**Dr Togapur Pavan Kumar**

Senior Scientist

 CSIR-Institute of Minerals & Materials Technology (IMMT)

Bhubaneswar- 751013; Odisha, India

**Personal**

Date of Birth : June 10, 1982

Nationality/Sex/Marital Status : Indian/Male/Married

Languages Known : English, Hindi, Telugu and Kannada

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**Education**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name of the Exam** | **Board/****University** | **Year of** **Passing** | **Major Subjects** | **% of Marks** | **Rank** |
| BSc | Osmania | 2002 | Microbiology, Zoology & Chemistry | 78.5 | **1st***(in College)* |
| MSc | Osmania | 2004 | Organic Chemistry(*Drug Design*) | 83.2 | **1st***(in University)* |
| PhD | Osmania(CSIR- IICT) | 2011 | **Organic Chemistry*****Thesis title:****“Synthesis and Applications of Pyrrolidine Based Amino Acids and Hydroxylamine Derivatives”* |
| PG Diploma in Patents Law | NALSAR | 2014 | Patents Law with "**A**" grade |

**IP and Management Courses**

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| --- | --- | --- | --- |
| **Name of the Course** | **Board/****University** | **Year of****Passing** | **%Marks/****Grade** |
| General Course on Intellectual Property | WIPO Academy | 2016 | 91 / A |
| Advanced Course on Patent Drafting | WIPO Academy | 2016 | 72 |
| Course on Patent Cooperation Treaty | WIPO Academy | 2016 | A |
| Diploma in Business Management & Entrepreneurship | ALISON Academy | 2016 | 90 |
| Diploma in Project Management | ALISON Academy | 2016 | 93 |
| Intellectual Property Management | WIPO Academy | 2017 | RA |
| Promoting Access to Medical Technologies and Innovation | WIPO Academy | 2017 | RA |

**Employment**

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| --- | --- | --- | --- | --- |
| **Organization** | **Designation** | **From** | **To** | **Nature of duties** |
| Tagore Govt. Arts & Science College | Assistant Professor | Jan 2018 | Sep 2019 | Teaching, Research & Academic Management activities |
| CSIR-IICT | INSPIRE Faculty & AcSIR-Assistant Professor | May 2012 | Jan 2018 | Research & Development; Academic activities; IP ActivitiesIntellectual Property, Technology Development, Management and Commercialization |
| DOLCERA | IP Scientist | Jan 2011 | May 2012 | IP Search, Analytics, Training, Documentation and Management |
| CSIR-IICT | Research Fellow | Feb 2006 | Dec 2010 | Basic Research & Scientific activities |
| LOYOLA ACADEMY | Lecturer | Dec 2004 | Feb 2006 | Teaching & Academic management activities |
| DR REDDYS LABS | Technical Trainee | May 2004 | Dec 2004 | Research and Development/ Analytical / Documentation |
| NDSU-USA | Visiting Fellow | April 2015 | July 2015 | R&D, IP Activities |
| NRDC | Manager  | Nov 2016 | Jun 2017 | Intellectual Property (IP) and Technology Transfer (TT) |

**Work / Research Experience**

**Research/Technology Skills**

* ***Basic Research:*** Organocatalysis-Asymmetric Synthesis; Nucleic Acid Chemistry; Process Chemistry, Medicinal Chemistry; Natural Product Synthesis & Flow Chemistry
* ***Technology:*** Process/Technology Development and Demonstration, Client management, Project execution and monitoring, Documentation and Result submission etc.
* ***Academic Teaching****:* Organic Chemistry Courses and Intellectual Property (IP), Patent Search and Analytics

**Information Analytics/IP Skills/Management**

*Patent and non-patent literature searches and analytics using various databases/STN Search and Markush Structure Analysis/Drafting and Management*

* ***Search/Analysis Skills:*** Structure, Reaction, Formulation, Keyword, Class code, Patentability, Invalidation, FTO, Landscape, Technology Trends and Updates etc.
* ***General Databases:*** Sci-Finder, Reaxys, Scirus, PubMed, SureChem, ISI web of Knowledge, Chemspider, Google Scholar, One-Source, ISYS, Lexis-Nexis, Engineering Village etc.
* ***Patent Search Databases:*** Micropat, Thomson Innovation, Total Patent, Free Patents Online, Google patents, Questel Orbit, IPO, SIP, EPO, USPTO, JPO, WIPO etc.
* ***STN Databases:*** Marpat, Registry, Caplus, Casreact, Djmsonline, Drugu, Cheminformrx, Medline, Wpindex etc.
* ***Patent Drafting:***Courses/Training from WIPO, RGNIIPM, CSIR-NISCAIR, ni-msme and drafted about 15 patents in the fields of Chemistry, Chemical Engineering and Biology
* ***IP Management:*** Involved in all kinds of IP activities of the organization/s-Awareness and promotion, Identification of potential inventive works, Patentability opinion, Search and Analysis, Invention disclosure, patent writing, Filing process, Responding to queries at different stages andIP Trend analysis project with INAE etc.

**Contribution towards Process /Technology Projects**

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| --- | --- | --- |
| **Process Technology**  | **Level** | **Output** |
| Lipoic acid | Ready to transfer | Patent Application Submitted for Filing |
| Acetaminophen | Scale-up studies | Continuous method |
| Nicotine | Ready to transfer | Patent filed IN*201611002388 Dated 8th Jan, 2016**WO2017/119003 Dated 13th July, 2017* |
| Etodolac | Feasibility studies | Ongoing |

**Research Projects as PI**

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| --- | --- | --- | --- |
| **Grant Title** | **Grant Agency** | **Year** | **Grant Value** |
| INSPIRE Faculty Award | DST | 2012-2017 | 35 Lakh |
| Fast Track Young Scientist | SERB | 2015-2018 | 28.6 Lakh |

**Patent Writing/Drafting Activities**

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| --- | --- | --- | --- |
| **Project/Research Group** | **Organization** | **IP Support Carried out** | **Output/Remarks** |
| HH Project | CSIR-IICT & GACL | IP Generation/Protection | Patent filed |
| Dr K Srigiridhar | CSIR-IICT&CSIR-CCMB | IP Generation/Protection | 3 Patents filed / US Patent Published |
| ProfC Suresh Reddy / Dr U Ramesh | SV University& CSIR-IICT | IP Generation/Protection | Patent Submitted |
| Dr ChRaji Reddy / Dr B Nagendra Babu | CSIR-IICT& NIPER | IP Generation/Protection | Patent filed |
| Dr Rajiv Trivedi / Dr Amitava Das | CSIR-IICT | IP Generation/Protection | Patent filed |
| Dr P Srihari / Prof G Mehta | CSIR-IICT& HCU | IP Generation/Protection | Patent filed |
| Dr K V Raghavan | INAE-IICT | IP Project | Proposal granted |
| Dr B V Rao | CSIR-IICT | IP Generation/Protection | Patent filed |

**Details of Awards/Fellowships/Honours**

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| --- | --- | --- | --- |
| **Award Type** | **Award Name** | **Awarding Agency** | **Year** |
| National Level | Summer Research Fellowship | Indian Science Academies | 2019 |
| National Level | Refresher Course in Chemistry | Indian Science Academies | 2018 |
| National Level | Refresher Course in Material Synthesis | Indian Science Academies | 2018 |
| International Level | Scholarship for Patent Information Search | WIPO | 2017 |
| International Level | Scholarship for course on Patents | WIPO | 2017 |
| State Level | Young Scientist | Telangana Academy of Sciences | 2016 |
| International Level | Scholarship for Patent Drafting course | WIPO | 2016 |
| International Level | Visiting Fellowship | North Dakota State University | 2015 |
| International Level | Post-Doctoral Fellowship | Dalhousie University(Did not avail) | 2015 |
| State Level | Associate Fellow | AP Academy of Sciences | 2015 |
| National Level | Young Scientist - (Fast-track) | DST-SERB | 2015 |
| National Level | Assistant Professor | AcSIR | 2014 |
| National Level | INSPIRE Faculty | DST | 2012 |
| National Level | CSIR-UGC-NET | CSIR | 2005 |
| National Level | CSIR-JRF | CSIR | 2006 |
| National Level | CSIR-SRF | CSIR | 2008 |
| University Level | University FIRST in MSc Chemistry | Osmania University | 2008 |
| University Level | V Bheemaiah Memorial Gold Medal | Osmania University | 2008 |
| University Level | Dr Sadashiv D Thatte Memorial Gold Medal | Osmania University | 2008 |
| University Level | Prof N VSubba Rao Memorial Gold Medal | Osmania University | 2008 |
| University Level | Dr KAnji Reddy Gold Medal | Osmania University | 2008 |
| College Level | Gold Medal | Vivek Vardhini College | 2003 |
| District Level | Fellowship for school & college education | MHRD, GoI | 1992-99 |

**Publications / Patents**

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| --- | --- | --- | --- |
| **Total Publications** | **21** | **Total Patents** | **19** |
| **International**  | **20** | National/International Filed | **14**(487/DEL/2015; 201611000697; 201611002388; 201611008487; 201611028762;*P1013151GB)* |
| Single Author | 2 |
| Corresponding/First Author | 10 | International Published | **2**(US20160244470A1); (WO2017/119003) |
| Others | 8 |
| **National**  | **1** | Submitted to IP Cell | **--** |

**Recognitions/Memberships**

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| --- | --- | --- |
| **Recognition/Membership** | **Agency** | **Year** |
| Associate Fellow | Andhra Pradesh Academy of Sciences - APAS | 2014 |
| Life member (1616) | Chemical Research Society of India - CRSI | 2013 |
| Assistant Professor (1297) | AcSIR | 2014 |
| INSPIRE Faculty (IFA12CH30) | Department of Science & Technology - DST | 2012 |
| Fast Track Scientist | Science & Engineering Research Board - SERB | 2015 |
| Life member (2959) | Material Research Society of India - MRSI | 2018 |
| Life member  | Indian Society of Chemists & Biologists - ISCB | 2018 |
| Life Member | Indian Science Congress - ISC | 2019 |
| Member | Global Intellectual Property Convention - GIPC | 2018 |

**Scientific Programs/Courses- Participation**

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| **S No** | **Program / Course** | **Duration** | **Dates/Year** | **Institution/Organizers** |
| 1 | MOOCs- NPTEL Online Certification Programme in Managing Intellectual Properties in Universities | -- | April 2019 | IIT Madras (MHRD, GoI) |
| 2 | MOOCs- (ARPIT) - Online Refresher Course in Chemistry for Higher Education Faculty | -- | April 2019 | UGC-SWAYAM |
| 3 | Science Academies Refresher Course on ‘Upskilling Chemistry teachers on latest pedagogical tools for impactful teaching’ | 15 days | Nov 27- Dec 11, 2018 | Vignan’s –VFSTR- University,Vadlamudi, Guntur-522213, Andhra Pradesh |
| 4 | UGC sponsored Orientation Programme | 28 days | May 24-June 20, 2018 | UGC-HRDC, University of Madras, Chennai, Tamilnadu |
| 5 | Science Academies Refresher Course | 14 days | May 7-20, 2018 | Saiva Bhanu Kshatriya College, Arippukottai, Tamilnadu |

**IP Training/Workshop Attended**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S No** | **Training/Workshop** | **Duration** | **Dates/Year** | **Institution/Organizers** |
| 1 | Managing IP Assets for Business and Academic Competence-MIPCON 2016 | 2 d | Sep 8-9/2016 | APTDC-CII, Hyderabad |
| 2 | Patent Strategy for Entrepreneurs, Scientists and Engineers | 3 d | Aug 10-12/2016 | ni-msme, Hyderabad |
| 3 | Patent Drafting | 5 d | Jun 13-17/2016 | CSIR-NISCAIR, New Delhi |
| 4 | Introduction to Intellectual Property Rights | 2 d | Apr 9-10/2016 | IPAI, New Delhi |
| 5 | Patents for Entrepreneurs, Scientists & Engineers-Wave 3 | 2 d | Feb 11-12/2016 | NCL-Innovation, Pune |
| 6 | Patinformatics for technological competitive intelligence and licensing | 3 d | Dec 7-9/2015 | CSIR-URDIP, Pune |
| 7 | The European Patent System and EPO Examination Practice | 1 d | Oct 7/2015 | NCL-Innovation, Pune |
| 8 | Patenting System in India | 5 d | Aug 10-14/2015 | RGNIIPM, Nagpur |
| 9 | Patent Drafting and Claims Interpretation | 5 d | Nov 24-28/2014 | ni-msme, Hyderabad |
| 10 | Management of Patent Portfolio Pharmaceutical, Biotech & Chemical  | 3 d | Sep 26-28/2013 | IIPRD, Mumbai |

**Conferenec / Workshop – Talks/Presentations**

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| --- | --- | --- | --- | --- |
| **S No** | **Conference/Workshop** | **Title of the talk/presentation** | **Dates/Year** | **Institute/Organizer** |
| 1 | Internationsl Conference on Strategic Management, Decision Theory & Data Science –SMTDS 2020 | 3 d | Jan 4-6, 2020 | CSIR-CGCRI, Kolkata |
| 2 | IISF –Young Scientists Conference-2019 | 4 d | Nov 5-8, 2019 | IISF, Kolkata |
| 3 | IPR Awareness Program | Importance and Applications of IPR | July 20, 2019 | NIT - Puducherry  |
| 4 | Recent Advances in Chemistry (RAC-19) | Strategies for Protecting Chemical Inventions | Jan 5, 2019 | Department of Chemistry, Anna University, Chennai |
| 5 | Recent Advancements in Nanotechnology (RAN-2018) | Spirooxy indole compounds as GSK3 inhibitors and process for preparation of these compounds | Sep 19-20, 2018 | NIT - Puducherry |
| 6 | Sustainable Chemistry for Health, Environment and Materials (SuCHEM-2018) | Improved Process for Production of Lipoic Acid  | Aug 5-8, 2018 | CSIR-IICT, Hyderabad |
| 7 | Managing IP Assets for Business and Academic Competence-MIPCON 2016 | Introduction and overall view of IPR/Patents & Industrial designs for innovative Products | Oct 27, 2016 | MSME-DI, Hyderabad |
| 8 | Intellectual Property Rights & Implications for MSMEs | Intellectual Property: Strategies for Protection and Commercialization | Oct 20, 2016 | ni-msme, Hyderabad |
| 9 | Frontiers at the Chemistry - Allied Sciences Interface (FCASI) | Intellectual Property: Strategies for Protection of Inventions | April 26, 2016 | University of Rajasthan, Jaipur |
| 10 | Promotion and Awareness Programme | Intellectual Property: Strategies for Protection of Inventions for all | Feb 24, 2016 | CSIR-IICT, Hyderabad |
| 11 | Group Seminar Activity | Intellectual Property: Strategies for Protection of Inventions for Research Scholars | July 2, 2016 | DNPC-IICT, Hyderabad |
| 12 | Promotion and Awareness Programme | Asymmetric synthesis and IPR for PG Students | Dec 2015 | Loyola Academy, Hyderabad |
| 13 | One week course faculty | Science, Technology and Innovation | Aug 2016 | CU Gujarat, Gandhinagar |
| 14 | Visiting/Guest Lectures Visiting/Guest Lectures | Organic Synthesis and Spectroscopy | Feb 2010 | Andhra Loyola College-Vijayawada |
| 15 | Visiting/Guest Lectures | Photochemistry, Heterocyclic chemistry, Spectroscopy &Asymmetric synthesis | Aug 2009/Apr 2011 | Adarsh College, Mahabubnagar |
| 16 | Visiting/Guest Lectures | Asymmetric synthesis & Nucleic acids | Aug 2009/Dec 2011/Oct 2012 | Sri Chaitanya College, Mahabubnagar |
| 17 |  |  |  |  |
| 18 | Visiting/Guest Lectures | Asymmetric synthesis, Photochemistry& Nucleic acids | Feb 2009/Apr 2010 | Pragathi College, Hyderabad |
| 19 | Visiting/Guest Lectures | Photochemistry, Heterocyclic chemistry, Spectroscopy &Asymmetric synthesis | 2006-2015 | Loyola Academy- Secunderabad |
| 20 | Awareness Sessions | Patent Search and Analysis Patent search and analysis | 2013 onwards | AcSIR; CSIR-IICT |
| 21 | Group Seminar | C-C bond formation via C-H activation | ---- | CSIR-IICT |
| 22 | Group Seminar | Asymmetric Organocatalytic Domino Reactions | ---- | CSIR-IICT |
| 23 | Group Seminar | Asymmetric Multi Component Reactions | ---- | CSIR-IICT |
| 24 | Group Seminar | Basics and importance of Intellectual Property | ---- | CSIR-IICT |

**Scientific Conferences- Participation**

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| --- | --- | --- | --- | --- |
| **S No** | **Conference/Symposium** | **Duration** | **Dates/Year** | **Institution/Organizers** |
| 1 | International Symposium “Nature Inspired Initiatives in Chemical Trends (NIICT) | 2 d | Sep 8-9/2016 | CSIR-IICT, Hyderabad |
| 2 | CRSI National Symposium in Chemistry-CRSI NSC-19 | 3 d | Jul 14-16/2016 | North Bengal University, Silguri |
| 3 | International Conference Frontiers at the Chemistry - Allied Sciences Interface (FCASI) | 2 d | Apr 25-26/2016 | University of Rajasthan, Jaipur |
| 4 | National Conference on “Drug Discovery and Development in Chemistry-Applications in Pharma Industry (DDCC) | 2 d | Sep 14-15/2015 | SV University, Tirupati |
| 5 | International Symposium “Nature Inspired Initiatives in Chemical Trends (NIICT) | 3 d | Mar 2-5/2014 | CSIR-IICT, Hyderabad |
| 6 | International Symposium “Chemistry and Chemical Biology of Natural Products (CCBNP) | 3 d | Aug 2-4/2012 | CSIR-IICT, Hyderabad |
| 7 | International Symposium “Organic Synthesis and Human Well Being: Emerging Opportunities and Challenges (OSHWB) | 5 d | Aug 1-4/2010 | CSIR-IICT, Hyderabad |
| 8 | National conference on Recent advances in Chemical Research (NCRACR) | 2 d | Feb 6-7/2009 | Osmania University, Hyderabad |
| 9 | Symposium on Modern Aspects of Organic Spectroscopy and Drug Chemistry | 2 d | Feb 26-27/2009 | Loyola Academy, Hyderabad |
| 10 | NMRS-Symposium for NMR Trends | 4 d | Feb 2-5/2009 | CSIR-IICT, Hyderabad |
| 11 | Asian Symposium on Medicinal Plants, Spices & Other Natural Products (ASOMPS-XIII) |  | Nov 3-5/2008 | CSIR-IICT, Hyderabad |
| 12 | Symposium “FRONTIERS IN CHEMISTRY | 2 d | Feb 17-18/2006 | Loyola Academy, Hyderabad |
| 13 | Workshop for Chemistry teachers of postgraduate colleges | 2 d | Jul 22-23/2005 | Osmania University, Hyderabad |
| 14 | CHEMILUMINESCENSC” an inter-college Faculty level Seminar | 2 d | Aug 24-25/2005 | St. Ann’s College, Hyderabad |
| 15 | Educational exhibition conducted by JNVS Hyderabad region | 3 d | Sep 19-21/1997 | JNV- Karimnagar |

**List of Patents**

1. Synthesis and biological evaluation of mitochondria-targeted esculetin for its anti-atherosclerotic and age delaying effects: KotamrajuSrigiridhar, Santosh Kumar, **TogapurPavan Kumar**, B. V. S. Reddy, Mahesh Kumar (*Indian Patent Application No: 478/DEL/2015; US Publication No:US20160244470A1; GB Application No: P1013151GB*)
2. Oxy imido triazoles and oxime ethers from hydroxylamine derivatives: Srivari Chandrasekhar, **Togapur Pavan Kumar**, VidyavathiPatro, Prathama S Mainkar, ChadaRaji Reddy (*Indian Patent Application No: 201611000697*).
3. A process for the preparation of nicotine: Prathama S Mainkar,KondepudiSugnana Sunder, **Togapur Pavan Kumar**, Srivari Chandrasekhar (*Indian Patent Application No: 201611002388; PCT Publication No: WO2017/119003; EP Application No: 17707968.8*).
4. Spirooxindole compounds as GSK3 inhibitors and process for preparation thereof: Prathama S Mainkar, Mohammad Abdul Sattar, Mallesham, **Togapur Pavan Kumar**, Ummanni Ramesh, DivyaDuscharla, Srivari Chandrasekhar (*Indian Patent Application No: 201611008487; PCT Application No: PCT/IN2018/050134*).
5. An improved process for the production of lipoic acid: Srivari Chandrasekhar, **Togapur Pavan Kumar**, KondepudiSugnana Sunder, Vanka Uma MaheshwaraSarma, Prathama S Mainkar (*Indian Patent Application No: 201811016688*).
6. Isothiocyanate compounds as SMAR1 stabilizers: Srivari Chandrasekhar, **Togapur Pavan Kumar**, Prathama S Mainkar, SamitChatopadhyay, Shruti Joshi, Venkatraju Chippala(*Indian Patent Application No: 201611028762*).
7. Nimbolide derivatives as anticancer agents and their preparation thereof: Srivari Chandrasekhar, Prathama S Mainkar, KarreNagaraju,**Togapur Pavan Kumar**, , Ummani Ramesh, KanchanapalliTejaswini, K. Suresh Babu, B S Sastry, DebabrataMukhopadhyay(*Indian Patent Application No: 201811000561*).
8. Indole (sulfomyl) N-hydroxy benzamide derivatives as selectiveHDAC inhibitors:Srivari Chandrasekhar, Prathama S Mainkar, Chada Raji Reddy, KotamrajuSrigiridhar**, Togapur Pavan Kumar**, Muppidi Mohan Venkata Subbarao, somesh Sharma, Ashok Kumar Jha, PremkumarArumugam(*Indian Patent Application No: 201711042426; PCT Application No: PCT/IN2018/050514*).
9. Process for the preparation of zafirlukast and analogs theeof: Srivari Chandrasekhar, Paladugu Srinu, Prathama S Mainkar **, Togapur Pavan Kumar**, (*Indian Patent Application No: 201711046976; PCT Application No: PCT/IN2018/050513*).

**List of publications**

1. Enantioselective Michael addition of aldehydes to nitroolefinscatalyzed by pyrrolidine-HOBt: **Togapur Pavan Kumar\***, Mohammad Abdul Sattar, Sthanikam Siva Prasad, Kothapalli Haribabu, Cirandur Suresh Reddy(*Tetrahedron: Asymmetry*, **2017,** 28, 401-409).
2. Pyrrolidine-HOBt: an oxytriazole catalyst for the enantioselective Michael addition of cyclohexanone to nitroolefins in water:**Togapur Pavan Kumar\***, Sthanikam Siva Prasad Kothapalli Haribabu, Veerjala Naveen Kumar Cirandur Suresh Reddy(*Tetrahedron: Asymmetry*, **2016,** 27, 1133-1138).
3. Chiral Pyrrolidine-Pyrazole Catalyzed Enantioselective Michael Addition: a Mechanistic Study by Computational Methods: Ramesh Kumar Chitumalla,**Pavan Kumar Togapur** and Joonkyung Jang\* (*Bull. Korean Chem. Soc*, **2016,** 37, 1554-1555).
4. Asymmetric aldol reaction of isatins catalyzed by phthalimido-prolinamide: **Togapur Pavan Kumar\***, Nemali Manjula, Kumar Katragunta(*Tetrahedron: Asymmetry*, **2015,** 26, 1281-1284).
5. Pyrrolidine-oxyimide catalyzed asymmetric Michael addition of α,α-disubstituted aldehydes to nitroolefins: **TogapurPavan Kumar\***(*Tetrahedron: Asymmetry*, **2015,** *26,*907-911).
6. Myrtanyl-prolinamide: a new chiral organocatalyst for stereoselectivealdol reactions

**Togapur Pavan Kumar\***, Rapelli Chandra Shekhar, KondepudiSugnanaSunder, RajeshVadaparthi(*Tetrahedron: Asymmetry*, **2015,** *26,*543-547).

1. Pyrrolidine-oxyimides: new chiral catalysts for enantioselective Michael addition of ketones to nitroolefins in water: **TogapurPavan Kumar\***, LaghuvarapuRadhika, KothapalliHaribabu, Veerjala Naveen Kumar (*Tetrahedron: Asymmetry*, **2014,** *25,*1555-1560).
2. AZT-prolinamide: the nucleoside derived pyrrolidine catalysts for asymmetric aldol reactions in water: TummaNaresh, **TogapurPavan Kumar**, KothapalliHaribabu, Srivari Chandrasekhar\*(*Tetrahedron: Asymmetry*, **2014**, *25,*1340-1345).
3. Intellectual Property Rights-Patents and their application procedures:**TogapurPavan Kumar\***(*Proceedings of APAS*, *Special Issue on Science for Society*, *December***2014**, *16,* 29-42).
4. Asymmetric Michael addition of aldehydes to nitroolefins catalyzed by pyrrolidine-pyrazole: **TogapurPavan Kumar\***(*Tetrahedron: Asymmetry*, **2014**, *25,*1286-1291).
5. Enantioselective Michael addition of α,α-disubstituted aldehydes to nitroolefins catalyzed by pyrrolidine-pyrazole: **TogapurPavan Kumar\***, KothapalliHaribabu (*Tetrahedron: Asymmetry*, **2014**, *25*, 1129-1132).
6. PeptidomimeticOragnocatalysts: Efficient Michael addition onto Nitroolefins with very low catalyst loading: S. Chandrasekhar**\***, Ch. Praveen Kumar, **T. Pavan Kumar**, K. Haribabu, B. Jagadeesh**\***, J. K. Lakshmi, Prathama S Mainkar**\***(*RSC Advances*, **2014**, *4*, 33025-33031).
7. Phthalimido-prolinamide: a new chiral catalyst for solvent free enantioselective aldol reaction; **Togapur Pavan Kumar\***,NamdevraoChethanVavle, Vidyavathi Patro, Kothapalli Haribabu(*Tetrahedron: Asymmetry,* **2014**, *25*, 457-461).
8. Sugar amide-pyrrolidine catalyst for asymmetric Michael addition of ketones to nitroolefins; **Togapur Pavan Kumar\***,SirinyamVenugopalBalaji(*Tetrahedron: Asymmetry***2014**, *25*, 473-477).
9. Direct asymmetric Michael addition of ketones to chalconescatalyzed by hydroxyphthalimide derived triazole-pyrrolidine; **Togapur Pavan Kumar\***, Mohammad Abdul Sattar, Vanka Uma MaheshwaraSarma(*Tetrahedron: Asymmetry,***2013**, *24*, 1615-19).
10. Asymmetric synthesis of all stereoisomers of 3-hydroxyproline: The constituent of several bioactive compounds: **Togapur Pavan Kumar**, Srivari Chandrasekhar\*(*Synthesis,***2012***, 44,* 2889).
11. First acid-catalyzed entry to *O*-alkylated hydroximides from benzylic alcohols: Srivari Chandrasekhar, Laghuvarapu Radhika, **Togapur Pavan Kumar** and Chada Raji Reddy\* (*European Journal of Organic Chemistry,* **2011**, *30*, 5967-5970).
12. Chiral pyrrolidine-pyrazole catalyst for enantioselective Michael addition of carbonyls to nitroolefins: Srivari Chandrasekhar\*, **Togapur Pavan Kumar**, Kothapalli Haribabu, Chada Raji Reddy, Chittumalla Ramesh Kumar (*Tetrahedron:Asymmetry*, **2011**, *22*, 697-702).
13. Hydroxyphthalimide allied triazole-pyrrolidine catalyst for Michael addition in water: Srivari Chandrasekhar\*,**TogapurPavan Kumar**, KothapalliHaribabu, ChadaRaji Reddy (*Tetrahedron:Asymmetry*, **2010**, *21*, 2372-2375).
14. Hydroxylamine derivatives as nucleophiles in Ferrier glycosylation: Synthesis of aminoxpseudoglycals: Ch. Raji Reddy\*, Y.S. Rao, **T. Pavan Kumar**, K.V. Reddy and S. Chandrasekhar (*Synthesis*, **2008**, *1*, 122-126).

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