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| **NAME** | Dr. Devalina Ray |
| **DESIGNATION** | Assistant Professor |
| **EMAIL ID** | dray@amity.edu |
| **CONTACT NUMBER** | 9560587855 |
| **RESEARCH INTERESTS** | Synthetic Organic Chemistry, Medicinal and Natural product Chemistry, Green Chemistry, Cancer Research |

**EDUCATIONAL QUALIFICATIONS:**

| Name of College / University | Degree | Year |
|---|---|---|
| University of Kalyani, WB, India | B. Sc (Hons.) Chemistry | 1999 |
| University of Kalyani, WB, India | M. Sc, Organic Chemistry | 2001 |
| IIT Kharagpur, WB, India | Ph. D (Synthetic Organic Chemistry) | 2008 |

**Title of Ph.D. thesis:**

**EXPERIENCE (in chronological order): Total 9 Years of Research & Teaching Experience**

| Designation | Type of post held (teaching/ research) | Name of the Institute | Year (From – To) |
|---|---|---|---|
| Postdoctoral Fellow | Research | University of Texas Medical Branch, Galveston, Texas, USA | Feb'2008- June'2009 |
| Postdoctoral Fellow | Research | University of Nebraska Medical Centre, Omaha, Nebraska, USA | July'2009- Dec'2009 |
| Research Associate | Research | IIT Kharagpur, WB, India | Mar'2010-June'2010 |
| Research Professor | Teaching and Research | Myongji University, Yongin, South Korea | Nov'2010- Sep' 2011 |
| Postdoctoral Fellow | Research and Teaching | Hanyang University, Seoul, South Korea | Oct' 2011- April'2012 |
| Research Associate | Research | IIT Delhi, Delhi, India | May'2014- Oct' 2015 |
| Fast Track Young Scientist | Research | IIT Delhi, Delhi, India | Nov'2015-Oct'2017 |
| Assistant Professor | Teaching and Research | Amity University, Noida, UP, India | Oct'2017-till date |

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| **No. of Ph.D. students supervised** | 1 (Ongoing) |
| **No. of Post-Doc** | 0 |
| **No. of M.Tech. Students supervised:** | 12 |
| **No. of B.Tech. Students supervised:** | 50 |
| **PUBLICATIONS** ***(mention total no. here)*** | Details***:*** **21 publications**<br>1. In Vitro and In Silico Anti-plasmodial Evaluation of Newly Synthesized β-Carboline Derivatives *Vipin Kumar, Cheryl Sachdeva, Kamran Waidha, Sunil Sharma,* ***Devalina Ray*,*** *Naveen Kumar Kaushik*,* |

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| | *Biswajit Saha**<br>*ChemistrySelect 2021,6, 5338-5342 (IF: 2.0)*<br><br>2. Design and identification of novel annomontine analogues against SARS-CoV-2: An in-silico approach<br>Kamran Waidha, Anjali Saxena, Prashant Kumar, Sunil Sharma, **Devalina Ray**, Biswajit Saha*<br>*Helion 2021, 7, e06657 (IF: 2.9)*<br>3. An atom-economical and regioselective metal-free C-5 chalcogenation of 8-aminoquinolines under mild conditions<br>*Vipin Kumar, Klaus Banert, **Devalina Ray*** and Biswajit Saha**<br>*Org. Biomol. Chem. 2019, 17, 10245-10250 (IF: 3.49)*<br>4. Palladium-catalyzed expedient Heck annulations in 1-bromo-1,5-dien-3-ols: Exceptional formation of fused bicycles<br>*J. K. Ray, Raju Singha, **Devalina Ray**, Paramita Ray, Davuluri Yogeswara Rao, Anakuthil Anoop*<br>*Tetrahedron Letters* 2019, 60, 931-935 *(IF: 2.347)*<br><br>5. Pd-Catalyzed Regioselective Intramolecular Dehydrogenative C-5 Cross Coupling in an N-substituted Pyrrole-Azole System<br>*Krishna Nand Tripathy, **Devalina Ray** and Ravi. P. Singh**<br>*Org. Biomol. Chem. 2017, 15, 10082-10086 (IF: 3.564)*<br><br>6. Synthesis of Pyrrole-Annulated Heterocycles through Copper-Catalyzed Site-Selective Dehydrogenative Cross-Coupling<br>*Krishna Nand Tripathy, **Devalina Ray** and Ravi. P. Singh**<br>*Eur. J. Org. Chem. 2017, 5809-5813 (IF: 3.065)*<br>7. Copper-Catalyzed Direct Cross-Coupling of Compounds Containing Activated C–H/Heteroatom–H Bonds with *N*-Tosylhydrazones<br>*Amol P. Yadav, **Devalina Ray,** V. U. BhaskaraRao and Ravi P. Singh**<br>*Eur. J. Org. Chem. 2016, 2369-2382 (IF: 3.065)*<br>8. Ligand –promoted Intramolecular dehydrogenative cross-coupling using a Cu catalyst: direct access to polycyclic heteroarenes<br>***Devalina Ray**, T. Manikandan, Arup Roy, Khrishna N.* |

*Tripathy and Ravi P. Singh**

*Chemical Communications 2015, 51, 7065-7068 (IF: 6.567)*

9. 1,3-Dipolar cycloaddition of 4-platinumisochromenyliums with an olefin and tandem insertion into benzylic C–H bonds.
   *Ji Hee Kim,* ***Devalina Ray****, Chang Seop Hong, Jin Wook Han and Chang Ho Oh**
   *Chemical Communications 2013, 49, 5690-5692 (IF: 6.567)*

10. Palladium-Catalyzed Intramolecular Oxidative Heck Cyclization and Its Application toward a Synthesis of (±)-β-Cuparenone Derivatives Supported by Computational Studies.
    ***Devalina Ray,*** *Nasima Yasmin, Sajal Mal, Priyanka Ray, Sarmistha Urinda, Anakuthil Anoop* and Jayanta K. Ray**
    *Synthesis 2013, 45, 1261-1269 (IF: 2.652)*

11. Cationic Gold-Catalyzed Regioselective Hydration of 1-Arylalkynes through Carbonyl Group Participation.
    *Jiseon Jeong,* ***Devalina Ray*** *and Chang Ho Oh**
    *Synlett 2012, 23, 897-902 (IF: 2.323)*

12. Phosphorous pentoxide mediated synthesis of 5-HMF in ionic liquid at low temperature.
    ***Devalina Ray,*** *Neha Mittal and Wook-Jin Chung**
    *Carbohydrate Research 2011, 346, 2145-2148 (IF: 1.817)*

13. Synthesis of unnatural amino acid derivatives via palladium-catalyzed 1,4-addition of boronic acids.
    ***Devalina Ray,*** *Abhijah Nyong and Amarnath Natarajan**

    *Tetrahedron Letters* 2010, 51, 2655-2656 *(IF: 2.347)*

14. Novel Synthetic Approach Toward (±)-*β*-Cuparenone via Palladium-Catalyzed Tandem Heck Cyclization of 1-Bromo-5-methyl-1-aryl-hexa-1,5-dien-3-ol Derivatives.
    ***Devalina Ray*** and *Jayanta K. Ray**
    *Organic Letters* 2007, *9,* 191-194 *(IF: 6.732)*

15. Palladium catalyzed intramolecular 5-endo-trig oxidative Heck cyclization: a facile pathway for the synthesis of some sesquiterpene precursors.
    ***Devalina Ray****, Sunanda Paul, Sulagna Brahma and Jayanta. K. Ray**

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| | *Tetrahedron Letters* 2007, *48*, 8005-8008 *(IF: 2.347)*<br><br>16. Base-catalyzed condensation of *β*-bromovinylaldehydes with *β*-ketoesters followed by water-mediated cyclization and aromatization: one pot access to substituted benzene derivatives.<br>***Devalina Ray*** and *Jayanta K. Ray**<br>*Tetrahedron Letters 2007, 48*, 673-676 *(IF: 2.347)*<br><br>17. Palladium catalyzed novel cycloisomerization: an unprecedented domino oxidative cyclization towards substituted carbocycles.<br>***Devalina Ray***, *Sajal K. Mal* and *Jayanta K. Ray**<br>*Synlett* 2005, *14*, 2135-2140 *(IF: 2.323)*<br><br>18. Palladium-catalyzed tandem oxidative cyclization of 1-bromohexa-1,5-dien-3-ols: easy access to cyclopentenones.<br>*Sajal K. Mal*, ***Devalina Ray*** and *Jayanta. K. Ray**<br>*Tetrahedron Letters* 2004, *45*, 277-279 *(IF: 2.347)*<br><br>19. Click chemistry tailored benzimidazole functionalized triazole block-co-polymer for emergence of exotic chimaeric nano-crystalsomes.<br>*Aarti Singh, Akansha Aggarwal, Soumyaditya Sutradhar,* ***Devalina Ray**** *and Monalisa Mukherjee** **(Under Review)**<br><br>20. Vitamin C-Catalyzed Hantzsch reaction under microwave condition: a greener access to 1,4-Dihydropyridines<br>***Devalina Ray***, *Ram Naresh Yadav, and Bimal Krishna Banik** **(Under Review)**<br><br>21. Transition metal-free *tert*-butoxide mediated/catalyzed strategies for coupling reactions<br>*Vipin Kumar, Biswajit Saha* and* ***Devalina Ray**(Under Review)** |
| **PATENTS** ***(total no.)*** | ***Details: 5 patents (1 granted and 4 filed)***<br>***1 Copyright (Published)***<br><br>***Patent Granted:***<br>1. Preparation method of 5-hydroxymethylfurfural by dehydration of fructose using metal halide catalysts and the ionic liquid. (Granted)<br>Korea 10-1307181<br>Issued September 5, 2013<br>*Inventors: Wook-Jin Chung*, Neha Mittal,* ***Devalina Ray****, Mi-Deok Han* |

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| | ***Patents filed:***<br>2. Anticancer compounds targeting human cell cycle regulating kinase (Filed)<br>Patent File No.: 201811039753<br>*Gauri Mishra, Sohini Singh,* ***Devalina Ray***<br>3. An atom-economical, regioselective, metal-free C-5 chalcogenation of 8-aminoquinolinesunder mild condition<br>Patent File No.: 201911024312<br>*Vipin Kumar, Kaus Benart,* ***Devalina Ray****, Biswajit Saha*<br>4. Synthesis and antimalarial evaluation of novel thiourea and guanidine<br>Patent file no. 202011011433<br>5. A composition having exotic chimeric single-crystalline nano-crystalsomes from 'click-tailored' benzimidazole functionalised triazole based copolymer and method thereof<br>Patent file no. 202111042433<br><br>***Copyright Published:***<br>*DESIGN AND IDENTIFICATION OF NOVEL ANNOMONTINE DERIVATIVES AGAINST SARS-COV-2: AN IN-SILICO APPROACH (Published)*<br>Registration No.: L-94682/2020 |
| **RESEARCH PROJECTS**<br>Completed: ***(total no.)***<br>Ongoing: ***(total no.)*** | ***Details:***<br>**Project Completed: 1 (As sole PI)**<br><br>**Fast Track Young Scientist grant in Chemical Sciences' 2014** by SERB, New Delhi, India (**As PI**, Grant Money: Rs. 32.8 Lakhs, Duration: 2015-2018)<br><br>**Project Ongoing: 1 (As sole PI)**<br><br>**"Core Research Grant, 2019"** in Organic Chemistry section from SERB, New Delhi, India (**As PI**), Grant Money: Rs. 34.13 Lakhs, Duration: 2020-2023) |
| **AWARDS & HONOURS/ DISTINCTIONS** | ***Details:***<br>• Qualified **GATE** (Graduate Aptitude Test in Engineering- 95.17 percentile in chemistry) in **2002**, organized by **IIT**<br>• Qualified **NET** (National Eligibility Test) in **2002**, organized by **CSIR** (Council of Scientific and Industrial Research) and **UGC** (University Grants |

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| | Commission, India)<br>• **Senior Research Fellowship** from CSIR-HRD in **2004**.<br>• ***"Dr. B. N. Mankad award"*** *for best oral presentation in Organic and Biochemistry section* of *41st Annual Convention of Chemists (Indian Chemical Society, India)'* ***2004*** *held at Delhi University.*<br>• **DST Fast Track Young Scientist grant in Chemical Sciences' 2014** by SERB, Delhi, India.<br>• **Best flash presentation award** from **ACS publications** (ACS Omega) in RTCS-OBC 2021 International conference.<br>• Editorial Board member in American Journal of Heterocyclic Chemistry.<br>• Executive Guest editor in "Current Organocatalysis", Bentham Sciences.<br>• 4 posters accepted in ACS Spring Session, 2022. |
| **MEMBERSHIP** with Professional/ Academic bodies | ***Details*****: 1)** Membership in Chemical Research Society of India (**CRSI**), Membership No.: LM 2841.<br>2) Affiliate Membership in Royal Chemical Society, Membership ID: 708865. |