

DILEEP PALADUGU

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EDUCATION

BS-MS dual degree in Chemical Sciences

2017 - 2022

Indian Institute of Science Education and Research, Berhampur, India.

CPI: 7.82/10

Higher Secondary School in Chemistry, Physics, Mathematics

2014 - 2016

Vikas Junior College, A.P., India.

Percentage: 96.7 %

Secondary School

2014

APSWR School & Junior College Chillakur, A.P., India.

CPI: 9.5/10

RESEARCH INTERESTS

Organic synthesis, Total synthesis of natural products, Catalysis, Photo chemistry & drug delivery .

RESEARCH EXPERIENCE

Project associate-I | **Practical organic synthesis harnessing light & Synthesis of Photoresponsive drug delivery system**

CSIR-IICT | PI: Dr Avijit Jana

July 2022 – Present

- This project has involved the synthesis of an organic photocatalyst and its application in organic transformations.
- This project also included the synthesis of fluorescent organic nanoparticles for real-time monitoring of Anticancer drug release.
- Designed fluorescent organic nanoparticle was synthesized and photophysical & chemical studies were conducted. Invivo and Invitro studies are also completed. Currently manuscript is under process
- Hands-on experience in handling and analyzing UV-Vis Spectrophotometer, FT-IR Spectrophotometer, and DLS.

Master's Dissertation | **Synthetic studies towards natural products Berkeley Lactone-I & Illoresorcyl-I.**

IISER Berhampur | PI: Dr Thirupathi Barla

May 2021 – May 2022

- Synthesized and characterized around 20 organic compounds by utilizing various reactions such as Sharpless asymmetric hydroxylation, Wittig reaction, decarboxylative cross-coupling, DIBAL-H reduction, Stille coupling, Swern oxidation, Pinnick oxidation, Nozaki-Hiyama-Kishi, Vilsmeier-Haack reaction, LDA coupling, Mitsunobu Reaction, protection and deprotection reactions.
- Hands-on experience in handling and analyzing NMR, HPLC, and IR techniques.
- Participated in the group meetings weekly.
- Learned to work as a team player and individual.

Summer Project | **Literature Review on Gold catalyzed Enantioselective C-H functionalization of Indoles.**

IISER Bhopal | PI : Dr Nitin T. Patil |

June 2021 – July 2021

- Written a short review which consists of examples of gold-catalyzed enantioselective C-H functionalization of indoles with allenes, allylic alcohols and aldehydes as electrophiles since 2005 to accentuate the strengths and limitations of the adopted methods.
- Presented a talk on Gold catalysis.

- Studied counting problems in algebra.

SKILLS

- **Instrumentation Skills:**

NMR, IR, HRMS, HPLC, Dynamic Light Scattering (DLS), UV-Vis Spectrophotometer & FT-IR Spectrophotometer.

- **Computer Skills :**

Chemistry-ChemDraw, MestreNova
General-Endnote, MS Office, OriginPro

- **Languages:**

English- IELTS-6.5 (fluent), Hindi (Basic), Telugu (Native)

RELEVANT COURSEWORK

Organic Chemistry I, Organic Chemistry II, Advanced Organic Chemistry I, Advanced Organic Chemistry III, Photochemistry and Heterocyclic Chemistry, Spectroscopy And Its Application In Organic Molecules.

PUBLICATIONS

Title: 8-(1-hydroxyethyl)-perylenemonoimide: An efficient photo removable protecting group (PRPG) for the on-demand spatiotemporal anticancer drug delivery triggered by red light.
{Manuscript with the first authorship is under preparation}.

POSTER PRESENTATIONS

- Poster Presentation at **RMIT-IICT International Workshop 2022** organised by the RMIT CSIR-IICT at CSIR-IICT.
- Poster presentation on Organic Nanoparticles based Photoresponsive Drug Delivery Systems at CSIR-IICT 2022

ADMINISTRATIVE EXPERIENCE

Coordinator of Chemshala (Chemistry club of IISER Berhampur).

IISER Berhampur

May 2021 – May 2022

- Experienced in leadership quality by organizing events with leading a group of members.
- Conducted various events like quizzes, workshops, webinars and article writing competitions.
- Worked as a chemshala core committee member to conduct club events smoothly and enhance the interest & knowledge towards science, especially Chemistry during the period of June 2020 – May 2022.

EXTRA-CURRICULAR ACTIVITIES

- Represented my college in various cultural events in Inter IISER Cultural meet as drummer.
- Organised and participated in various college events and fest.
- Represented my college in various sports events in Inter IISER sports meet as KHO-KHO, Basketball & Chess player.
- Avidly enjoys reading science magazines and talk videos related to organic synthesis.

REFERENCES

- Dr Thirupathi Barla
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