College for their extensive support and guidance for the benefit of students as well as for the growth of the Department by taking many initiatives even during the pandemic.

Think like a  
**Proton**  
  
and stay  
**Positive**





# CHEM FRONTIER issue 2, 2021

## B.Sc. Chemistry (2018-2021)



## M.Sc. Chemistry (2019-2021)



Chemistry can be good or bad thing. Chemistry is *good* when you *make love* with it. Chemistry is *bad* when you *make crack* with it.





# CHEM FRONTIER issue 2, 2021

## Faculty of the Department



**Dr. S. RAYAPPAN**  
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Assistant Professor & Head



**Dr. M. EASURAJA**  
M.Sc., M. Phil., Ph.D.  
Assistant Professor



**Dr. N. SAVITHA DEVI**  
M.Sc., Ph.D.  
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**Dr. K. JANSI RANI**  
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**Mr. S. A. DEVA PRINCE**  
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