

### **Directorate of Outcome**

## Outcome Report(Event/Activity Organized @ AUH)

#### 1. General Information

Date: 20th April, 2022

**Event Type:** Seminar Series

**Event Title: "Tuning The Catalytic Efficiency of Transition Metal Complexes through Peripheral** 

Ligand Modification".

**Event Theme:** Research Seminar

Venue: D-block , Room no. -309

Web/Video Link of the Event :Offline Event

Organized by: Department of Chemistry, Biochemistry and Forensic Sciences

**Event Level:** Institutional

Student Participation\*: No. of Students from AUH (Course wise):-22 M.Sc (AC); 5M.Sc(FS)

Faculty Participation\*: No. of Faculty Members from AUH (Deptt. wise):- 1 Participation from outside AUH\*: No. of Students & Faculty Members-NIL

(Enclose attendance sheets in given format)

Event Coordinator(s) with designation: Dr.DiptiVaya (Associate Professor)

Details of Expert/Speaker/Resource Person/Judge:

| S | SN . | Country<br>Name    | Expert<br>Name          | Organi<br>zation<br>Name               | Designation                                   | Specializatio<br>n           | Contac<br>t No.    | E-mail<br>Id            | CV of<br>Expert<br>(Yes/<br>No) | Major Areas<br>where Amity<br>can<br>Collaborate<br>with expert | Recom<br>mended<br>by |
|---|------|--------------------|-------------------------|--|---|------------------------------|--------------------|-------------------------|---------------------------------|---|-----------------------|
|   | 1    | <mark>India</mark> | Dr.Gyansh<br>warr K Rao | Amity<br>Univer<br>sity<br>Haryan<br>a | Assistant<br>Professor,<br>CBFS, ASAS,<br>AUH | Organometal<br>lic Chemsitry | 6393<br>230<br>849 | gkrao r@gg n.ami ty.edu | NA                              | NA  | <mark>NA</mark>       |

Criteria of Inviting Resource Person/Judge/Speaker/Judge (Write a paragraph): The resource person was invited because he has excellence knowledge in his field.

Were the guest known in advance and if yes, from what previous interaction (Write a paragraph)? Yes, Dr.Gyaneshwar K Rao is known in advance to the students. He is an Assistant Professor, CBFS, ASAS,

**AUH** 

#### Outcome of the Event with Time Lines (Proposed/Achieved)

| Envisaged Outcome   | Tangible/<br>Intangible | Achieved/<br>Proposed | Target date & responsibilities (if proposed ) | Details of outcome |  |
|---|-------------------------|-----------------------|---|--------------------|--|
| 1. Outcome related to Academia (  | Connect                 |                       |   |                    |  |
| a) Collaborations for Research<br>Papers/Conference Papers/ Book<br>Chapter etc.  | NA                      | NA                    | NA  | NA                 |  |
| b) Collaborations & MOU for<br>Research Guidance [PhD, PG &<br>UG (summer training,<br>Dissertation)] & Projects/Use of<br>Instruments etc. | NA                      | NA                    | NA  | NA                 |  |
| c) Collaboration for Funded Projects  | NA                      | NA                    | NA  | NA                 |  |
| 2. Outcome related to Industry Connect  |                         |                       |   |                    |  |

| a) Placement                             | NA           | NA           | NA       | NA                             |
|--|--------------|--------------|----------|--------------------------------|
| b) Collaborations for Research Papers    | NA           | NA<br>NA     | NA       | NA NA                          |
| c) Collaborations & MOU for              | NA<br>NA     | NA<br>NA     | NA       | NA<br>NA                       |
| Research Guidance [PhD, PG &             | 1421         | 1471         | 1171     | 1471                           |
| UG (summer training,                     |              |              |          |                                |
| Dissertation)] & Projects/Use of         |              |              |          |                                |
| Instruments                              |              |              |          |                                |
| d) Collaboration for Funded Projects     | NA           | NA           | NA       | NA                             |
| 3. Outcome related to Society Out        | reach_       |              |          |                                |
| a) Benefit to society in terms of Health | NA           | NA           | NA       | NA                             |
| & Hygiene                                |              |              |          |                                |
| b) Benefit to society in terms of        | NA           | NA           | NA       | NA                             |
| Education                                |              | <u> </u>     |          |                                |
| 4. Outcome related to Students Le        | arning &Groo | ming         |          |                                |
|  |              |              |          | Students learnt and understood |
|  |              |              |          | about the tuning the catalytic |
|  |              |              |          | efficiency of Transition metal |
|  |              |              |          | complexes through peripheral   |
|  |              |              |          | ligand modification. They      |
|  |              |              |          | - C                            |
|  |              |              |          | learnt about the               |
|  |              |              |          | Organochalcogen ligated        |
|  |              |              |          | palladium II complexes in      |
|  |              |              |          | catalysis. They also learnt    |
|  |              |              |          | about Suzuki-Miyaura reaction. |
|  |              |              |          | Then they learnt about nature  |
|  |              |              |          | of catalysis, challenges faced |
|  |              |              |          | by petroleum based economy.    |
|  |              |              |          | They also understood about     |
|  |              |              |          | challenges of practical        |
|  |              |              |          |                                |
|  |              |              |          | applications.                  |
|  |              | 5. <u>Ar</u> | ny other |                                |
| NA                                       |              |              |          |                                |

#### 2. **Event Report along with glimpses of the event**(*Photographs*)

Seminar started with the introduction of speaker. The seminar "Tuning the catalytic efficiency of Transition metal complexes through peripheral ligand modification" held on 20 April 2022 by Dr. Gyaneshwar K Rao.

Students learnt and understood about the Organochalcogen ligated palladium (II) complexes in catalysis. They learnt about Suzuki - Miyaura reaction. They are commonly referred to as the Suzuki cross-coupling reaction. Palladium catalyzed cross-coupling between organoboron compounds and organic halides leading to the formation of carbon-carbon bonds.

Students also learnt about synthesis of Palladacyales. They also learnt about nature of catalysis, mercury poisoning test, PPh3 poisoning test, Three- phase test. Then they learnt about challenges of

petroleum based economy. Solution to the energy challenge is low GHG, a carbon neutral and sustainable energy supply. Carbon dioxide concentration reached a maximum of 416 ppm in 2021.

Students also understood about the challenges for practical applications like over potential, solubility of carbon dioxide, product selectivity etc

- 2.1 Future plan for utilizing the contacts developed with the Invited Guests: NA
- 2.2 Budget of the Event(Budget Sanctioned, Total Expenditure&Revenue Generated): NA
- 2.3 Details of Awards if Any:NA

| Awardee Details | Award / Position /<br>Recognition Secured | Title of Innovation/ Start-up<br>Secured the Award /<br>Recognition | Award/Recognition/<br>Achievement Received for |
|-----------------|---|---|--|
|                 |   | recognizion   |  |

3.8 Photographs with caption (also share high resolution JPEG files of photographs)

ESTABLISHED BY THE HARYANA ACT NO.10 OF 2010 AND UGC RECOGNISED . LOCATED AT GURGAON (MANESAR)

# Contemporary Research Endeavors The Seminar Series

"Tuning the Catalytic Efficiency of Transition Metal

**Complexes Through Peripheral Ligand Modification**"

Speaker Dr. Gyaneshwar K Rao, CBFS, ASAS, AUH

**Organized by: Department of Chemistry, Bio-Chemistry** 

and Forensic Sciences, ASAS

Venue: D-309

Date: 20th April, 2022 (Wednesday)

Time: 3:50- 4:45 pm

#### **Audience**

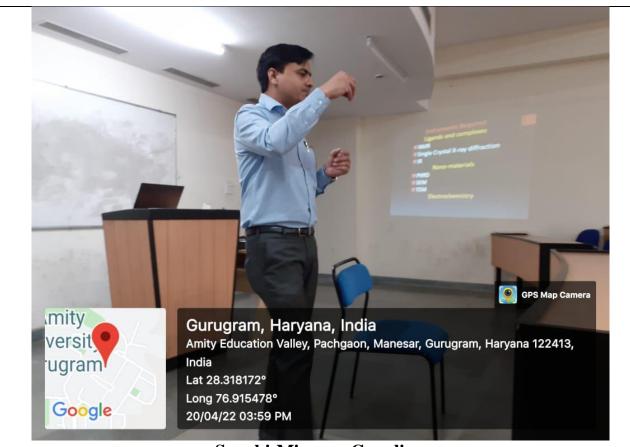
Compulsory to all students of M.Sc. Applied
Chemistry, M.Sc. Bio Chemistry and M.Sc. Forensic
Science (Second Semester)
Others are welcome to attend

Event Flyer



Introduction





## Suzuki-Miyaura Coupling

| S.No. | Participant Faculty Name | School | Designation         |
|-------|--------------------------|--------|---------------------|
| 1     | Dr.DiptiVaya             | ASAS   | Associate Professor |
|       |                          |        |                     |
|       |                          |        |                     |

| S.No. | Participant Name | School | Programme & Semester |
|-------|------------------|--------|----------------------|
|       |                  |        |                      |
|       |                  |        |                      |
| 1     | Renu             | ASAS   | M.Sc. Chemistry      |
| 2     | Reena            | ASAS   | M.Sc. Chemistry      |
| 3     | Anjali           | ASAS   | M.Sc. Chemistry      |
| 4     | Sushma           | ASAS   | M.Sc. Chemistry      |
| 5     | Anjali           | ASAS   | M.Sc. Chemistry      |
| 6     | SahilRathi       | ASAS   | M.Sc. Chemistry      |
| 7     | Shalu            | ASAS   | M.Sc. Chemistry      |
| 8     | DikshaGahlot     | ASAS   | M.Sc. Chemistry      |
| 9     | Sanju Sharma     | ASAS   | M.Sc. Chemistry      |
| 10    | Sunil            | ASAS   | M.Sc.Chemistry       |
| 11    | Geeta            | ASAS   | M.Sc. Chemistry      |
| 12    | Jatinyadav       | ASAS   | M.Sc. Chemistry      |
| 13    | Mansi            | ASAS   | M.Sc. Chemistry      |
| 14    | Sonam            | ASAS   | M.Sc. Chemistry      |
| 15    | Priyanshu Vats   | ASAS   | M.Sc. Chemistry      |
| 16    | Ameer aalam      | ASAS   | M.Sc. Chemistry      |

| 17 | Chandankumar  | ASAS | M.Sc. Chemistry        |
|----|---------------|------|------------------------|
| 18 | Lakshay       | ASAS | M.Sc. Chemistry        |
| 19 | Kuldeep       | ASAS | M.Sc. Chemistry        |
| 20 | Akshay        | ASAS | M.Sc. Chemistry        |
| 21 | Ashish ahlwat | ASAS | M.Sc. Chemistry        |
| 22 | Nikita        | ASAS | M.Sc. Chemistry        |
| 23 | Thmoas        | ASAS | M.Sc. Forensic Science |
| 24 | Shuruthika    | ASAS | M.Sc.Forensic Science  |
| 25 | Aastha        | ASAS | M.Sc.Forensic Science  |
| 26 | Raghav        | ASAS | M.Sc.Forensic Science  |
| 27 | Ankita        | ASAS | M.Sc. Forensic Science |
|    |               |      |                        |



Dr. Supreet Outcome Coordinator, ASAS

A tul Traleur



Prof. Atul Thakur Head of Institute, ASAS