

# DILEEP PALADUGU

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## EDUCATION

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### 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

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

## RESEARCH EXPERIENCE

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### 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 & Ilyoresorcy-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

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- **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

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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

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**Title: 8-(1-hydroxyethyl)-perylene monoimide: 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

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- 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

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**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

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- 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.
- Avidely enjoys reading science magazines and talk videos related to organic synthesis.

## REFERENCES

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- Dr Thirupathi Barla  
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IISER Berhampur, India  
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