

ARKAPRAVA LAYEK

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Personal Info

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Email ID: arkapravalayek97@gmail.com or alayek16497@gmail.com
Language: Bengali (Mother Tongue), English, Hindi
Nationality: Indian
Date of birth: April 16, 1997
Current position: Technical Trainee at Dr. Reddy's Laboratory

Education and Training

MSc in Chemistry (2018-2020): University of Hyderabad (UoH), India.

MSc thesis (January 2020 – June 2020) Topic: Synthesis of Cyclopalladated Complexes with Some Schiff Bases Derived from 1-Naphthaldehyde and Diamines, supervised by Prof. Samudranil Pal, University of Hyderabad (UoH).

MSc Coursework (CGPA – 8.32): Specialized courses taken include: Advance Inorganic Chemistry, Biological Chemistry, Molecular Spectroscopy, Physical Organic Chemistry, Bio-inorganic Chemistry, Advanced Organic Chemistry, Chemical Dynamics, Chemical Binding, Materials Chemistry, Physical Methods for Inorganic Chemistry, Organic Chemistry Laboratory, Inorganic Chemistry Laboratory, Physical Chemistry Laboratory and Computer Programming Laboratory.

BSc in Chemistry (2015-2018): Banaras Hindu University (BHU), India.

BSc Coursework (CGPA – 9.09): Courses undertaken include: Stereochemistry, Co-ordination Chemistry, Analytical Chemistry, Quantitative & Qualitative Analysis, Thermal Physics, Calculus, Statistics, Optics, Algebra, Modern Physics, Geometry, and Mechanics & Relativity.

Senior Secondary School (2013-2015): Kajora High School, Asansol, Paschim Barddhaman, West Bengal, India.

WBCHSE-XII (senior secondary school certificate) qualified with 91.0% securing top 1% among 0.5 million students.

Secondary School (2011-2013): Kajora High School, Asansol, Paschim Barddhaman, West Bengal, India.

WBSE-XI (Secondary School Certificate) qualified with 92.14% securing top 1% among 1 million students.

Awards and Achievements

- Qualified **CSIR** (The Council of Scientific and Industrial Research) **NET** (National Eligibility Test) two times in June 2019 & December 2019, **ranked 68 & 59** out of about 15,000 students. This is the national level entrance exam for PhD study in India.
- Qualified **GATE** (Graduate Aptitude Test Engineering) **2020** and **GATE 2021** conducted by **IIT Delhi & IIT Bombay**, **ranked 1889 & 1485** respectively among around 25000 students.
- Qualified Joint Admission Test for MSc (JAM) in 2017, **ranked 726** out of about 12,000 students. This is a national level entrance exam for MSc study in India.
- Awarded position in a multinational pharmaceutical company named Dr. Reddy's Laboratories.
- Selected for Summer Research Fellowship in 2019 in IISER Kolkata offered by IASc-INSa-NASl.

Research areas of Interest

- Organic Chemistry, Organometallic Chemistry, Inorganic Chemistry.
- Photoredox Catalysis & the application of it in different fields.
- Catalysis, Green Chemistry, Renewable Energy.

Research experience

- **MSc Dissertation project (January 2020 – June 2020): “Synthesis of Cyclopalladated Complexes with Some Schiff Bases derived from 1-Napthaldehyde and Diamines” supervised by Prof. Samudranil Pal.**

(The project mainly focusing on the synthesis of mono and dinuclear cyclopalladated complexes using Schiff base and Pd precursor compound. The prepared ligands are characterized by using HNMR, IR, Mass techniques.)

- **IAS Summer Internship (May 2019 – July 2019): “Dinuclear Cyclometalated Iridium Complexes: Synthesis, Photophysical and Electrochemical Characterization” supervised by Dr. Parna Gupta.**

(The project mainly based on the synthesis of Cyclometalated Iridium (III) complexes with imidazolyl modified phenanthroline ligands. The photophysical & electrochemical Characterization has been done of the complexes both analytically and spectroscopically.)

Industrial Experience

After M.Sc, I joined in July 2020 to the multinational pharmaceutical company named Dr. Reddy's Laboratories as a technical trainee in R&D department where I have developed my expertise in the synthesis unknown impurities formed during the synthesis of active Pharmaceutical ingredients. Till now, I have worked on several projects- Ezetimibe, Lacosamide, Cetrizine, Pramipexole, Ibuprofen, Empaglifozin, Omeprazole, Prednisolone.

Technical Strengths

- **Spectroscopic techniques:** Ultraviolet-Visible (UV-VIS), Infrared Spectroscopy (FTIR), Fluorescence Spectroscopy. Glove box and Schlenk line techniques as well as the usual range of standard synthetic chemistry skills.
- **Software Skills:** Origin, Chemdraw, Microsoft, Windows, Latex and MS-Office, Basic knowledge of Fortran.
- **Other techniques:** Crystallization techniques, Glove Box handling, Schlenk line, potentiometer, polarimeter, Conductometer, pH meter, Column Chromatography and other purification techniques used in organic and inorganic Laboratories.

Seminars Attended

- Attended seminar on “Modification in TEM to observe mitochondria” arranged by Institute of Science, Banaras Hindu University by Nobel laureate Joachim Frank for which he was awarded Nobel prize.
- Attended XIII J-Nost conference organized by Dept. Of Chemistry, Institute of Science, Banaras Hindu University.
- Attended M.R.Das Memorial lecture by Dr. Rajan Sankaranarayanan arranged by Indian National Science Academy, Varanasi.
- Attended B.C. Guha memorial lecture by Dr. Shekhar Mande arranged by Indian National Science Academy, Varanasi.
- Attended Prof. A. Srikrishna Memorial Lecture Series-3 organized by School of Chemistry, University of Hyderabad.
- Attended CHEMFEST 2019 & 2020, organized by School of Chemistry, University of Hyderabad.
- Attended webinar by Prof. Debasis Das on Zinc containing Metalloenzymes organized by Lady Brabourne College, Kolkata.
- Attended webinar by Dr. Rahul Banerjee on Porous Framework Materials organized by Lady Brabourne College, Kolkata.

Extra-Curricular Activities

- Chemfest 2020 - Coordinated an event.
- Presented a poster in Chemfest 2020 organized in School of Chemistry, UoH

Academic Referees

- **Professor Samudranil Pal**
School of Chemistry
University of Hyderabad
Email id: spal@uohyd.ac.in
Contact No.: +91 986600753

- **Dr. Parna Gupta**

Department of Chemical Science

Indian Institute of Science Education and Research (IISER) Kolkata

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