Birendra Nayak

PhD Scholar, Department of Chemistry

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**EDUCATION:**

* PhD Research Scholar-PMRF (Total Synthesis), CGPA-10/10-*(2022-present)*

IISER Tirupati, Andhra Pradesh.

* Project Assistant (Total Synthesis) -*(2021 Aug-2022 July)*

IISER Tirupati, Andhra Pradesh.

* Master in Science (chemical science), CGPA: 7.35/10 -*(2018-2020)*

Pondicherry University, Puducherry, India.

* B.SC.(Hons.) Chemistry, CGPA: 7.91/10(73% with distinction) – (2015-2018)

Banki Autonomous College, Cuttack, Utkal University.

**SKILLS:**

* **Software in Chemistry**

 NMR Data analysis in Mestrenova, Chemdraw, Scifinder and Reaxys.

* **Documentation**

 Latex, MS-office.

* **Laboratory techniques**

Experienced in handling light and moisture sensitive compounds and performing reactions under inert atmosphere and their proper purification. Experienced in performing microscale to large-scale reactions. Skilled in interpretation of spectroscopic data *viz*.*,* NMR, IR, UV and Mass spectra. Working knowledge of Biotage flash chromatography machine, Glove box, Polarimeter, IR spectrophotometers, rotavaps, SPS-solvent system and various solvent purification processes.

* **Language Spoken**

 Odia, Hindi, English.

**ACHIEVEMENTS:**

* Qualified CSIR-UGC JRF in June 2021 Securing AIR-100.
* Qualified IIT-JAM Chemistry 2018 and got selected in NIT Jamshedpur for MSc.
* Qualified GATE-2022 Chemistry.
* Academic excellence award on 9th foundation day in IISER Tirupati for excelling in PhD course work.
* Qualified Pathani Samanta Mathematics Talent Search Scholarship (High School) and Awarded Fellowship for 5yrs.

**TEACHING ASSISTANTSHIP:**

* Organic Chemistry (CHM 221): Chemistry, 2nd Year Undergraduate Course, IISER Tirupati Conducted tutorials, involved in conducting and evaluating quizzes and examinations.
* Chemistry Laboratory II (CHM-212): Chemistry laboratory, 2nd year undergraduate course, IISER Tirupati, conducted pre-lab sessions, monitored students with their experiments and evaluated their examination.

**CONFERENCES/WORKSHOPS ATTENDED:**

* Attended A National Level in House One Day Symposium in Current Trends in Chemistry Supported by UGC (Pondicherry university).

**PROJECTS:**

* Project on “Stereoselective synthesis of vinyl phosphonates- A mild and reliable method for total synthesis.” under the guidance of Dr. Kiran Kumar Pulukuri, assistant Professor, Department of chemistry, IISER Tirupati. We have successfully developed the method producing 30 derivatives and manuscript is under process for publication.
* Project on “one pot oxidation and alkylation of hydroxyquinone derivatives to their corresponding substituted quinones.” under the guidance of Dr. Kiran Kumar Pulukuri, assistant Professor, Department of chemistry, IISER Tirupati.
* Project on “Michael-ene cyclization of 1,7-dienes and its application in total synthesis of some bio- active molecules.” Under the guidance of Dr. Kiran Kumar Pulukuri, assistant Professor, Department of chemistry, IISER Tirupati. (ongoing).

**PUBLICATIONS and PATENTS:**

* “Highly Stereoselective synthesis of vinyl phosphonates from bis- diisopropylmethyledinediphophate” manuscript is under process for publication.
* “One pot oxidation and alkylation of hydroxyquinone derivatives to their corresponding substituted quinones.” Patent under process.