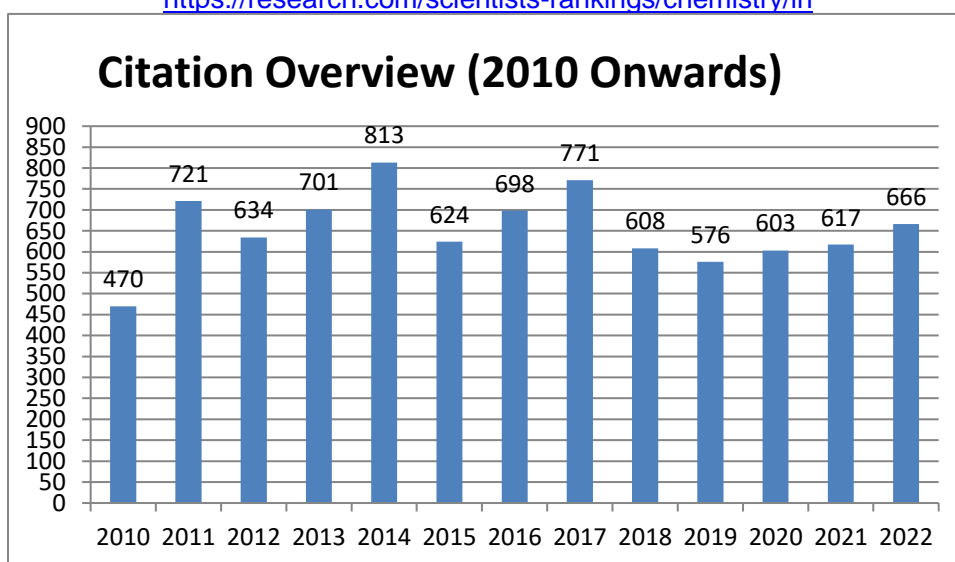


Research Output/Contribution of Prof. Asit K. Chakraborti

Website: <http://akcresearchgroup.weebly.com/>

- I) **Publications:** Research Article 180; Review Article 4;
Book (Edited) 1; Book Chapter 4
[Scopus Citation: 10,780; Citation per paper 58.58 ***h-Index: 63***]
[Google Scholar: 11,985; Citation per paper 65.13 ***h-Index: 64; i10-Index: 163***]
[Impact Factor (IF) 2021: Cumulative IF: 762.246; Average IF: 4.142]
World Ranking 2022 of Top 2% Indian Scientist (Field-Organic Chemistry):
Indian Rank: 25 World Rank: 1326 C-score: 3.63763844 Top%: 1.19043344
<https://www.thehindu.com/sci-tech/science/article33043379.ece/binary/IndiansWorldRanking.pdf>
Top Chemistry Scientist 2022: World Rank 3713; National Rank 31
<https://research.com/scientists-rankings/chemistry/in>



Research Articles: Total 180 [Scopus citation against each article provided]

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9. Asha Rani, Gurmeet Kaur, Asit K. Chakraborti,* S. Majumdar, N. K. Ganguly, Anuradha Chakraborti, “Use of Mass Spectrometric Analysis in Establishing Siderophore Mediated Iron Acquisition in Group A Streptococcus (GAS),” *11th ISMAS Workshop on Mass Spectrometry*, Shimla, India, Oct. 7 – 12. Paper No. RS-20, **2004**. Page 338-341.
10. Asit K. Chakraborti,* Gurmeet Kaur, Smriti Khanna, Harshvardhan Jain, “Solution and Solid Phase Combinatorial Synthesis of Chalcone Libraries: Application of APCIMS and LCMS in Identification of the Constituents,” *ISMAS Silver Jubilee Symposium on Mass Spectrometry*, National Institute of Oceanography, Goa, India. Jan 27-31, **2003**. Invited Talk: Contributed Papers, *Vol II*, 912-916.

II) Patents Granted/Filed: 42

Granted: 27

1. Asit K. Chakraborti, and Babita Tanwar, “**Novel 2-Biarylbenzoxazole Compounds and the Process of Preparation Thereof.**” Indian Patent Grant No. 413619; Grant Date: 05-12-2022. Indian Patent Application No. 3433/DEL/2015 filed on 10.23.2015 (IP32736/CBR).
2. Asit K. Chakraborti, Priyank Purohit, Shyam S. Sharma, Kapileswar Seth, Shivshaeen B. Kharatmal, Madhulika Singh, and Gulshan Kumar, “**2-(2-Aryl/Alkylphenyl)benzazoles as Selective COX-2 Inhibitory Scaffolds.**” Indian Patent Grant No. 387998; Grant Date: 31-01-2022. Indian Patent Application No. 2540/DEL/2015 filed on 08.18.2015 (IP32255/NC/sa).
3. Asit K. Chakraborti and Naisargee Parikh, “**A synthesis of 5-oxochromenopyridine derivatives.**” Indian Patent Grant No. 339944; Grant Date: 30-06-2020. Indian Patent Application No. 1518/DEL/2014 filed on 06.06.2014 (IP24815/AK).
4. Asit Kumar Chakraborti, Kapileswar Seth, Sudipta Raha Roy, Damodara Naidu Kommi, “**A green process for synthesis of β -hydroxy aryl ethers in the presence of transition metal nanoparticles.**” Indian Patent Grant No. 330000; Grant Date: 22-01-2020. Indian Patent Application No. 2071/DEL/2012 filed on 03.07.2012 (IP18791/SP/sm).
5. Asit K. Chakraborti and Damodara N. Kommi, “**Improved Processes for the Total Synthesis of Ranolazine.**” Indian Patent Grant No. 328871; Grant Date: 03-01-2020. Indian Patent Application No. 1722/DEL/2012 filed on 05.06.2012 (IP20457/RK/rp).
6. Asit K. Chakraborti, Kapileswar Seth, Sudipta Raha Roy and Damodara N. Kommi, “**Improved Catalytic Process for the Synthesis of Dibenzo[1,3]diazepines using Metal Nanoparticles Based Catalysts.**” Indian Patent Grant No. 313508; Grant Date: 31-05-2019. Indian Patent Application No. 338/DEL/2014 filed on 05.02.2014 (IP24720/SP/skm).
7. Asit K. Chakraborti and Sudipta Raha Roy “**An Improved Process for Synthesis of β - δ -Hydroxysulfides using Ionic Liquid as an Organo Catalyst and Process of Preparation of *cis*-(\pm)-2-(4-Methoxyphenyl)-3-hydroxy-2,3-dihydro-1,5-benzothiazepine-4(5H)-one.**” Indian Patent Grant No. 310442; Grant Date: 29-03-2019. Indian Patent Application No. 2366/DEL/2011. Filing Date: 19.08.2011 (IP17890/JCR).
8. Asit K. Chakraborti, Damodara N. Kommi and Dinesh Kumar, “**Improved Processes for the Synthesis of Lubeluzole.**” Indian Patent Grant No. 307494; Grant Date: 16-02-2019. Indian Patent Application No. 1962/DEL/2012. Filing Date: 26.06.2012 (IP20458/RK/rp).
9. Asit K. Chakraborti, Anirban Sarkar, and Sudipta Raha Roy, “**A Method for the Synthesis of *N*-*t*-Boc Formation with the Ionic Liquid Catalysts.**” Indian Patent Grant No. 306975; Grant Date: 07-02-2019. Application No. 1681/DEL/2010. Filing Date: 19/07/2010 (IP14720/AY/rpra).
10. U. C. Banerjee, Asit K. Chakraborti, Amit Agarwal and Brahmam Pujala, “**Novel Substituted 6-Aminopurine Compounds as Xanthine Oxidase Inhibitors.**” Indian Patent Grant No. 305460; Grant Date 08-01-2019. Application No. 1119/DEL/2011. Filing Date: Provisional 15/04/2011; Complete 16/04/2012. (IP15549/AMT/am).

11. Asit K. Chakraborti, Dinesh Kumar, Kapileshwar Seth and Damodar N. Kommi, “**A Green Procedure for Synthesis of Functionalized Compounds.**” Indian Patent Grant No. 305259; Grant Date: 02-01-2019. Application No. 2023/DEL/2011. Filing Date: 18/07/2011 (IP15780/SGBA).
12. Asit K. Chakraborti, Dinesh Kumar and Himanshu Sharma, “**An Improved Process for One-Pot Synthesis of 2-Styryl-4-(3H)-Quinazolinones.**” Indian Patent Grant No. 305128; Grant Date: 31-12-2018. Application No. 2443/DEL/2011. Filing Date: 26.08.2011 (IP17889/JCR).
13. Asit K. Chakraborti, Dinesh Kumar, Sachin Bindal and Damodar N. Kommi, “**An Improved Process for the Synthesis of Alkyl Ester of Carboxylic Acid.**” Indian Patent Grant No. 304283; Grant Date: 11-12-2018. Application No. 2176/DEL/2011. Filing Date: 02.08.2011 (IP17891/VR)
14. Asit K. Chakraborti and Naisargee Parikh, “**Ionic Liquid as a Catalyst for an Improved Process of Dihydrobenzothiazepine Synthesis.**” Indian Patent Grant No. 303782; Grant Date: 30-11-2018. Application No. 1177/DEL/2013. Filing Date: 22.4.2013 (IP21899/JCR/akm).
15. Asit K. Chakraborti, Kapileswar Seth and Sudipta Raha Roy, “**An Improved Processes for Synthesis of Phenazines and Azo-compounds based on Reusable Metal Nanoparticles as Catalyst.**” Indian Patent Grant No. 301751; Grant Date: -1-10-2018. Indian Patent Appl. No. 1818/DEL/2012. Filing Date: 13.06.2012 (IP20392/AK).
16. Asit K. Chakraborti, Alpesh R. Patel, Dinesh Kumar, Sachin Bindal, “**An Improved Catalytic Process for Esterification of Carboxylic Acids.**” Indian Patent Grant No. 292009; Grant Date: 23-01-2018. Indian patent. Appl. No. 1046/DEL/2009. Filing Date: May 21, 2009.
17. Asit K. Chakraborti, Naisargee Parikh, and Sudipta Raha Roy, “**A Novel and Improved Process for the Synthesis of 2-Substituted Benzthiazoles/Benzoxazoles using Ionic Liquid as a Catalyst.**” Indian Patent Grant No. 290553; Grant Date: 13-12-2017. Indian patent. Appl. No. 1404/DEL/2010. Filing Date: 16/06/2010 (IP14531/AMT/md).
18. Asit K. Chakraborti, Alpesh R. Patel, Dinesh Kumar, “**An Improved Process for Esterification using Organic Carbonates,**” Indian Patent Grant No. 288722; Grant Date: 25-10-2017. Indian Patent. Appl. No. 554/DEL/2009. Filing Date: 23-03-2009 (IP11168/PC/PGV).
19. Asit K. Chakraborti, Uttam C. Banerjee, Raj Kumar, Sanjeev K. Garg, Vachan S. Meena, “**Novel cyclooxygenase-2 inhibitors.**” Indian Patent Grant No. 283941; Grant Date: 06-06-2017. Indian Patent. Appl. No. 638/DEL/2008. Filing Date: 14-03-2008. IP08491G/SBtpj.
20. Asit K. Chakraborti, Sunay V. Chankeshwara, “**An Improved Organocatalytic Process for Esterification and Amidation Reaction,**” Indian Patent Grant No. 277349; Grant Date: 18-11-2016. Indian patent. Appl. No. 1030/DEL/2008. Filing Date: 22-04-2008. IP08734/mt/md.
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23. Asit K. Chakraborti and Atul Kondaskar, “**An Improved Process for Preparation of Hydroxyalkyl and Hydroxyaryl sulfides.**” Indian Patent Grant No. 248681; Grant Date: 04-08-2011. Indian Application No: 1209/DEL/2002. Filing Date: 03-12-2002, IPO 0978.
24. Asit K. Chakraborti and Rajesh Gulhane, “**A Process for the Acylation of Various Substrates using a Solid Support Catalyst.**” Indian Patent Grant No. 248506; Grant Date: 20-07-2011. Indian Patent Appl. No. 266/DEL/2003. Filing Date: 10-3-2003.
25. Asit K. Chakraborti and Rajesh Gulhane, “**Method for Acylation using Zirconium (IV) Compound as Catalysts.**” Indian Patent Grant No. 248501; Grant Date: 20-07-2011. Indian Patent Application No: 336/DEL/2003. Filing Date: 21-03-2003; IPO 1043.
26. Asit K. Chakraborti, Simi Sarin, Santosh V. Rudrawar, Raj Kumar, Sunay V. Chankeshwara, Abhijit Ray, Sunanda Ghosh Dastidar, “**Inhibitors of Phosphodiesterase Type 4,**” United States Patent. Pub. No. US 2008/0207659 A1. Pub. Date Aug. 28, 2008.
27. Asit K. Chakraborti, Simi Sarin, Santosh V. Rudrawar, Raj Kumar, Sunay V. Chankeshwara, Abhijit Ray, Sunanda Ghosh Dastidar “**Inhibitors of Phosphodiesterase Type 4,**” European Patent. Pub. No. EP 1 958 947 A1. Pub. Date Aug. 20, 2008. Bulletin 2008/34.

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28. Asit K. Chakraborti, Sahaj Pancholia, and Tejas M. Dhameliya, “**N-Arylbenzo[d]-2-carboxamides as Anti-tubercular Agents.**” Indian Patent Application No. 201711010231 (TEMP/E-1/10432/2017-DEL) filed on 2017/03/23 (IP36982/CBR).
29. Asit K. Chakraborti, and Babita Tanwar., “**Alkyl 1,2-Diamines and its bioisoters β -Aryloxyamines As Potential Anti-tubercular Agents and Preparation.**” Indian Patent Application No. 3430/DEL/2015 filed on 10.23.2015 (IP32735/SB).
30. Asit K. Chakraborti, and Babita Tanwar, “**Novel 2-(2'-Aminophenyl)benzazoles as Potential Anti-tubercular Agents and improved process of preparation thereof.**” Indian Patent Application No. 2838/DEL/2015 filed on 09.10.2015 (IP32256/SB/md).
31. Asit K. Chakraborti, Babita Tanwar and Pradeep S. Jadhavar, “**An improved green protocol for the synthesis of 1,2-diamines via ring opening of aziridines with amines.**” Indian Patent Application No. 3741/DEL/2013 filed on 23.12.2013. Publication date (U/S 11A) 26.06.2015.
32. Asit K. Chakraborti, Naisargee Parikh and Sudipta Raha Roy, “**Process for Synthesis of Functionalized Tetrahydropyridines.**” Indian Patent Application No. 226/DEL/2013 filed on 28.1.2013 (IP21900/JCR/akm).
33. Asit K. Chakraborti, Dinesh Kumar, Santosh Rudraawar, Sachin Bindal, Himanshu and Pradeep Chopra, “**Improved Processes for Synthesis of Functionalized Pyridines.**” Indian Patent Application No. 3245/DEL/2012 filed on 18.10.2012 (IP16173/SP/sm).

34. Asit K. Chakraborti, Rajesh Chebolu and Damodara N. Kommi, “An Improved **Catalyst-free Process for the Direct Reductive Amination of Aromatic/Alicyclic Aldehydes and Cyclic ketones.**” Indian Patent Application No. 1918/DEL/2012 filed on 21.06.2012 (IP20473/RK/am).
35. Asit K. Chakraborti, Dinesh Kumar, Mukesh Sonawane, and Brahmam Pujala “**Processes for Synthesis of 2,3-Disubstituted-4-Thiazolidinone.**” Indian Patent Application No. 3148/DEL/2011 filed on 08.11.2011 (IP15779/SGBA).
36. Asit K. Chakraborti, Dinesh Kumar, Tushar Satav, “**An Improved Acid Catalyzed One Pot Synthesis of 2-Styryl Quinoline.**” Indian Patent Application No. 2673/DEL/2011 filed on 15.09.2011 (IP17892/VR).
37. Asit K. Chakraborti, Sunay V. Chankeshwara, “**A Novel Process for Direct Alkylation,**” Indian patent. Appl. No. 11107/DEL/2008 (May 01, 2008).
38. Asit K. Chakraborti, Sunay V. Chankeshwara, Bavneet Singh, “**An Improved Solid Support Catalyst Systems for Direct Esterification,**” Indian patent. Appl. No. 2764/DEL/2007 (Dec 28, 2007).
39. Manpreet Singh, Parikshit Khokale, Santosh Rudrawar, Asit K. Chakraborti, Uttam C. Banerjee, “**Process for the preparation of (R)-1-chloro-3-(3,4-difluorophenoxy)-2-propanol.**” Indian Pat. Appl. (2008), 21pp. CODEN: INXXBQ IN 2006DE02570 A 20080606. Application: IN 2006-DE2570 20061201. Priority: CAN 150:329407 AN 2008:716774 CAPLUS (Copyright (C) 2009 ACS on SciFinder (R)).
40. Asit K. Chakraborti, Simi Sarin, Santosh V. Rudrawar, Raj Kumar, Sunay V. Chankeshwara, Sunanda Dastidar, Abhijit Ray, “**Inhibitors of Phosphodiesterase Type-IV,**” PCT patent filed/1882/DEL/2006 (22-08-2006).
41. Asit K. Chakraborti, Simi Sarin, Santosh V. Rudrawar, Raj Kumar, Sunay V. Chankeshwara, Sunanda Dastidar, Abhijit Ray, “**Phosphodiesterase Inhibitors,**” PCT patent filed/566/DEL/2006 (06-03-2006).
42. Asit K. Chakraborti, Santosh V. Rudrawar, Raj Kumar, Sunay V. Chankeshwara, Simi Sarin, Dr. Sunanda Dastidar, Dr. Abhijit Ray, “**Inhibitors of Phosphodiesterase Type-IV,**” PCT patent filed/565/DEL/2006 (03-03-2006).

III) Research Guidance: (In collaboration with other faculty of the Institute/Department)

Doctoral Level: Total 41

Degree Awarded: 39

1. ¶Title: “Diaminoazines and their Bioisosteres as Potential Trypanothione Reductase Inhibitors: Computational Modeling, Synthesis and Reactivity,” - Ph. D. degree awarded to Ms. Deepika Kathuria in Feb, **2021**.
2. ¶Title: “Computer Aided Design and Synthesis of Potential Antimalarial Agents,” - Ph. D. degree awarded to Ms. Shweta Bhagat in Feb, **2021**.
3. ¶Title: “*New Method Development for the Synthesis of N-heterocycles Potential*,” - Ph. D. degree awarded to Mr. Firdoos Ahmad Sofi in July, **2020**.
4. Title: “Synthesis of Various Novel Heterocyclic Compounds via C-H Bond Activation/Cross Coupling Reactions and Evaluation of their Cyclooxygenase (COX) Inhibitory Potential,” - Ph. D. degree awarded to Mr. Asim Kumar in April, **2019**.
5. ¶Title: “*Synthesis, Structural Analysis, Computer Aided Drug Design and Biological Evaluation of Azines*,” - Ph. D. degree awarded to Mr. Sumit S. Chourasiya in Mar, **2019**.
6. Title: “*Design, Synthesis and Biological Evaluation of New Oxazolidinone Derivatives as Potential Anti-tubercular Agents*,” - Ph. D. degree awarded to Mr. Vaja Maulikkumar Dineshbhai in Dec, **2018**.
7. ¶Title: “*Divalent NI Compounds: An Electronic Structure Analysis, Synthesis and Biological Activity Evaluation*,” - Ph. D. degree awarded to Ms. Neha Patel in Nov, **2018**.
8. Title: “*Heterocyclic Carboxamides as Novel Anti-Mycobacterial Chemotypes: Design, Synthesis, and Biological Evaluation*,” - Ph. D. degree awarded to Mr. Dhameliya Tejas Manjibhai in May, **2018**.
9. Title: “*Biorelevant Heterocycles as Directing Groups for C-H Activation: Synthesis of Novel Functionalised Heterocycles and Evaluation of Their Biological Activity*,” - Ph. D. degree awarded to Mr. Bhavin V. Pipaliya in Aug, **2017**.
10. Title: “*Development of Novel Anti-inflammatory Scaffolds: Synthesis via Newer C-O/C-H/C-Br Activation Protocols and Determination of their COX-Inhibitory Potential*,” - Ph. D. degree awarded to Mr. Priyank Purohit in Oct, **2016**. Received the National level Rajnibhai V. Patel PharmInnova Award for the most “Innovative Thesis” in Ph. D. (Pharmaceutical Chemistry) category in Pharmaceutical Sciences 2017-18.
11. Title: “*Design and Synthesis of Molecular Entities Belonging to New Structural Scaffolds as Anti-Tubercular Agents*,” - Ph. D. degree awarded to Ms. Babita Tanwar in May, **2016**.
12. Title: “*Diversity Oriented Synthesis of Novel Heterocyclic Scaffolds for the Discovery of New Anti-TB Agents*,” - Ph. D. degree awarded to Mr. Pradeep Jadhavar in Feb, **2016**. Received the National level Rajnibhai V. Patel PharmInnova Award for the most “Innovative Thesis” in Ph. D. (Pharmaceutical Chemistry) category in Pharmaceutical Sciences 2016-17.

13. Title: “*CADD Assisted Design and Synthesis of Potentially Selective GSK-3 β Inhibitors,*” - Ph. D. degree awarded to Mr. Minhajul Arfeen in Feb, **2016**.
14. Title: “*Design, Synthesis and Biological Evaluation of Chemical Entities with New Structural Motifs as Antiasthmatic Agents Targeting Phosphodiesterase IV Inhibition,*” - Ph. D. degree awarded to Ms. Naisargee Parikh in Nov, **2013**.
15. Title: “*Studies on Organic Reactions in Aqueous Media: Applications and Understanding the Catalytic Role,*” - Ph. D. Degree awarded to Mr. Damodara Naidu Kommi in August, **2013**.
16. Title: “*Development of Synthetic Methodologies Catalysed by Metal Lewis Acids/Metal Nanoparticles,*” - Ph. D. Degree awarded to Mr. Kapileswar Seth in July, **2013**.
17. Title: “*Design, Synthesis and Biological evaluation of Heterocyclic Based Scaffolds as Cyclooxygenase Inhibitors,*” - Ph. D. Degree awarded to Mr. Dinesh Kumar in June, **2013**. **Recipient of 2013 Eli Lilly Asia Outstanding Thesis Award (First Prize).**
18. Title: “*Design, Synthesis and Biological Evaluation of New Chemical Entities with Carbo/Heterocyclic Scaffolds as Potential Cyclooxygenase Inhibitors,*” - Ph. D. degree awarded to Mr. Sanjeev Kumar Garg in Mar, **2013**.
19. Title: “*Studies on Drug Action and Metabolism for the Design and Synthesis of Novel Y-Shaped PPAR γ Activators,*” - Ph. D. degree awarded to Mr. Dixit Vaibhav Anil in Dec, **2012**.
20. Title: “*Development of Newer Methodologies of Green Chemistry for the Epoxide Ring Opening: Applications to Synthesis of Drugs and Drug Intermediates,*” - Ph. D. degree awarded to Mr. Brahmam Pujala in Nov, **2012**.
21. Title: “*Applications and Mechanistic Investigations of Ionic Liquid Catalysis,*” - Ph. D. degree awarded to Mr. Sudipta Raha Roy in July, **2012**. **Recipient of 2012 Eli Lilly Asia Outstanding Thesis Award (First Prize).**
22. Title: “*Computational and Synthetic Studies on Novel PPAR γ Ligands,*” - Ph. D. degree awarded to Mr. Yoganjaneyulu Kasetti in July, **2012**.
23. Title: “*Development of Novel Catalytic Reactions for Functional Group Interconversion and Cascade Processes,*” - Ph. D. degree awarded to Mr. Rajesh Chebolu in June, **2012**.
24. Title: “*Ionic Liquids as Catalysts in the Development of Eco-friendly Organic Reaction Methodologies and Mass Spectrometric Investigation of Catalysis,*” - Ph. D. degree awarded to Mr. Anirban Sarkar in Apr, **2011**.
25. Title: “*Design, Synthesis and Biological Evaluation of 6-Aminopurine Derivatives as Potential Xanthine Oxidase Inhibitors,*” - Ph. D. degree awarded to Mr. Amit Agarwal in Apr, **2011**.
26. Title: “*Computer-aided Design and Synthesis of Potential Anti-malarial Agents: Targeting PfDHFR Enzyme,*” - Ph. D. degree awarded to Mr. Legesse Adane Bahiru in Feb, **2011**.

27. Title: “*Development of Novel Methodologies for Synthesis of α -Aminophosphonates and α -Hydroxyphosphonates,*” - Ph. D. degree awarded to Mr. Srikant Bhagat in March, **2009**.
28. Title: “*Development of Novel Electrophile Activation Strategies for Organic Transformations: Applications to Synthesis of Drugs and Drug Intermediates,*” - Ph. D. degree awarded to Mr. Sunay V. Chankeshwara in Dec, **2008**. Recipient of 2009 Eli Lilly Asia Outstanding Thesis Award (First Prize).
29. Title: “*Computer-Aided Design, Synthesis and Receptor Binding Studies for the Discovery of Potential PPAR Ligands,*” - Ph. D. degree awarded to Mr. Sandeep Sundriyal in Dec, **2008**. Recipient of 2009 Eli Lilly Asia Outstanding Thesis Award (Second Prize).
30. Title: “*Molecular Docking Studies and Synthesis of Novel Dual PPAR α / γ Antidiabetic agents,*” – Ph. D. degree awarded to Mr. Amit Mittal by NIPER in May **2008**.
31. Title: “*Design, Synthesis and Biological Evaluation of Novel Ligands as Phosphodiesterase-4 Inhibitors,*” - Ph. D. degree awarded to Mr. Santosh Rudrawar in Apr, **2008**.
32. Title: “*Design, Synthesis and Biological Evaluation of Cyclooxygenase Inhibitors as New Non-steroidal Anti-inflammatory Agents,*” - Ph. D. degree awarded to Mr. Raj Kumar in Sept, **2007**.
33. Title: “*Development of Novel Catalysts for Activation of Electrophiles: Application to Chiral Synthesis,*” - Ph. D. degree awarded to Ms. Shivani by NIPER in Aug, **2007**.
34. Title: “*Molecular Modelling Studies on Dual PPAR Agents: Synthesis of a Few Designed Molecules,*” – Ph. D. degree awarded to Ms. Smriti Khanna by NIPER in July **2005**.
35. Title: “*Computer Aided Design and Syntheses of Selective Cyclooxygenase-2 Inhibitors,*” – Ph. D. degree awarded to Ms. R. Thilagavathi by NIPER in April **2005**.
36. Title: “*Studies on Selective Nucleophilic Epoxide Cleavage and Applications in Synthesis of Pharmaceuticals,*” - Ph. D. degree awarded to Mr. Atul Kondaskar by NIPER in May **2003**.
37. Title: “*Design of Catalysts for Acylation and Alkylation Reactions: Application for the Syntheses of Pharmaceutical Intermediates,*” - Ph. D. degree awarded to Mr. Rajesh Gulhane by NIPER in March **2003**.
38. Title: “*Synthesis of New Chemical Entities as Anti-Leishmanial Agents,*” - Ph. D. degree awarded to Ms. Lalima Sharma by NIPER in December **2002**.
39. Title: “*Synthetic Studies on Organo-Sulfur Compounds,*” - Ph. D. degree awarded to Mr. Mrinal Kanti Nayak by The University of Burdwan in February **1999**.

In Persuasion: 2

40. Title: “*Design, Synthesis and Biological Evaluation of N-Containing Heterocycles and Enaminones as Selective COX-2 Inhibitor,*” - Ph. D. thesis work in persuasion by Mr. Nirjhar Saha from July, **2017**.

41. Title: “*Design, Synthesis and Biological Evaluation of Various Heterocyclic-based Scaffolds as Anti-bacterial Agents,*” - Ph. D. thesis work in pursuasion by Mr. Kshitij Ishwarbhai Patel from July, **2017**.

Masters Level: Total 130

Degree Awarded: 130

1. Title: “*Design, Synthesis, and Biological Evaluation of Benzazole-Enaminone Hybrids as Potential COX-2 Inhibitor,*” – M. S. (Pharm.) degree awarded to Ms. Soumyadri Chakraborty in June **2019**.
2. Title: “*Design and Synthesis of Benzazole-Tethered Heterocycles as Potential Trypanothione Reductase (TR) Inhibitors,*” – M. S. (Pharm.) degree awarded to Ms. Disha Taksande in June **2019**.
3. Title: “*Design and Synthesis of Benzazole, Quinazolinone Tethered Oxazolidinone Hybrids as Anti-tubercular Agents,*” – M. S. (Pharm.) degree awarded to Ms. Haritha Sindhe in June **2019**.
4. Title: “*Design and Synthesis of N,1-Dibenzyl-1H-benzo[d]imidazole-2-carboxamide as Potential Anti-tubercular Agents,*” – M. S. (Pharm.) degree awarded to Mr. Kayande Pramod Ashok in June **2019**.
5. Title: “*Design, Synthesis, and Biological Evaluation of Heterocycle Containing Cyclic Enaminone as Selective COX-2 Inhibitors,*” - M. S. (Pharm.) degree awarded to Mr. Bhuneswar Sinha in June **2019**.
6. Title: “*Design and Synthesis of Benzazole-Quinazolinone Hybrids as Leishmanial Trypanothione Reductase Inhibitors,*” – M. S. (Pharm.) degree awarded to Mr. Ramavath Ramesh Naik in June **2019**.
7. Title: “*Design, Synthesis, and Biological Evaluation of Benzazole Tethered Heterocycles as Novel Potential PDE-4 Inhibitors,*” M. S. (Pharm.) degree awarded to Mr. Pranav Bhagwat in June **2019**.
8. Title: ““On Water” Benzazole Directed Ruthenium Catalysed C2-Alkenylation of Indoles with Alkynes and Styrenes via C[sp²]-H Activation,” –M. S. (Pharm.) degree awarded to Ms. Astha Zalpuri in June **2018**.
9. Title: “*Meta Nanoparticles Catalyzed Synthesis of Heterocyclic Compounds via C-H Activation with COX (Cyclooxygenase) Inhibitory Potential,*” –M. S. (Pharm.) degree awarded to Mr. Akshay Dhote in June **2018**.
10. Title: “*Design and Synthesis of Benzoxazole-2-carboxamides as Potential Anti-Tubercular Agents,*” – M. S. (Pharm.) degree awarded to Mr. Mainak Chatterjee in June **2018**.
11. Title: “*Synthesis of Potential mPGES-1 Inhibitors,*” – M. S. (Pharm.) degree awarded to Ms. Pooja Israni in June **2018**.
12. Title: “*Design and Synthesis of Quinoline Tethered Oxazolidinones as Potential anti-Tubercular agents,*” - M. S. (Pharm.) degree awarded to Ms. Sweety in June **2018**.

13. Title: “*Synthesis and Biological Evaluation of Indazolo[3,2b]quinazolinones as Potential Anti-Tubercular Agents,*” – M. S. (Pharm.) degree awarded to Ms. Naikela Shweta Kantilal in June **2018**.
14. Title: “*Design and Synthesis of Novel Benzoxazoles as Potential Phosphodiesterase-IV Inhibitors,*” - M. S. (Pharm.) degree awarded to Mr. Balabhau Warkhad in June **2018**.
15. Title: “*Design, Synthesis, and Biological Evaluation of 3-N-Arylquinazoline- 4(3H)-one Derivatives as Potential Anti-Leishmanial Agents,*” - M. S. (Pharm.) degree awarded to Mr. Satish Pathak in June **2018**.
16. Title: “*Design, Synthesis, and Biological Evaluation of Cyclic Monoenaminone as COX-2 Inhibitors,*” - M. S. (Pharm.) degree awarded to Mr. Ajmer Singh in June **2018**.
17. Title: “*Design and synthesis of benzazole tethered oxazolidinone derivatives as potential anti-tubercular agents,*” – M. S. (Pharm.) degree awarded to Mr. Neeraj Singh Rawat in June **2017**.
18. Title: “*Design, Synthesis and Biological Evaluation of Quinazolines, Dihydroquinazolines and Quinazolinones as potential antileishmanial agents,*” – M. S. (Pharm.) degree awarded to Mr. Irshad Maajid Taily in June **2017**.
19. Title: “*Design and Synthesis of 3,3'-pyridine-2,3 /3,4-diylbis(azenediyl)biscycloalken-2-enones and 3-substituted 1,3-diarylpropan-1-ones as Potential Selective COX-2 Inhibitors,*” – M. S. (Pharm.) degree awarded to Mr. Takle Dnyaneshwar Janardan in June **2017**.
20. Title: “*Design, synthesis and biological evaluation of N3-arylquinazolinones as potent antileishmanial agents,*” – M. S. (Pharm.) degree awarded to Mr. Pathan Shahebaazkhan Ferozkhan in June **2017**.
21. Title: “*Design and Synthesis of Benzo[d]imidazole-2-carboxamides as Potential Anti-tubercular Agents,*” - M. S. (Pharm.) degree awarded to Mr. Eshan Mishra in June **2017**.
22. Title: “*Design and Synthesis of Novel 1-[2-(benzo[d]thiazol-2-yl)aryl]methanones as Phosphodiesterase-IV Inhibitors,*” – M. S. (Pharm.) degree awarded to Mr. Rajesh Parmar in June **2017**.
23. Title: “*3,3'-(1,2-Phenylenebis(azanediy))bis(cycloalkyl-2-enones): Synthesis and Biological Evaluation as Selective COX-2 Inhibitors,*” M. S. (Pharm.) degree awarded to Mr. Nirjhar Saha in June **2017**.
24. Title: “*Palladium(II)-Catalysed C(sp²)-H Aroylation: Design, Synthesis and Biological Evaluation of Novel Benzothiazoles as Potential Phosphodiesterase-IV Inhibitors,*” M. S. (Pharm.) degree awarded to Mr. Vajja Krishna Rao in June **2017**.
25. Title: “*Design and Synthesis of 2-Styrylquinazoline-4(3H)-ones as Potential Anti-Tubercular Agents,*” M. S. (Pharm.) degree awarded to Md. Umer Lone in June **2017**.
26. Title: “*Design and Synthesis of Novel Benzimidazole Derivatives as Potential anti-Inflammatory Agents,*” – M. S. (Pharm.) degree awarded to Mr. Aman Gupta in June **2016**.

27. Title: “*Design and Synthesis of 1-(2-(Benzothiazol)phenyl-3-aryl/alkylureas as Potential COX-2 Inhibitors,*” – M. S. (Pharm.) degree awarded to Mr. Saurav Mahajan in June **2016**.
28. Title: “*Design and Synthesis of Substituted Benzazoles as Potential anti-Leishmanial Agents,*” – M. S. (Pharm.) degree awarded to Ms. Priti Singh in June **2016**.
29. Title: “*Development of New anti-Tubercular Agents through Exploration of Enzymes Involved in Glyoxylate Pathway,*” – M. S. (Pharm.) degree awarded to Ms. Manasa K. in June **2016**.
30. Title: “*Design and Synthesis of 1-(2-Benzoxazole)phenyl-3-aryl/alkylureas as Potential COX-2 Inhibitoras,*” - M. S. (Pharm.) degree awarded to Ms. Ketki Eknath Shelar in June **2016**.
31. Title: “*Design and Synthesis of Oxazolidinone Derivatives as Potential anti-Tubercular Agents,*” – M. S. (Pharm.) degree awarded to Ms. Yadav Tanuja in June **2016**.
32. ¶Title: “*Design and Synthesis of 3,5-Disubstituted 1,2,4-triazoles as Potential anti-Leshmanial agents,*” – M. S. (Pharm.) degree awarded to Ms. Sakshi in June **2016**.
33. ¶Title: “*Design and Synthesis of Hybrid Molecules as Potential anti-Malarial Agents,*” – M. S. (Pharm.) degree awarded to Mr. Gourav Das in June **2016**.
34. ¶Title: “*Chalcone Based Aminoguanidine Derivatives as Novel Class of Trypanothione Reductase Inhibitors,*” – M. S. (Pharm.) degree awarded to Ms. Smapada Sunil Nikam in June **2016**.
35. ¶Title: “*Design and Synthesis of Substituted Benzamidine Derivatives as Trypanothione Reductase Inhibitors,*” – M. S. (Pharm.) degree awarded to Mr. Balu Falke in June **2016**.
36. Title: “*2-(Aminophenyl)benzthiazoles as Potentially New Antileishmanial Chemotypes: Design, Synthesis and Biological Evaluation,*” – M. S. (Pharm.) degree awarded to Mr. Nishant Singh Chauhan in June **2015**.
37. Title: “*Design and Synthesis of Novel Benzothiazoles as Potential Anti-Tubercular Agents,*” – M. S. (Pharm.) degree awarded to Mr. Sahaj Pancholia in June **2015**. Received the National level Rajnibhai V. Patel PharmInnova Award for the most “Innovative Thesis” in M. Pharm. (Pharmaceutical Chemistry) category in Pharmaceutical Sciences 2015-16.
38. Title: “*Design and Synthesis of New Chemotypes as Potential Antitubercular Agents,*” - M. S. (Pharm.) degree awarded to Mr. Bharat Shinde in June **2015**.
39. Title: “*Design and Synthesis of 2-(2'-Arylphenyl)benzoxazole Derivatives as Potential COX-2 Inhibitors,*” – M. S. (Pharm.) degree awarded to Ms. Madhulika Singh in June **2015**.
40. Title: “*Design and Synthesis of 2-(2'-Arylphenyl)benzothiazole Derivatives as Potential COX-2 Inhibitors,*” – M. S. (Pharm.) degree awarded to Mr. Gulshan Kumar in June **2015**.

41. Title: “*Design And Synthesis of Benzothiazole Derivatives as Potential PDE IV Inhibitors,*” – M. S. (Pharm.) degree awarded to Ms. Tokala Ramya in June **2015**.
42. Title: “*Design and Synthesis of Novel B/C Ring Fused Oxazolidinones as Potential Anti-TB Agents,*” – M. S. (Pharm.) degree awarded to Mr. Vaja Maulikkumar Dineshbhai in June **2014**.
43. Title: “*Design and Synthesis of Novel Oxazolidinones as Potential Anti-TB Agents,*” – M. S. (Pharm.) degree awarded to Mr. Udaya Bhaskar Goda in June **2014**.
44. Title: “*Design and Synthesis of Novel Benzothiazoles as Potential Anti-tubercular Agents,*” – M. S. (Pharm.) degree awarded to Mr. Dhameliya Tejas Manjibhai in June **2014**. Received the National level Rajnibhai V. Patel PharmInnova Award for the most “Innovative Thesis” in M. Pharm. (Pharmaceutical Chemistry) category in Pharmaceutical Sciences 2014-15.
45. Title: “*Development of Novel Anti-Inflammatory Agents Targeting Cyclooxygenase Enzyme,*” – M. S. (Pharm.) degree awarded to Mr. Badoo Chatale Chhagan in June **2014**.
46. Title: “*Design and Synthesis of Novel COX/LOX Dual Inhibitors,*” - M. S. (Pharm.) degree awarded to Mr. Abhishek Gautam in June **2014**.
47. Title: “*Design and Synthesis of Substituted Heteroaryl and Biaryl Derivatives as Potential PTP-1B Inhibitors,*” – M. S. (Pharm.) degree awarded to Ms. Shikha Jain in June **2014**.
48. Title: “*Design, Synthesis and Biological Evaluation of Structurally Diverse Heterocyclic Scaffolds as Phosphodiesterase IV Inhibitors,*” – M. S. (Pharm.) degree awarded to Mr. Shah Hardik Vijaykumar in June **2014**.
49. Title: “*Design and Synthesis of Phosphonate Derivatives of Curcumin Type Analogue as Antileishmanial Agents,*” – M. S. (Pharm.) degree awarded to Ms. Shweta Mishra in June **2014**.
50. Title: “*Design and synthesis of novel benzothiazole derivatives as Anti-Tubercular Agents,*” – M. S. (Pharm.) degree awarded to Mr. Parth Shah in June **2013**.
51. Title: “*Design, synthesis and biological evaluation of new heterocyclic scaffolds as potential PDE4 inhibitors,*” – M. S. (Pharm.) degree awarded to Mr. Rahul P Mahire in June **2013**.
52. Title: “*Design and synthesis of Histone Deacetylase inhibitors as novel Anti-Parasitic Agent,*” – M. S. (Pharm.) degree awarded to Mr. Asim Kumar in June **2013**.
53. Title: “*Design, synthesis and biological evaluation of potential Cyclooxygenase (COX) Inhibitors,*” – M. S. (Pharm.) degree awarded to Mohammad Mohsin A. G. Qadri in June **2013**.
54. Title: “*Design synthesis and evaluation of structurally diverse bisphosphonates as Antileishmanial Agents,*” - M. S. (Pharm.) degree awarded to Mr. G. V. V. Tharun Kumar in June **2013**.

55. Title: “*PTP-1B as Anti Diabetic drug target: Design and Synthesis of new chemical entities*,” – M. S. (Pharm.) degree awarded to Mr. Banothu Nagaraju in June **2013**.
56. Title: “*Design, synthesis and evaluation of α -sulfonamidoposphonates and 3- keto phosphonates as Anti-Leishmanial Agents*,” – M. S. (Pharm.) degree awarded to Ms. M. Supriya in June **2013**.
57. Title: “*Design and synthesis of 2-imino-thiazolidine 4-one as ATP-competitive GSK-3 inhibitors*,” – M. S. (Pharm.) degree awarded to Mr. Rahulkumar Arvindbhai Patel in June **2013**.
58. Title: “*Design and Synthesis of Substrate Competitive Inhibitors of GSK-3*,” – M. S. (Pharm.) degree awarded to Mohd. Tosif Khan in June **2013**.
59. Title: “*Design and Synthesis of Novel GTU Derivatives: Targeting PfDHFR Enzyme*,” – M. S. (Pharm.) degree awarded to Mr. Ankur Khare in June **2013**.
60. Title: “*Design and Synthesis of Novel 6-Aminochromane Derivatives of Troglitazone as PPAR γ Agonist*,” – M. S. (Pharm.) degree awarded to Mr. Sanjay Singh in June **2013**.
61. Title: “*Binding Site Characterization and Identification of Novel Inhibitors of hSGLT2 protein*,” - M. S. (Pharm.) degree awarded to Mr. Ayush Singhal in June **2013**.
62. Title: “*Molecular Docking Studies and Synthesis of 2-Iminothiazole Derivatives as Anti-Cancer Agents*,” – M. S. (Pharm.) degree awarded to Mr. Maulik Dineshchandra Patel in June **2013**.
63. Title: “*Design, Synthesis and Biological Evaluation of New Chemical Entities Belonging to Novel Structural Scaffolds as Potential PDE-4 Inhibitors*,” – M. S. (Pharm.) degree awarded to Mr. Mardul K. Srivasrtava in June **2012**.
64. Title: “*Design and Synthesis of Thiazolidine-4-one and 3-(1H-indol-3-yl)-1,3-Diphenylpropan-1-one Derivatives as PTP-1B Inhibitors*,” – M. S. (Pharm.) degree awarded to Mr. Varun K. Jain in June **2012**.
65. Title: “*Design, Synthesis and Biological Evaluation of Quinazoline-based Heteroaromatics as Cyclooxygenase Inhibitors*,” – M. S. (Pharm.) degree awarded to Mr. Manesh Nautiyal in June **2012**.
66. Title: “*Design and Synthesis of Novel Oxazolidinones as Potential Anti-tubercular Agents*,” – M. S. (Pharm.) degree awarded to Mr. Sunil H. Choure in June **2012**.
67. Title: “*Design and Synthesis of HDACIs as Anti-parasitic Agents*,” - M. S. (Pharm.) degree awarded to Md. Imam Ansari in June **2012**.
68. Title: “*Design and Synthesis of Non-purine Entities as Xanthine Oxidase Inhibitors*,” – M. S. (Pharm.) degree awarded to Mr. Samala Mohan Reddy in June **2012**.
69. Title: “*Exploration of Non-Shikimic Acid-based Synthetic Routes for the Neuraminidase Inhibitor- Oseltamivir*,” – M. Tech. (Pharm.) degree awarded to Mr. Prashant S. in June **2012**.

70. Title: “*Biocatalytic stereoinversion of secondary alcohols using Candida parapsilosis MTCC 1965*,” – M. Tech. (Pharm.) degree awarded to Mr. Suyog Madhav Amrutkumar in June **2012**.
71. Title: “*New scaffolds for selective COX-2 inhibition: design, synthesis and biological evaluation of novel compounds*,” – M. S. (Pharm.) degree awarded to Mr. Tushar Satav in June **2011**.
72. Title: “*Design, synthesis and biological evaluation of new heterocyclic scaffolds as potential phosphodiesterase-IV inhibitors*,” – M. S. (Pharm.) degree awarded to Mr. Husan Chand in June **2011**.
73. Title: “*Design and Synthesis of new heterocyclic scaffolds as potential histone deacetylase inhibitors*,” – M. S. (Pharm.) degree awarded to Ms. Himanshu Sharma in June **2011**.
74. Title: “*Design and Synthesis of structurally diverse scaffoldss as potential HIF prolyhydroxylase inhibitors*,” – M. S. (Pharm.) degree awarded to Mr. Rohit Bansal in June **2011**.
75. Title: “*Oseltamivir Synthesis: A New Approach*,” - M. Tech. (Pharm.) degree awarded to Ms. Babita Tanwar in June **2011**.
76. Title: “*Design and Synthesis of Potential Phosphodiesterase 4 Inhibitors with Novel Structural Framework*,” – M. S. (Pharm.) degree awarded to Ms. Sonam Bhatia in June **2010**.
77. Title: “*Design and Synthesis of New Heterocyclic Scaffolds as Protein Tyrosine Phosphatase 1B Inhibitors (PTP1B)*,” – M. S. (Pharm.) degree awarded to Mr. Prahlad Kumar Meena in June **2010**.
78. Title: “*Novel Heterocyclic Scaffolds as Histone Deacetylase Inhibitors*,” – M. Tech. (Pharm.) degree awarded to Mr. Sachin Bindal in June **2010**.
79. Title: “*Design and Synthesis of Novel Xanthine Oxidase Inhibitors*,” – M. Tech. (Pharm.) degree awarded to Mr. Mukesh Sonawane in June **2010**.
80. Title: “*Design and Synthesis of Potential Selective Cyclooxygenase-2 Inhibitors*,” - M. S. (Pharm.) degree awarded to Mr. Kulin K. Sharma in June **2009**.
81. Title: “*Design, Synthesis of New Heterocycliclic Scaffolds of Potential Phosphodiesterase-4 Inhibitors*,” - M. S. (Pharm.) degree awarded to Ms. Naisargee Parikh in June **2009**.
82. Title: “*Development of New methodology for Alkylation using Dimethyl Carbonate under heterogeneous catalysis: An Eco-friendly Appraoch*,” - M. Tech. (Pharm.) degree awarded to Mr. Alpesh R. Patel in June **2009**.
83. Title: “*Design and Synthesis of Novel Hydroxamates Based Histone Deacetylase Inhibitors having Heterocyclic Spacer*,” - M. S. (Pharm.) degree awarded to Mr. Pradeep Chopra in June **2008**.
84. Title: “*Design and Synthesis of Dual COX/LOX Inhibitors as Non-steroidal Antiinflammatory Agents*,” - M. S. (Pharm.) degree awarded to Mr. Pradeep Jadhavar in June **2008**.

85. Title: “*Design and Synthesis of New Chemical Entities as Potential Xantine Oxidase Inhibitors,*” - M. S. (Pharm.) degree awarded to Mr. Vinay Saini in June **2008**.
86. Title: “*Design, Synthesis and in-vitro Evaluation Various Heterocyclic Scaffolds based Phosphodiesterase (PDE-4) Inhibitors,*” - M. S. (Pharm.) degree awarded to Ms. Sharmistha Sharma in June **2008**.
87. Title: “*Quantum Chemical Structural Analysis of Antidiabetic Sulfonyl Ureas to Understand Conformational and Polymorphic Preferences,*” - M. S. (Pharm.) degree awarded to Mr. Nikunj Kumar Patel in June **2008**.
88. Title: “*Electrophilic Activation catalyst for Nitration: An Ecofriendly Approach,*” - M. Tech. (Pharm.) degree awarded to Mr. Satyakam Rahul in June **2008**.
89. Title: “*Isolation and Screening of Novel Microorganisms for Bioreduction of 1-(4-Fluorophenyl)-5-(2-oxo-4-phenyl-oxazolodin-3-yl)-pentane-1,5-dione: an Intermediate for Ezetimibe Synthesis,*” - M. Tech. (Pharm.) degree awarded to Mr. Abdul Basit in June **2008**.
90. Title: “*Enantioselective Kinetic Resolution of Racemic Metoprolol using Lipase Mediated transesterification Reaction,*” - M. Tech. (Pharm.) degree awarded to Mr. Abhishek Kaler in June **2008**.
91. Title: “*Biological Evaluation of New Chemical Entities as Cyclooxygenase Inhibitor,*” - M. Tech. (Pharm.) degree awarded to Mr. Anil Kumar in June **2008**.
92. Title: “*Design and Synthesis of Hetero-Michael Adducts as Phosphodiesterase 4 Inhibitors,*” - M. S. (Pharm.) degree awarded to Mr. Gaurav Shrama by NIPER in June **2007**.
93. Title: “*Design and Synthesis of Heteroaromatics as Cyclooxygenase Inhibitors,*” - M. S. (Pharm.) degree awarded to Mr. Dinesh Kumar by NIPER in June **2007**.
94. Title: “*Design and Synthesis of Substituted 1-Aryl-3-amino-2-propen-1-one Based Histone Deacetylase Inhibitors,*” - M. S. (Pharm.) degree awarded to Ms. Chetna Madaan by NIPER in June **2007**.
95. Title: “*Quest for Novel Friedel Crafts Acylation,*” - M. Tech. (Pharm.) degree awarded to Mr. Bavneet Singh by NIPER in June **2007**.
96. Title: “*Molecular Docking and Synthesis of Y-Shaped Potential PPAR γ Ligands,*” - M. S. (Pharm.) degree awarded to Mr. G. Ranganath in June **2007**.
97. Title: “*Biological Evaluation of New Chemical Entities (NCEs) for Inhibition of Cyclooxygenase and Lipooxygenase,*” - M. Tech. (Pharm.) degree awarded to Mr. Vachan Singh Meena by NIPER in June **2007**.
98. Title: “*Isolation and Purification of Phosphodiesterase Enzymes and in-vivo, in-vitro Screening of New Chemical Entities for PDE-4 Activity,*” - M. Tech. (Pharm.) degree awarded to Mr. Jagmohan Verma by NIPER in June **2007**.
99. Title: “*Isolation and Purification of Xanthine Oxidase from Bovine Milk and Screening of New Chemical Entities as Xanthine Oxidase Inhibitors,*” - M. Tech. (Pharm.) thesis submitted by Mr. Sanjay Rawat by NIPER in June **2007**.

100. Title: “*Design and Synthesis of 1,3-Diaryl Heterocyclic Compounds as Anti-Leishmanial Agents,*” - M. S. (Pharm.) degree awarded to Mr. Gopla L. Khatik by NIPER in July **2006**.
101. Title: “*Design and Synthesis of Novel 4-Aminoquinoline Analogues as Cyclooxygenase Inhibitors,*” - M. S. (Pharm.) degree awarded to Mr. Hashim F. Motiwala by NIPER in July **2006**.
102. Title: “*Dual Activation Strategy: Application in Carbon-Carbon Coupling Reaction,*” - M. S. (Pharm.) degree awarded to Mr. Ratnesh Sharma by NIPER in July **2006**.
103. Title: “*Studies of Cyclopropanation under PTC Conditions,*” - M. Tech. (Pharm.) degree awarded to Ms. Kavitha B. by NIPER in July **2006**.
104. Title: “*Synthesis of 1-Chloro-3-(3,4-difluorophenoxy)-2-propanol (Intermediate in Lubeluzole Synthesis) and its Resolution by Lipase,*” - M. Tech. (Pharm.) degree awarded to Mr. Parikshit Khokale by NIPER in July **2006**.
105. Title: “*Chemoenzymatic Synthesis of (S)-Sotalol,*” - M. Tech. (Pharm.) degree awarded to Mr. Kamlesh Mena by NIPER in July **2006**.
106. Title: “*Synthesis of 1,3-Bisheterocycles,*” - M. S. (Pharm.) degree awarded to Mr. Ramchandra Besra by NIPER in July **2005**.
107. Title: “*1,3-Diaryls as Potential Inhibitors of Leishmanial Tubulin: Design and Synthesis,*” - M. S. (Pharm.) degree awarded to Mr. Sanjeev Kumar Garg by NIPER in July **2005**.
108. Title: “*Design and Synthesis of Diaryl Ethers, Sulfides and Amines as Leishmanial Tubulin Inhibitors,*” - M. S. (Pharm.) degree awarded to Mr. Navnath S. Gavande by NIPER in July **2005**.
109. Title: “*Design and Synthesis of Fructose-1,6-bisphosphatase Inhibitors as Antidiabetic Agents,*” - M. S. (Pharm.) degree awarded to Ms Rajni in June **2005**.
110. Title: “*Synthesis of Hydroxychalcones as Antileishmanial Agents,*” - M. S. (Pharm.) degree awarded to Mr. Sawant Devesh M. by NIPER in December **2003**.
111. Title: “*Regioselective Thiocarbothioalkoxylation of Phenols,*” - M. S. (Pharm.) degree awarded to Ms. Beenu Bhatt by NIPER in December **2003**.
112. Title: “*Solution and solid Phase Synthesis of 2-Arylbenzothiazole Libraries,*” - M. S. (Pharm.) degree awarded to Mr. Jadhav Kiritikumar B. by NIPER in December **2003**.
113. Title: “*Development of New Method for On-Bead and Off-Bead Monitoring and Quantification of Resin Loading in Solid-Phase Combinatorial Reactions,*” - M. S. (Pharm.) degree awarded to Mr. Sunay V. Chankeshwara by NIPER in December **2003**.
114. Title: “*Single Electron Transfer Process for In Situ Generation of Thiolate Anion: Applications in Functional Group Transformations and Syntheses of Sulfides as Potential Anti-parasitic Agents,*” - M. S. (Pharm.) degree awarded to Ms. Sonia Kundu by NIPER in December **2002**.

115. Title: “*Design and Syntheses of Potential Parasite Specific Anti-tubulin Agents,*” - M. S. (Pharm.) degree awarded to Mr. Raj Kumar by NIPER in December **2002**.
116. Title: “*Cleavage of Aryl Alkyl Ethers,*” - M. S. (Pharm.) degree awarded to Mr. Harsh Vardhan Jain by NIPER in December **2002**.
117. Title: “*Design and Syntheses of Novel Oximes and Oxime Ethers Anti-tubulin Compounds as Potential Anti-leishmanial Agents,*” - M. S. (Pharm.) degree awarded to Ms. Harmeet Kaur by NIPER in December **2002**.
118. Title: “*Computer Aided Design and Synthesis of Benzyl Piperidinyl Thiourea Derivatives as Acetylcholinesterase Inhibitors,*” - M. S. (Pharm.) degree awarded to Mr. Harpreet Singh by NIPER in December **2001**.
119. Title: “*Ligand Based Design of Phosphodiesterase Type IV Inhibitors as Anti-Asthma Agents,*” - M. S. (Pharm.) degree awarded to Mr. Malde Alpeshkumar Keshavji by NIPER in December **2001**.
120. Title: “*Combinatorial Synthesis of Stilbene Libraries,*” - M. S. (Pharm.) degree awarded to Mr. S. Magesh by NIPER in December **2001**.
121. Title: “*Synthesis of Novel Benzopyran and Dihydroquinoline Derivatives as Potential Anti-hypertensive Agents,*” - M. S. (Pharm.) degree awarded to Mr. Anurag Bansal by NIPER in December **2001**.
122. Title: “*Computer Aided Design of Novel Acetylcholinesterase Inhibitors as Anti-Alzheimer’s Agents,*” - M. S. (Pharm.) degree awarded to Mr. Akash Khandelwal by NIPER in December **2000**.
123. Title: “*Computer Aided Design of Cystein Protease Inhibitors as Antiparasitic Agents,*” - M. S. (Pharm.) degree awarded to Mr. Sachin Badrinath Surade by NIPER in December **2000**.
124. Title: “*Combinatorial Synthesis of Chalcone Libraries,*” - M. S. (Pharm.) degree awarded to Ms. Smriti Khanna by NIPER in December **2000**.
125. Title: “*Design and Synthesis of Novel Anti-tubulin Compounds as Anti-leishmanial Agents,*” - M. S. (Pharm.) degree awarded to Mr. Santosh Rudrawar by NIPER in December **2000**.
126. Title: “*Theoretical Modelling of Lewis Acid Catalyst,*” - M. S. (Pharm.) degree awarded to Ms. R. Thilagavathi by NIPER in December **1999**.
127. Title: “*Design of Novel HMG-CoA Reductase Inhibitors,*” - M. S. (Pharm.) degree awarded to Ms. V. Aparna by NIPER in December **1999**.
128. Title: “*The Use of Zirconium Derived Catalysts as a Substitute for Aluminium Chloride in the Synthesis of Certain Drug Intermediates,*” - M. Tech. (Pharm.) degree awarded to Mr. Santharam U. by NIPER in December **1999**.
129. Title: “*Application of Microwave in Functional Group Protection and Deprotection,*” - M. S. (Pharm.) degree awarded to Mr. C. Selvam by NIPER in December **1999**.
130. Title: “*Asymmetric Synthesis of α -Amino Acids,*” - M. S. (Pharm.) degree awarded to Mr. D. Gangadhar Goud by NIPER in December **1999**.

Guidance at Masters' Level for Other University/Institute Students:

1. Title: "*Naked Fluoride Anion Promoted Deprotection of Sulfonate Esters,*" - Project carried out at NIPER by Ms. Rajita Patankar, M. Sc. (Tech.) in Pharmaceutical Chemistry student from Devi Ahilya Viswavidyalaya, Indore, July **2001**.
2. Title: "*Selective Aryl-Alkyl Ether Cleavage,*" - Project work carried out at NIPER by Mr. Anurag Hardia, M. Sc. (Tech.) in Pharmaceutical Chemistry student from Devi Ahilya Viswavidyalaya, Indore, July **2001**.
3. Title: "*Development of Novel Methodologies for Protection and Deprotection of Functional Groups,*" - Project carried out at NIPER by Ms. Upasana Sharma and the M. Sc. (Tech.), Pharmaceutical Chemistry Degree awarded by the University of Lucknow in January **2001**.
4. Title: "*Electrostatic Catalysis: Protection of Aldehydes as Diacetates under Environment Friendly Condition,*" - Project carried out at NIPER by Mr. Amit Kumar Tiwari and the M. Sc. (Pharmaceutical Chemistry) Degree was awarded by the Devi Ahilya Viswavidyalaya, Indore in **2000**.
5. Title: "*Development of Novel Method for Acylation Catalysed by Zirconium Derivatives,*" - Project carried out at NIPER by Mr. Kishan Kumar Vishwakarma and the M. Sc. (Pharmaceutical Chemistry) Degree was awarded by the Devi Ahilya Viswavidyalaya, Indore in **2000**.
6. Title: "*Transition Metal Catalysed Thioketalisation of Carbonyl Groups,*" - Project carried out at NIPER by Mr. Sandeep Victor and the M. Sc. (Pharmaceutical Chemistry) Degree was awarded by the Devi Ahilya Viswavidyalaya, Indore in **2000**.
7. Title: "*Effect of Counter Cation in the Alkylation of Carboxylate Anion with Dialkyl Sulfates,*" - Project carried out at NIPER by Mr. Sashi Dixit and the M. Sc. (Pharmaceutical Chemistry) Degree was awarded by the Devi Ahilya Viswavidyalaya, Indore in **1999**.

Short Training at Masters Level for Other University/Institute Students:

1. Ms. Pooja Batra, M. Sc. (Industrial Chemistry) student from Guru Nanak Khalsa College, Yamuna Nagar, Haryana. June 4 to August 31, **2001**.
2. Ms. Shefali Ghai, M. Sc. (Industrial Chemistry) student from Guru Nanak Khalsa College, Yamuna Nagar, Haryana. July 4 to September 6, **2000**.
3. Ms. Harneet Kaur, M. Sc. (Industrial Chemistry) student from Guru Nanak Khalsa College, Yamuna Nagar, Haryana. June 15 to August 13, **1999**.
4. Mr. Amit Kumar Tiwari, M. Sc. (Pharmaceutical Chemistry) student from Devi Ahilya Viswavidyalaya, Indore. June 3 to July 30, **1999**.

IV) Paper Presented/Accepted in Symposium: Total 110

[Abroad 18, India 91, Adjudged Best Paper/Presentation 8]

National: 51

1. Nirjhar Saha, Babita Tanwar, Asim Kumar, Mansa K., Kapileswar Seth, and Asit K. Chakraborti. "Paladium Nanoparticle-Catalyzed Aziridine Phenolysis for the Synthesis of β -Aryloxyamines," The National Symposium on Recent Advances in Organic and Bioorganic Chemistry (RAOBC) Mar 22-24, **2019**. Jointly Organized by RSC and IISER, Mohali, Punjab, India. **Poster Presentation No. P40**.
2. Kshitij I. Patel, Pradeep S. Jadhavar, Tejas M. Dhameliya, Maulikkumar D. Vaja, Perumal Yogeshwari, Dharamarajan Sriram, and Asit K. Chakraborti. "Benzimidazoloquinazolines as New anti-TB Chemotypes: Design, Synthesis, and Biological Evaluation," The National Symposium on Recent Advances in Organic and Bioorganic Chemistry (RAOBC) Mar 22-24, **2019**. Jointly Organized by RSC and IISER, Mohali, Punjab, India. **Poster Presentation No. P27**.
3. Nirjhar Saha, Babita Tanwar, Asim Kumar, Kapileswar Seth, and Asit K. Chakraborti. "In situ Generated Paladium Catalyst for Suzuki-Miyaura Reaction of Bio-active Scaffold-Tethered Haloarenes with Aryl/Heteroary Boronic Acids," The 24th National Symposium in Chemistry Feb 8-10, 2019 and 13th CRSI-RSC Joint Symposium Feb 7, **2019**. Jointly Organized by CSIR-Central Leather Research Institute & IIT Madras, Chennai, Tamil Nadu, India. **Poster Presentation No. PP119**.
4. Tejas M. Dhameliya, Rishu Tiwari, Arkaprabha Banerjee, Sahaj Pancholia, Dharamarajan Sriram, Dulal Panda, and Asit K. Chakraborti. "New Avenue for Novel Anti-TB Chemotypes: Design, Synthesis, Biological Evaluation and Molecular Modeling of Benzo[d]thiazole-2-carbanilides," National Conference on "Convergence of Pharmaceutical Sciences & Biomedical Technology (CPSBT)-2018" organised by National Institute of Pharmaceutical Education and Research (NIPER), Ahmedabad during Mar 21-23, **2018** at Ahmedabad Management Association, ATIRA Campus, Dr. Vikram Sarabhai Marg, Ahmedabad, Gujarat, India. **Oral Presentation No. OP3, Received Second Prize**.
5. Tejas M. Dhameliya, Sahaj Pancholia, Dharamarajan Sriram and Asit K. Chakraborti. "*N*-Arylbenzo[d]thiazole-2-carboxamide as New Anti-TB Scaffold: Design, Synthesis, Biological Evaluation and Structure-Activity Relationship," 2nd National Conference of Institute of Pharmacy (NCIP 2017) on Emerging Trends in Drug Discovery, Development and Molecular Targets for Cancer Research, organized by Institute of Pharmacy (IPNU), Ahmedabad during Jan 24-25, **2017** at Nirma University, Ahmedabad, India. **Poster No. MSC003. Received Best Poster Award**.
6. Bhavin V. Pipaliya and Asit K. Chakraborti "Redox-Neutral Couplings between Heteroarenes and Alkynes via Metal Catalyzed C–H Activation" 19th CRSI National Symposium in Chemistry held in University of North Bengal, Darjeeling, India, **2016**, July 14-16. **Poster No. P58**
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76. Murli Misra, Rama Rao Poduri, G. Jena, C. Gopi Mohan, Naisargee Parikh, and Asit K. Chakraborti, "In Silico Methods of Genotoxicity Prediction: Can it be Used Reliably for Prediction of In Vitro/In Vivo Genotoxicity?" Society of Toxicology's (SOT) 5^{1st} annual Meeting, Moscone Convention center in San Francisco, California, USA, Mar 11-15, **2012**. Poster Presentation. No. **P-1829**. Received Dr. Harihara Mehendale Graduate Student Best Abstract Award.
77. Babita Tanwar, Brahman Pujala, Pradeep S. Jadhavar and Asit K. Chakraborti, "Green and Efficient Protocol for the Synthesis of 1,2-Diamines." Professor Ram Chand Paul International Conference on Emerging Trends in Chemistry, Department of Chemistry, Panjab University, Chandigarh. February 11-12, **2011**. Poster Presentation. No. **P-32**.
78. Brahman Pujala, Pradeep S. Jadhavar and Asit K. Chakraborti, "Facile and Efficient Synthesis of Vicinal Amino Alcohols Catalysed by Recyclable Protic Acids on Solid Support." Professor Ram Chand Paul International Conference on Emerging Trends in Chemistry, Department of Chemistry, Panjab University, Chandigarh. February 11-12, **2011**. Poster Presentation. No. **P-36**.
79. Damodara N. Kommi, Dinesh Kumar, Pradeep S. Jadhavar and Asit K. Chakraborti, "Highly Efficient One-pot Three-component Reactions for the Synthesis of β -Amino Carbonyl Compounds in Water." Professor Ram Chand Paul International Conference on Emerging Trends in Chemistry, Department of Chemistry, Panjab University, Chandigarh. February 11-12, **2011**. Poster Presentation. No. **P-40**.
80. Dinesh Kumar and Asit K. Chakraborti, "Convenient and Highly Efficient Synthesis of 2,4,5-Trisubstituted Imidazoles by Three Component Reactions (3-MCR) Catalysed by Recyclable Protic Acid." Professor Ram Chand Paul International Conference on Emerging Trends in Chemistry, Department of Chemistry, Panjab University, Chandigarh. February 11-12, **2011**. Poster Presentation. No. **P-48**.
81. Himanshu Sharma, Dinesh Kumar and Asit K. Chakraborti, "Organo-catalysis by Organophosphorus Compound: A New Approach for the Synthesis of Multifunctionalized Dihydropyrimidones/thiones." Professor Ram Chand Paul International Conference on Emerging Trends in Chemistry, Department of Chemistry, Panjab University, Chandigarh. February 11-12, **2011**. Poster Presentation. No. **P-65**.
82. Kapileswar Seth, Sudipta Raha Roy, Naisargee Parikh and Asit K. Chakraborti, "An Efficient Method of Epoxide Ring Opening Catalyzed by Ionic Liquid." Professor Ram Chand Paul International Conference on Emerging Trends in Chemistry, Department of Chemistry, Panjab University, Chandigarh. February 11-12, **2011**. Poster Presentation. No. **P-84**.
83. Linga Banoth, Bhukya Chandar Rao, Brahman Pujala, A. K. Chakraborti and U. C. Banerjee, "Enantioselective Enzymatic Resolution of Racemic (*RS*)-1-Chloro-3-(2-cyanophenoxy) propan 2-ol." Professor Ram Chand Paul International Conference on Emerging Trends in Chemistry, Department of Chemistry, Panjab University, Chandigarh. February 11-12, **2011**. Poster Presentation. No. **P-96**.

84. Pradeep S. Jadhavar, Sudipta Raha Roy, Kulin Kumar Sharma and Asit K. Chakraborti, "Rapid Synthesis of Multifunctionalized Dihydropyrimidine Derivatives: Application Towards the Synthesis of Pharmacologically Active Compounds." Professor Ram Chand Paul International Conference on Emerging Trends in Chemistry, Department of Chemistry, Panjab University, Chandigarh. February 11-12, **2011**. Poster Presentation. No. **P-151**.
85. Sanjeev K. Garg and Asit K. Chakraborti, "An Efficient Green Protocol for the Synthesis of Enaminones." Professor Ram Chand Paul International Conference on Emerging Trends in Chemistry, Department of Chemistry, Panjab University, Chandigarh. February 11-12, **2011**. Poster Presentation. No. **P-210**. **Received Best Poster Award**.
86. Tushar Satav, Dinesh Kumar and Asit K. Chakraborti, "Green Friedlander Synthesis of Quinoline Derivatives." Professor Ram Chand Paul International Conference on Emerging Trends in Chemistry, Department of Chemistry, Panjab University, Chandigarh. February 11-12, **2011**. Poster Presentation. No. **P-246**.
87. Sudipta Raha Roy, Asit K. Chakraborti. "Inspired by Nature: Supramolecular Assembly in Ionic Liquid Catalysis"; 8th International Congress of Young Chemist (YoungChem 2010), Reda, Poland. 6-10th Oct, **2010**, Poster Presentation No. **T-12**.
88. Brahmam Pujala, Asit. K. Chakraborti. "Ambiphilic (Dual Electrophile-Nucleophile) Activation Role of Water in Promoting Organic Reactions"; International Symposia on Advancing the Chemical Sciences (ISACS), Challenges in Organic Chemistry and Chemical Biology (ISACS1), San Francisco, USA. 6-9 July **2010**. Poster Presentation No. **E2**.
89. Sonam Bhatia, Dinesh Kumar and Asit K. Chakraborti, "Polymer-Supported Lewis Acid as a Convenient and Efficient Catalyst for Synthesis of 1, 5-Benzodiazepine." 14th ISCB International Conference (ISCBC-2010) Chemical Biology for Discovery: Perspective and Challenges. Central Drug Research Institute, Lucknow. January 15-18, **2010**. Poster Presentation. No. **P-97**.
90. Sachin Bindal, Dinesh Kumar, Santosh Rudrawar and Asit K. Chakraborti, "Facile and Efficient Synthesis of Functionalised Pyridines Catalysed by Recyclable Protic Acids on Solid Support." 14th ISCB International Conference (ISCBC-2010) Chemical Biology for Discovery: Perspective and Challenges. Central Drug Research Institute, Lucknow. January 15-18, **2010**. Poster Presentation. No. **P-98**. **Received best poster award**.
91. Mukesh Sonawane, Srikant Bhagat, Ratnesh Sharma and Asit K. Chakraborti, "Dual Activation Catalysis: Green Protocol for an Efficient Stereoselective Olefination." 14th ISCB International Conference (ISCBC-2010) Chemical Biology for Discovery: Perspective and Challenges. Central Drug Research Institute, Lucknow. January 15-18, **2010**. Poster Presentation. No. **P-113**.
92. Prahlad Kumar Meena, Dinesh Kumar and Asit K. Chakraborti, "Green Synthesis of synthesis of 8,9,10,12-tetrahydrobenzo[a]xanthen-11-one derivatives." 14th ISCB International Conference (ISCBC-2010) Chemical Biology for Discovery: Perspective and Challenges. Central Drug Research Institute, Lucknow. January 15-18, **2010**. Poster Presentation. No. **P-120**.
93. Sudipta Raha Roy, Asit K. Chakraborti, "Cooperative Hydrogen Bonded Clusters: Untangling the Mysteries of the Ionic Liquid Catalysis." 14th ISCB International Conference (ISCBC-2010) Central Drug Research Institute, Lucknow. January 15-18, **2010**. Poster Presentation. No. **P-148**.

94. Naisargee Parikh, Asit K. Chakraborti, "Inclination towards Green Chemistry: Delve into Acquiring Seven Membered Heterocyclic Scaffold." 14th ISCB International Conference (ISCBC-2010) Chemical Biology for Discovery: Perspective and Challenges. Central Drug Research Institute, Lucknow. January 15-18, **2010**. Poster Presentation. No. **P-150**.
95. S. Bhagat, S. Rawat, A. Aggarwal, U. C. Banerjee, A. K. Chakraborti, "An Efficient Synthesis of α -Aminophosphonates and their Biological Evaluation," Challenges in Organic Chemistry. 8th Tetrahedron Symposium. **2007**, June 26-29, Berlin, Germany. Poster Presentation. **P3-28**.
96. A. Sarkar, A. K. Chakraborti, "Catalytic Uses of Ionic Liquids," Challenges in Organic Chemistry. 8th Tetrahedron Symposium. **2007**, June 26-29, Berlin, Germany. Poster Presentation. **P1-19**.
97. Brahmam Pujala, Shivani, Asit K. Chakraborti, "A Novel Heterogeniuos Catalyst for Nucleophilic Opening of Epoxide Rings," 11th ISCB International Conference on Advances in Drug Discovery Research, **2007**, Feb 24 – 26. Dr. Babasaheb Ambedkar Morathwada University, Aurangabad, India. **Poster No. PP 88**.
98. Srikant Bhagat, Asit K. Chakraborti, "An Efficient and Novel Solid Supported Catalyst for the Synthesis of α -Amino and α -Hydroxy phosphonates under Solvent-free Conditions and at Room Temperature, Joint International Conference on Building Bridges," Forging Bonds for 21st Century Organic Chemistry and Chemical Biology, **2006**, Jan 6 – 9. National Chemical Laboratory, Pune, India **Poster No. P 20**.
99. Sunay V. Chankeshwara, Asit K. Chakraborti, "Electrophilic Activation: An Efficient Acylative Deprotection of Aryl and Alkyl Benzyl Ethers in a Counter-attack Fashion," Joint International Conference on Building Bridges, Forging Bonds for 21st Century Organic Chemistry and Chemical Biology, **2006**, Jan 6 – 9. National Chemical Laboratory, Pune, India **Poster No. P 24**.
100. Asha Rani, Gurmeet Kaur, S. Majumdar, N. K. Ganguly, P. Ray, Asit K. Chakraborti, Anuradha Chakraborti, "Is Iron Acquisition in Group A Streptococcus (Gas) Mediated by Siderophore?" Joint International Conference on Building Bridges, Forging Bonds for 21st Century Organic Chemistry and Chemical Biology, **2006**, Jan 6 – 9. National Chemical Laboratory, Pune, India **Poster No. P 120**.
101. Ramasamy Thilagavathy and Asit K. Chakraborti, "Importance of Alignment in Developing 3-D QSAR Models of 1,5-Diaryl Pyrazoles for Prediction of COX-2 Inhibitory Activity," *Internet Electronic Conference of Molecular Design 2004*, IECMD 2004, **2004**, Nov 29 – Dec 12. **Paper No. 41**.
102. H. Bhutani, A. K. Chakraborti, K. C. Jindal and S. Singh, "Mechanistic Explanation to the Catalysis of Reaction Between Rifampicin and Isoniazid by Pyrazinamide and Ethambutol," 35th Union World Conference on Lung Health, Paris, France, **2004**, Oct. 28 – Nov. 01. **Poster No. PS-486-530-30** under the theme **Tuberculosis and poverty**.
103. Asit K. Chakraborti, B. Gopalakrishnan, M. Elizabeth Sobhia and Alpeshkumar Malde, "3D-QSAR Studies of Indole Derivatives as Phosphodiesterase IV Inhibitors," 11th International workshop on Quantitative Structure Activity Relationship in the Human Health and Environmental Services (QSAR 2004), Liverpool, UK. **2004**, May 9-14.

104. Asit K. Chakraborti, and Ramasamy Thilagavathi, "Computer-Aided Design of selective COX-2 Inhibitors: Molecular Docking of structurally Diverse COX-2 Inhibitors using FlexX Mthod," *International Electronic Conference on Molecular Design*, **2003**, Nov. – Dec. 5. 24-21, **Paper No. 18**.
105. Asit K. Chakraborti, and Lalima Sharma, "An Efficient Conversion of Aryl Esters to Benzthiazoles," *18th International Congress of Heterocyclic Chemistry*, Pacific Yokohama, Japan. **2001**, July 29-August 3, **30-PO-150**.
106. Asit K. Chakraborti, and Gurmeet Kaur, "Syntheses of Thiazoles from Aldehydes in a One-Pot Reaction," *18th International Congress of Heterocyclic Chemistry*, Pacific Yokohama, Japan. **2001**, July 29-August 3, **30-PO-151**.
107. Rajesh S. Gulhane, and Asit K. Chakraborti, "An Efficient Method for the Syntheses of 2-Substituted-2-oxazolines and 2H-2-oxazolines: Condensation of Ortho Esters with Amino Alcohols under Environment Friendly Conditions," *18th International Congress of Heterocyclic Chemistry*, Pacific Yokohama, Japan. **2001**, July 29-August 3, **31-PO-53**.
108. Asit K. Chakraborti, Gurmeet Kaur, Lalima Sharma and C. Selvam, "An Efficient Method for Syntheses of Thiazoles, Oxazoles and Imidazoles," *18th International Congress of Heterocyclic Chemistry*, Pacific Yokohama, Japan. **2001**, July 29-August 3, **2-PO-151**.
109. Asit K. Chakraborti, "Heterocycles in Organic Synthesis: Selectivity Control During the Nucleophilic Opening of Epoxides as Key Step in the Syntheses of Pharmaceuticals," *18th International Congress of Heterocyclic Chemistry*, Pacific Yokohama, Japan. **2001**, July 29-August 3, **2-PO-150**.
110. Richard K. Dieter, Asit K. Chakraborti and Vibuti Dabral, "Asymmetric Induction in the Copper (I) Catalysed Conjugate Addition," *Southeast Regional Meeting of American Chemical Society*, Florida, U. S. A., **1986**, 3-5 November.

V) Invited Lecture Delivered in Seminar/Symposium: Total 175

National: 128

1. “Sustainable Chemistry in Drug Discovery: A few Concepts and Applications,” **June 10, 2022**. Dr. Nitya Anand Endowment Lecture 2021 of the Indian National Science Academy (INSA). Organised by the Kolkata Local Chapter of INSA at Indian Association for the Cultivation of Science (IACS), Kolkata.
2. “Green Chemistry for Sustainable Development in Drug Discovery,” **May 18, 2022** in the National level Faculty Development Programme on “Advances in Green Chemistry for Sustainable Development,” May 16-21, 2022. Organised by the Department of Chemistry, SRM Institute of Science and Technology, Ramapuram, Chennai, India.
3. “Sustainable Chemistry Development in Drug Discovery,” **Mar 25, 2022** in the “28th CRSI National Symposium in Chemistry (CRSI NSC-28),” Mar 25-27, 2022. Organised by the Department of Chemistry, IIT- Guwahati, Assam, India.
4. “New Anti-inflammatory Scaffolds: Sustainable Medicinal Chemistry Approaches,” **Feb 04, 2022**. In the “3-Day Workshop on Advanced Drug Design and Medicinal Chemistry (ADDMC 2022),” Feb 02-04, 2022. Organised by National Institute of Pharmaceutical Education and Research (NIPER), Guwahati, Assam, India.
5. “Applications of C-X (X = Br/O/H) Bond Activation Strategies in Drug Discovery,” April 03, **2021**. Department of Chemistry, BITS-Pilani, Goa, India.
6. “Sustainability in Drug Discovery and Development,” Mar 23, **2021** In the Workshop on Sustainable Chemical Technology, Mar 22-23, 2021. Organised by FTBI, National Institute of Technology, Rourkela, India.
7. “Sustainable Organic Chemistry: Novel Concepts and Synthetic Methodologies Towards Process Development of APIs,” Feb 27, **2021** in the GUJCOST Sponsored Webinar Series on “Organic Synthesis: Life Line of Pharma API Industry” Feb 25-27, 2021. Organised by L. M. College of Pharmacy Ahmedabad, Gujarat.
8. “Sustainable Medicinal Chemistry: Optimisation of Therapeutic Leads through Late-stage Functionalisation,” Feb 23, **2021** in the Webinar on “Refresher Course on Emerging Trends at the Interface of Chemistry & Biology” Feb 11-24, 2021. Organised by North Bengal University, Siliguri, W. B. under the UGC-Human Resource Development Centre.
9. “Sustainable Medicinal Chemistry: New Therapeutic Leads and Green Processes,” Feb 19, **2021** in the Webinar on “Refresher Course on Emerging Trends at the Interface of Chemistry & Biology” Feb 11-24, 2021. Organised by North Bengal University, Siliguri, W. B. under the UGC-Human Resource Development Centre.
10. “Green Chemistry: Role on Environment Protection and Scope of Implementation in Academic Research,” Jan 18, **2021** in the Webinar on “Pre-PhD Course Works on Green Chemistry” Jan 02-Feb 15, 2021. Organised by Dr. Babasaheb Ambedkar Marathwada University, Aurangabad under the UGC-Human Resource Development Centre.
11. “Sustainability and Drug Discovery and Development: Bridging the Gap,” Webinar on “Science and Technology Innovations: Ushering in the Era of Make in India.” Dec 17, **2020** in the 14th Chandigarh Science Congress Dec 17-19, 2020. Organised by Panjab University alongwith Chandigarh Region Innovation and Knowledge Cluster (CRICK).

12. "Green Medicinal Chemistry: Drug Discovery and Development," Keynote Speech in the "National Webinar On Medicinal Chemistry for the Society." Dec 06, **2020**. Organised by the Bhagalpur Chapter of the Indian Chemical Society.
13. "Green Chemistry Approaches in Pharmaceutical Education and Research," Sept 15, **2020** in the Online Short Term Course on Advances in "Pharmacy Education." Sept 14-18, **2020**. Organised by National Institute of Technical Teachers Training and Research (NITTTR), Chandigarh.
14. "Green Chemistry Research: Scope and Implementation in Academics Through Novel Concepts," in the Virtual Value Added Course on "Green Chemistry: Through Original Research." August 01, **2020**. Organised by Department of Chemistry, Indus International University, Bathu, Una, Himachal Pradesh.
15. "Green Synthesis of Drugs and Pharmaceuticals: Exploring Organic Reactions in Aqueous Medium," in the National Webinar on "Sustainable Synthesis of Pharmaceuticals and Basics of Drug Discovery." July 25, **2020**. Organised by Department of Chemistry, Krishnagar College, Krishnagar, Nadia, WB to celebrate 175th Anniversary.
16. "Sustainable Chemistry in Drug Development and Discovery," in the National Webinar on "Current Perspectives in Chemical Sciences." July 21, **2020**. Organised by Department of Chemistry, Bhatler College, Dantan, Paschim Medinipur, WB, in Collaboration with Indian Chemical Society.
17. "Drug Discovery Research Keeping the Pace with Newer Development in Chemistry," in the Virtual Conference on "Cross-Cutting Edge Research in Organic and Medicinal Chemistry." June 24, **2020**. Organised by Department of Chemistry BITS Pilani, Pilani Campus in Association with Indian Society of Chemists and Biologists, Lucknow.
18. "Integrating Modern Development in Chemistry to Drug Discovery," Mar 30, **2019** in the National Conference on "Recent Trends and Advancements in Chemical Sciences." Mar 29-31, **2019**. Organised by Department of Chemistry and Bhaskaracharya College of Applied Sciences, University of Delhi in association with Society for Promotion of Education and Science.
19. "Medicinal Chemistry Research in the Context of Sustainable Development," Feb 15, **2019** in the "PCI Sponsored Continuing Education Programme." Feb 15-17, 2019. Organised by Gupta College of Technological Sciences, Asansol, W. B.
20. "Sustainable Approaches in Drug Discovery: Delving New Concepts for Novel Therapeutics," Oct 24, 2018 in National Conference on "Role of Pharmacists in Academia & Research." Oct 24-25, 2018. Organised by Chandigarh College of Pharmacy, Chandigarh Group of Colleges, Chandigarh.
21. "Sustainable Chemistry: Invoking New Concepts in the Quest for New Therapeutic Agents," Sept 15, 2018 on the occasion of World Health Day celebration at L. M. College of Pharmacy, Ahmedabad.
22. "Green Chemistry Tools in Sustainable Chemistry Developments," Aug 09, **2018** National Seminar (FDP cum Workshop) on "Greening Undergraduate Chemistry Lab-GUCL-2018." Aug 08-09, 2018. Organised by S. V. College, Delhi University, Dhaura Kuan, New Delhi.

23. "Green Chemistry: Rational use of Water and Ionic Liquids in Organic Reactions," Mar 18, **2018** National Seminar on "Green Chemistry and Sustainable Development." Mar 17-18, 2018. Organised by the University Department of Chemistry, T. M. Bhagalpur University, Bihar.
24. "Sustainability in Pharmaceutical Research: Concepts to Applications," Feb 07, **2018** Technical Session: Section C in "21st Punjab Science Congress." Feb 07-09, 2018. Organised by Punjab Agriculture University, Ludhiana, Punjab.
25. "Sustainable Medicinal Chemistry in the Quest for New Therapeutics," Dec 22, **2017** Prof. S. K. Siddhanta Memorial Lecture in the National Level Seminar on "Design, Synthesis, Characterization, Reactivity, Theoretical Study and Applications of Different Advanced Functional Materials." Dec 21-23, 2017. Organised by the Department of Chemistry, The University of Burdwan, Burdwan, West Bengal, India.
26. "Innovative Green Chemistry Approaches in Drug Design and Development," Apr 24, **2017** in the "Training Programme on Green Productivity & Waste Minimisation for Pharmaceutical Industries." Apr 24-26, 2017. Organised by National Productivity Council, New Delhi (under Ministry of Commerce and Industry, Govt of India) at Baddi (H.P.), India.
27. "Innovative Approaches Towards Sustainable Chemistry Development," Mar 04, **2017**, 12th JK Science Congress on Science and Technology: Emerging Trends and Innovations, Organised by University of Jammu, Jammu. Mar 02-04, 2017.
28. "Career Development through Education in Pharmaceutical Sciences," Nov 10, 2016, INSPIRE Internship Camp, Organised by Lyallpur Khalsa College, Jalandhar, Punjab. Nov 08-12, 2016.
29. "*Green Chemistry Tools in Pharma Research: Paradigm Change in Innovation for APIs*," Invited Lecture delivered on July 28, **2016** in the Conference on "APIs: Reducing Dependence on Imports." Organised by ASSOCHAM, India in Hotel Best Western Royal Park, Badi, Himachal Pradesh. Sponsored by the Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers, Govt. of India.
30. "*Innovation of Green Chemistry Tools in Medicinal Chemistry: Recent Trends in Pharma Research*," Lecture delivered as Chief Guest on July 21, **2016** in the "Orientation programme for PG new entrants." Organised by Institute of Pharmacy, NIRMA University, Ahmedabad, India, July 18-23, 2016.
31. "*Innovation of Green Chemistry Tools: Recent Trends in Pharma Research*," Invited Lecture delivered on Apr 9, **2016** in the Symposium "Emerging Trends in Translation Research in India." Organised by Shiv Nadar University, Noida, India, Apr 9, 2016.
32. "*Mass Spectrometry: An Indispensable Tool to Derive New Chemistries and Novel Concepts in the Perspective of Pharmaceutical Research*," June 16, **2015**, 30th ISMAS Summer School on Mass Spectrometry for Proteomics & Metabolonomics, CSIR-CCMB & CSIR-ICT, Hyderabad, India. June 15-20, 2015.
33. "*Science Education: Scope and Opportunities in Career Advancement*," Mar 21, **2015**, INSPIRE Internship Camp, Organised by Akal College of Pharmacy & Technical Education, Mastuana Sahib, Sangrur, Punjab. Mar 20-24, 2015.

34. *“Organo-catalysis by Ionic Liquids: On the Origin of Catalysis and Applications,”* **2015**, Mar 14. Plennar Lecture 8. National Conference on Frontiers at the Chemistry-Allied Sciences Interface (FACSI-2015), 13-14 Mar 2015, Department of Chemistry, University of Rajasthan, Jaipur, Rajasthan, India.
35. *“Sustainable Chemistry: Rational Approaches and Applications,”* **2015**, Feb 17. Invited Lecture 1. Frontiers in Chemistry-2015, 17-18 Feb 2015, Department of Chemistry, North Bengal University, West Bengal, India.
36. *“Novel Anti-Inflammatory Scaffolds through Sustainable Chemistry,”* **2014**, Sept 11. Keynote presentation in Drug Discovery India 2014, 11-13 Sept 2014, Ramada Powai Hotel & Convention Center, Mumbai, India.
37. *“Supramolecular assemblies: On the origin of catalysis by ionic liquids and molecular basis for rate acceleration in aqueous medium,”* **2014**, July 4 in the Twenty-fifth Mid-year meeting of Indian Academy of Sciences, Bangalore, 4-5 July 2014, Indian Institute of Science, Bangalore.
38. *“Sustainable Development: All Chemistry in Water,”* **2014**, May 10 in the UGC-ASC Refresher Course in Chemistry Apr 24 to May 14, Department of Chemistry, Guru Jambheshwar University of Science and Technology, Hisar, Haryana.
39. *“Sustainable Chemistry: On Organo-catalysis by Ionic Liquids,”* **2014**, May 10 in the UGC-ASC Refresher Course in Chemistry Apr 24 to May 14, Department of Chemistry, Guru Jambheshwar University of Science and Technology, Hisar, Haryana.
40. *“Medicinal Chemistry Education and Research: The Necessity and Pitfalls,”* **2014**, Apr 4. Centre of Chemical and Pharmaceutical Sciences, Central University, Bhatinda, Punjab.
41. *“Enriching the Medicinal Chemists’ Tool Box: Emerging Trend and Paradigm Shift in Discovery Chemistry,”* **2014**, Apr 4. Centre of Chemical and Pharmaceutical Sciences, Central University, Bhatinda, Punjab.
42. *“Sustainable Chemistry for Novel Anti-inflammatory Scaffolds,”* **2014**, Apr 4. Centre of Chemical and Pharmaceutical Sciences, Central University, Bhatinda, Punjab.
43. *“Mass Spectrometry in Intercepting Supramolecular Assemblies of Small Molecules in Understanding Organo-catalysis by Ionic Liquids,”* **2014**, Mar 12, “28th ISMAS Symposium cum Workshop (28th-ISMAS-2014). Advances in Chemical Sciences,” Organised by ISMAS, Mumbai at Timber Trail Heights, Parwanoo, HP, India, Amritsar. Mar 9-13, 2014.
44. *“Supramolecular Assemblies in Organo-catalysis by Ionic Liquids,”* **2014**, Mar 7, Department of Chemistry, IIT Kharagpur, W. B.
45. *“Sustainable Chemistry in Drug Discovery and Process Development,”* **2014**, Mar 3, Department of Chemical Sciences, IISER, Kolkata.
46. *“Supramolecular Assemblies: Origin of Catalysis by Ionic Liquids,”* **2014**, Feb 28, 8th Annual Meeting of Chandigarh Science Congress (CHASCON-2014), Organised by Panjab University, Chandigarh. Feb 26-28, 2014.
47. *“Sustainable Chemistry: Rational Approaches,”* **2014**, Feb 27, “IVth National Symposium on Advances in Chemical Sciences,” Organised by Center for Advanced Studies, Department of chemistry, GNDU, Amritsar. Feb 27-28, 2014.

48. *"Enriching Medicinal Chemists' Tool Box,"* **2013**, Nov 19 Training School on CHALLENGES AND OPPORTUNITIES IN DRUG DISCOVERY, NETWORKING RESOURCE CENTRE UGC Centre for Advanced Studies (CAS), Organised by UIPS, Panjab University, Punjab, Nov 18 – 23, 2013.
49. *"Science Education: Motivation to Innovate and Opportunities for Career Development,"* **2013**, Nov 16, INSPIRE Internship Science Camp, Organised by Columbia College of Pharmacy, Raipur, Chhatrisgarh, Nov 13-17, 2013.
50. *"Necessity for Science Education: Scope for Career Development,"* **2013**, Aug 11, DST INSPIRE SCIENCE CAMP, Organised by Guru Nanak Dev Engineering College, Ludhiana, Punjab, Aug 7-11, 2013.
51. *"Greener Approaches Towards Drug Discovery and Development,"* **2013**, Aug 9, 12th Training School on "LEARNING METHODOLOGIES IN PHARMACEUTICAL CHEMISTRY: MEDICINAL AND ANALYTICAL ASPECTS," NETWORKING RESOURCE CENTRE UGC Centre for Advanced Studies (CAS), Organised by UIPS, Panjab University, Punjab, Aug 5 – 10, 2013.
52. *"Greener Approaches Towards Drugs and Pharmaceuticals,"* **2013**, June 12, Conference on "Research Trends in Future Drug Development: Exploration of Medicinal and Aromatic Flora." Organised by Faculty of Pharmaceutical Sciences, Shoolini University, Solan, HP, June 20 – 21, 2013.
53. *"Ionic Liquids as Functional Materials; Organo-Catalytic Power and its Relation,"* **2013**, Apr 26, Workshop on "Recent Developments in Functional Materials" under TEQIP – II Organised by the Department of Applied Sciences and Department of Materials & Metallurgical Engineering, PEC University of Technology, Chandigarh, Apr 14, 2013.
54. *"Sustainability through Innovation: Necessary Drive in Pharmaceutical Research,"* **2013**, Mar 14. Training School on "INNOVATIONS IN PHARMA RESEARCH: STEPPING STONES," NETWORKING RESOURCE CENTRE UGC Centre for Advanced Studies (CAS), Organised by UIPS, Panjab University, Punjab, Mar 11 – 16, 2013.
55. *"Organo-catalytic Applications of Ionic Liquids: Mechanistic Insight and the Rational for Catalyst Selection,"* **2013**, Mar 13, Department of Chemistry, PAU, Ludhiana, Punjab.
56. *"Integrating Discovery Research and Sustainable Chemistry,"* **2013**, Feb 06, UIPS, UGC Centre of Advanced Study (CAS), Panjab University, Chandigarh.
57. *"Necessity for Science Education: Scope for Career Development,"* **2012**, Nov 6, SCIENCE CAMP UNDER INSPIRE INTERNSHIP SCHEME Organised by Selvam Arts and Science College, Namakkal, TN, Nov 5-12, 2012.
58. *"Supramolecular Organo-catalysis,"* **2012**, Oct 11, XV NOST-Organic Chemistry Conference (OCC), Organised by National Organic Symposium Trust, Jaypee Palace Hotel, Agra, Oct 10-13, 2012.
59. *"Enriching the Medicinal Chemists' Tool Box: Emerging Trend and Paradigm Shift in Discovery Chemistry,"* **2012**, Sept 22, AICTE Sponsored Quality Improvement Programme 2012, "Impetus to Organic Synthesis: Approaches for Pharmaceutical Chemistry," Organised by Department of Pharmaceutical Sciences, BIT, Mesra, Ranchi, Sep 16-30, 2012.

60. *"Sustainable Chemistry for Novel Anti-inflammatory Scaffolds,"* **2012**, Sept 22, AICTE Sponsored Quality Improvement Programme 2012, "Impetus to Organic Synthesis: Approaches for Pharmaceutical Chemistry," Organised by Department of Pharmaceutical Sciences, BIT, Mesra, Ranchi, Sep 16-30, 2012.
61. *"Science: Necessity for Education and the Scope for Career Development,"* **2012**, May 13, Second Residential INSPIRE Science Camp, Organised by Krishna College, Bijnor, UP, May 11-15, 2012.
62. *"Sustainable Chemistry Development in the Perspective of Academic Research,"* **2012**, Mar 20, national Seminar on Recent Trends in chemistry," Organised by Department of Chemistry, Sri Venkateshwara College, University of Delhi, New Delhi, Mar 20-22, 2012.
63. *"Sustainable Chemistry Development in the Perspective of Academic Research,"* **2012**, Mar 20, National Seminar on Recent Trends in chemistry," Organised by Department of Chemistry, Sri Venkateshwara College, University of Delhi, New Delhi, Mar 20-22, 2012.
64. *"Drug Discovery Chemistry in the Context of Sustainable Development,"* **2012**, Feb 26, 6th Chandigarh Science Congress, CHASCON 2012, Panjab University, Chandigarh India, Feb 26-28, 2012.
65. *"Emerging Trends in Medicinal Chemistry Research: A Paradigm Shift in the Context of Sustainable Chemistry Development,"* **2012**, Feb 10, National Conference on "Drug Innovation: Emerging trends and Challenges," Rayat-Bahra Institute of Pharmacy, Hoshiarpur, Punjab, India, Feb 10-11, 2012.
66. *"Medicinal Chemistry Education and Research: the Necessity and Pitfalls,"* **2011**, Dec 13, Professor K. N. Giand Memorial Seminar on "Advances in the Area of Pharmaceutical Education and Research in the Country," University Institute of Pharmaceutical Sciences, Panjab University, Chandigarh, India.
67. *"Non-heme Model of Dioxygen Activation in Aqueous Medium: Mass Spectrometric Methods to Identify the Catalytic Species and Understanding the Rational of Catalysis,"* **2011**, Nov 8, "14th ISMAS Workshop cum Workshop on Mass Spectroscopy," Tea County, Munnar, India, Nov 7-11, 2011.
68. *"Implementing Green Chemistry in Drug Discovery and Development,"* **2011**, Aug 22, "National Workshop on Green Chemistry (NWGC-2011)," Department of Chemistry, Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu Aug 17-22, 2011.
69. *"A Relook into the Green Image of Ionic Liquids: Non-Solvent Applications and Rational Selection,"* **2011**, Mar 22, "Workshop on Green Chemistry Education," Department of Chemistry, HNB Garhwal Univ, Mar 22-23, 2011.
70. *"Influence of Green Chemistry on Medicinal Chemistry Research: Rational Approaches to Meet the Challenges,"* **2011**, Mar 4, "3rd Symposium on Medicinal Chemistry and Pharmaceutical Sciences," CDRI, Lucknow, Mar 3-5, 2011.

71. *“Rationally Designing Sustainable Chemistry using Water and Ionic Liquids,”* **2011**, Feb 16, “National Seminar Recent Advances in Chemistry and their impact on Environment,” NSRACE- 11, Department of Chemistry, Panjabi University, Patiala. Feb 15-16, 2011.
72. *“Identification and Characterisation of Supramolecular Assemblies of Small Molecules: Implecation in the Emerging Trends in Medicinal Chemistry Research,”* **2011**, Jan 27, UGC Training Course on “Current Trends in Pharmaceutical Analysis & Medicinal Chemistry.” UIPS, Panjab University, Chandigarh. Jan 24-29, 2011.
73. *“Rationally Designing Sustainable Chemistry: On the use of Water and Ionic Liquids as Alternate Reaction Media,”* **2011**, Jan 22, National Conference On Green Chemistry: “An approach to meet the challenges of sustainability” (GCMS-2011). MMH College, Gaziabad, UP, Jan 22-23, 2011.
74. *“Exploring Sustainable Chemistry: Rational Approaches,”* **2010**, Dec 19, 29th Annual Conference of Indian Council of Chemists (ICC). Department of Chemistry, Panjab University, Chandigarh. Dec 19-21, 2010.
75. *“Rational Approaches towards Green Chemistry,”* **2010**, Nov 20, Training Workshop on Green Chemistry Education. Department of Chemistry, Delhi University, Delhi. Nov 20, 2010.
76. *“Sustainable Development in Chemistry: An Academic Perspective,”* **2010**, Sept 27, National Conference on Green Chemistry- Recent Trends and Application (NCGO-2010). Department of Chemistry, DAV College, Amritsar. Sept 28-29, 2010.
77. *“On Understanding the Role of Ionic Liquids in Promoting Organic Reactions,”* **2010**, Sept 11, National Conference on Recent Advances in Green, Eco-friendly and Sustainable Chemistry. Hans Raj Mahila Mahavidyalaya, Jalandhar. Sept 10-11, 2010.
78. *“Implementing Green Chemistry Principles in Medicinal Chemistry Research,”* **2010**, June 1, Panjab Univ., Chandigarh, UGC Networking Resource Centre Training Course, May 31 – June 12, 2010.
79. *“Exploring Sustainable Chemistry in the Quest for Novel Concepts, New Synthetic Methodologies and Reaction Mechanism,”* **2010**, Mar 19, National Seminar on Chemistry Today, Department of Chemistry, The University of Burdwan, West Bengal. March 18-20, **2010**.
80. *“In the Pursuit of Sustainable and Green Chemistry Development: New Concepts, Reaction Mechanism and Synthetic Methodologies,”* **2010**, Feb 19, National Conference on Green and Sustainable Chemistry (NCGSC-2010), Chemistry Group Birla Institute of Technology and Science, Pilani (Rajasthan). February 19-21, **2010**.
81. *“Rationally Designed Sustainable Chemistry in the generation of New Chemical Entities,”* **2010**, Feb 16, Mini-symposium in Medicinal Chemistry, National Institute of pharmaceutical Education and Research (NIPER), S. A. S. Nagar, Punjab.
82. *“Ionic Liquids: In the Context of Sustainable Development,”* **2010**, Feb 7, 13th Punjab Science Congress, Feb 7-9, 2010, Punjab University, Chandigarh.

83. *“Chemical Research in the Context of Sustainable Development: Scope of Implementation in Academia,”* **2010**, Jan 22, Recent Advances in Chemical and Environmental Sciences, Modi College, Patiala, Punjab.
84. *“In the Context of Medicinal Chemistry Education,”* **2009**, Dec 24, Nargund College of Pharmacy, Bangalore, India.
85. *“Implementing Green Chemistry Principles: Use of Non-conventional Reaction Media,”* **2009**, Dec 23, SERC School on Green Chemistry-Applications, Research Activities and Recent Trends, Dec 14-27, 2009, School of Chemistry, Madurai Kamraj University, Madurai, India.
86. *“Implementing Green Chemistry Principles: Novel Concepts in the Development of New Synthetic Methodologies,”* **2009**, Dec 23, SERC School on Green Chemistry-Applications, Research Activities and Recent Trends, Dec 14-27, 2009, School of Chemistry, Madurai Kamraj University, Madurai, India.
87. *“Rational Use of Non-conventional Reaction Media,”* **2009**, Dec 8, Green Chemistry, Opportunities and Challenges in New Global Era, Dec 7-9, 2009, Department of Chemistry, Maharaja’s College, University of Rajasthan, Jaipur, India.
88. *“Quest for Novel Concepts: Development of New Synthetic Methodologies,”* **2009**, Nov 27, Jubilant, Bangalore, India.
89. *“Development of New Synthetic Methodologies Relevance to Drug Synthesis: Deriving Novel Concepts,”* **2009**, Nov 26, AstraZeneca, Bangalore, India.
90. *“Discovery Chemistry Research in the Context of Sustainable Development,”* **2009**, Nov 25, Nargund College of Pharmacy, Bangalore, India.
91. *“Mass Spectrometry in the Generation of New Chemical Entities,”* **2009**, Nov 22, ISMAS Short Course in Mass Spectrometry, CCMB, Hyderabad, AP, India.
92. *“Sustainable Synthesis Through Novel Concepts,”* **2009**, Nov 13, Institute of Pharmacy, Nirma University, Ahmedabad, Gujarat, India.
93. *“Sustainable Development: New Concepts and Organic Synthetic Methodologies,”* **2009**, Oct 13, Dep of Chemistry, NIIT, Jalandhar, India.
94. *“Implementing a few Green Chemistry Principles in Academic Research,”* **2009**, Aug 25, Dept Chemistry, J. N. Vyas Univ, Jodhpur, India.
95. *“On Organocatalysis by Ionic Liquids,”* **2009**, July 23, Mid CRSI Meeting, Department of Applied Chemistry, SGSITS, Indore.
96. *“Sustainable Chemical Synthesis: Developing New Concepts and Novel Synthetic Tools,”* **2009**, April 22, Royal Society of Chemistry Eastern Chapter, IACS, Kolkata.
97. *“Green Chemistry Approaches in Academic Research: Part I-III,”* **2009**, June 19-20, Summer School on Green Chemistry, Dep of Chemistry, Tezpur Univ, Tezpur, India.
98. *“Furthering Green Chemistry Through Novel Concepts and Synthetic Methodologies,”* **2009**, May 9, Workshop on Green Chemistry in Real World Practice, Univ of Delhi, Delhi, India.

99. *"Sustainable Chemical Research: The Necessity and Implementation,"* **2009**, March 12-13, National Symposium on Emerging Trends in Chemical Analysis & Synthesis (ETCAS-2009), SLIET, Longwal, India
100. *"The discovery chemistry in the context of sustainable development,"* **2009**, Mar 04, National Conference on Innovation in Drug Discovery and Research, Punjabi Univ. Patiala, India.
101. *"Green Chemistry Principles: Applications in Chemical Research,"* **2009**, Feb 5-6, National Symposium in Green Chemistry: Applications in Science & Engineering (NSGC 2009), Thapar Univ, Patiala, India.
102. *"Rational Design of Green Chemistry Methodologies: Thriving for Sustainable Development,"* **2008**, Nov 23 – 27, 45th Annual Convention of Chemists, P.G. Department of Studies in Chemistry, Karnatak University, Dharwad, India.
103. *"On How Water Catalyses Organic Reactions,"* **2008**, Nov 20-22, Symposium on "Current Trends in Organic Synthesis," Indian Institute of Science, Bangalore, India.
104. *"The Changing Pattern of Discovery Chemistry Keeping Pace with Sustainable Development,"* **2008**, Nov 24, Astra Zeneca, Bangalore, India.
105. *"Green Chemistry Initiative in Academic Research: Geering up with EPA Regulations,"* **2008**, Aug 4, Advinus Therapeutics, Pune, India.
106. *"Green Chemistry Influence on Medicinal Chemistry,"* **2008**, Mar 18-19, MedChem India. Bangalore, India.
107. *"Understanding the Role of Water for Aqueous Reactions: Mass Spectrometric Investigation,"* 13th ISMAS-WS, **2008**, Jan 27-31, Indian Society of Mass Spectrometry, BARC, Mumbai, India.
108. *"Water Catalysis: Electrophile-Nucleophile Dual Activation by Single Water Molecule through Cooperative Hydrogen Bond Network,"* 95th ISCA, **2008**, Jan 6, Indian Science Congress Association, Andhra University, Visakhapatnam, India.
109. *"Green Chemistry: Scope in Medicinal Chemistry Activities,"* **2007**, Sept 4, Workshop on Green Chemistry. National Institute of Pharmaceutical Education and Research (NIPER), S. A. S. Nagar, Punjab, India.
110. *"Practicing Green Chemistry: Scope in Academic Research,"* **2007**, Apr 2, National Workshop on Green Chemistry Practices & Their Applications. Deptt. of Chemistry, Cotton College, Guwahati, India.
111. *"Mass Spectrometric Identification of Ionic Liquids,"* **2007**, Mar 27, 12th ISMAS Symposium cum Workshop on Mass Spectrometry. Mar 25-30, 2007, Dona Paula, Goa, India.
112. *"Developing Reactions Frequently Required in Drug Synthesis: A Green Chemistry Approach,"* **2007**, Mar 10, Workshop on Green Chemistry Education for a Sustainable Future. University of Delhi, Delhi, India.
113. *"Medicinal Chemistry: Another Degree or a Multifaceted Expertise?"* **2006**, Sept 2, 11th Annual National Convention of APTI, Bangalore.

114. “*Demand Based Thiolate Anion Generation: Novel Concepts from Prior Arts*” **2006**, May 4, Department of Organic Chemistry, Indian Association for the Cultivation of Science, Kolkata.
115. “*Building Novel Concepts from Prior Arts*” **2006**, March 29, Department of Organic Chemistry, Indian Institute of Science, Bangalore.
116. “*Demand Based Thiolate Anion Generation: A Novel Strategy for Functional Group Manipulation*” **2006**, Mar 20-21, National Symposium on New Challenges in Chemistry, GNDU, Amritsar.
117. “*Demand-Based Thiolate Generation: Concept and Applications,*” **2006**, Feb. 3-5, National Symposium in Chemistry (NSC-8). IIT, Mumbai.
118. “*Proteomics in Drug Discovery: Uses of Mass Spectroscopy,*” **2005**, Nov 06. Clinical Proteomics, PGI, Chandigarh.
119. “*Application of Mass Spectroscopy in Combinatorial Synthesis of Chalcone and Stilbene Libraries,*” **2004**, Oct. 7 - 12. Eleventh ISMAS Workshop on Mass Spectrometry, Shimla.
120. Resource Faculty in “*National Workshop on Curriculum Development in Natural Products at Postgraduate Level,*” **2003**, Nov. 25-27. National Institute of Pharmaceutical Education and Research (NIPER), S. A. S. Nagar.
121. Resource Faculty in “*Modern Analytical Techniques in Quality Control of Drugs and Pharmaceuticals (ITEC-SCAPP Programme),*” **2003**, Sept. 1-19. National Institute of Pharmaceutical Education and Research (NIPER), S. A. S. Nagar.
122. “*Ecofriendly Unit Processes: Application of Green Chemistry in Chemical Industry,*” in Workshop on *Indian Pharmaceutical Industry: Technological Challenges*, **2003**. Mar 20-21, National Institute of Pharmaceutical Education and Research (NIPER), S. A. S. Nagar.
123. “*Demand-Based Thiolate Anion Generation: Concept and Applications,*” in National Symposium on *New Trends in Synthetic Organic Chemistry*, **2002**. Jul 8-9, Department of Chemistry, KTHM College, Nashik.
124. “*Quest for Novel Targets for Design and Synthesis of New Chemical Entities as anti-leishmanial agents,*” in *Current Perspectives in Organic Chemistry*, **2002**. Jan 24-25, Department of Organic Chemistry, IACS, Kolkata.
125. “*Design of New Chemical Entities as Anti-leishmanial Agents Aiming at Novel Targets: synthesis of Bio-active Phenols via Demand Based Thiolate anion generation in Counter-attack Fashion,*” in *National Bioorganic Symposium 7*, **2001**, Nov. 9-10. Department of Chemistry, GNDU, Amritsar, Punjab.
126. Resource faculty in *Summer School on Computer Aided Drug Design*, **1998**, June 15-19. National Institute of Pharmaceutical Education and Research (NIPER), S. A. S. Nagar.
127. “*Second Generation Taxoids as Antimitotic Agents,*” **1997**, June 18. Department of Organic Chemistry, I.A.C.S., Calcutta.

128. "Semi-Synthetic Approaches to Taxoids," in National Seminar on *Molecular Basis of Drug Discovery and Development*. **1997**, May 31, National Institute of Pharmaceutical Education and Research (NIPER), S. A. S. Nagar.

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129. "Sustainable Chemistry in New Drug Discovery and Development." **April 28, 2022**. Invited Lecture in the International Conference on "Emerging Trends in Biotechnology and Sustainable Chemistry [ETBSC-2022]," April 27-29, 2022. Sponsored by the Indian National Science Academy, New Delhi and Organised by the Faculty of Sciences, Department of Biotechnology and Chemistry, Baba Farid College, Bathinda-151001, Punjab, INDIA.
130. "Organic Chemistry in the Context of Sustainability: A Few Concepts and Applications." March 01, **2022**. Invited Lecture in the 28th Iranian Conference on Organic Chemistry ISOC 2022 March 1-3, 2022. Organised by the Chemistry & Chemical Engineering Research Center of Iran (CCERCI).
131. "New Drug Discovery in the Context of Sustainable Development." **Feb 18, 2022**. Invited Lecture in the 6th Nirma Institute of Pharmacy International Conference on "Emerging Opportunities and Challenges in Pharmacology and Pharmaceutical Sciences for Drug Discovery and Healthcare Innovations" jointly organised with Indian Pharmacological Society, NIPiCON-IPS 2022 February 17-19, 2022, Nirma University, Ahmedabad.
132. "Applications of Green Chemistry Principles in Pharmaceutical Research." September 29, **2021**. Invited Lecture 10 in the International Conference on Recent Trends in Green Chemistry (ICRTGC-2021), Sept 28-30, 2021, Akal University, Bhatinda, Punjab in collaboration with Indian Chemical Society, Kolkata.
133. "New Anti-inflammatory Scaffolds: Lead Identification and Optimization through Sustainable Medicinal Chemistry Approaches." March 19, **2021**. Plenary Lecture 13 in the International e-Conference "Covid-19: Challenges and Opportunities in Pharmaceutical Research," March 18-19, 2021. Organised by NIRMA University and Indrashil University, Ahmedabad.
134. "Coherency of Recent Trends in Organic and Medicinal Chemistry." December 27, **2020**. P. K. Bose Memorial Lecture in the Virtual 57th Annual Convention of Chemists (ACC) On "Recent Trends in Chemical Sciences- Organic Bio-chemistry-2020 (RTC SOBC-2020). Organised by the Indian Chemical Society, Dec 27-29, 2020 at IISER Kolkata.
135. "Sustainable Practices in Drug Discovery and Development." November 06, **2020**. International Seminar on "International Virtual Conference on Drug Discovery and Delivery (IVCDDD – 2020)" Nov 6-7, 2020 organized by the Department of Pharmacy, BITS Pilani, Pilani Campus, Rajasthan.
136. "Drug Discovery in the Context of Sustainable Chemistry Development." August 03, **2020**. International Seminar on "Recent Advances in Chemistry & Material Sciences – 2020 (RACMS – 2020)" organized by the Indian Chemical Society in Collaboration with the American Chemical Society (India International Chemical Science Chapter) in Commemoration with the 159th Birth Anniversary of Acharya Prafulla Chandra Ray.

137. "The Role of Green Chemistry in Drug Discovery and Development in the Context of Environmental Pollution." July 17, **2020**. International Webinar On "The Role of Green Chemistry in Controlling Environment and Ocean Pollution" organized by the Department of Chemistry, Gangasheel Mahavidyalaya Nawabganj, Bareilly, Uttarpradesh, Bharat.
138. "Integrating Sustainable Chemistry in Pharmaceutical Research: Novel Transition Metal-free Approaches for Drug Discovery and Development." IL 53. Jan 24, **2020**. "Integrating Chemical, Biological and Pharmaceutical Sciences for Innovations in Health Care" ISCBC-NIPiCON-2020. 26th Indian Society for Chemists and Biologists Conference jointly organized with 5th Nirma Institute of Pharmacy International Conference. 22nd -24th January, 2020.
139. "New C-H/X Activation Strategies and Applications in Drug Discovery," PL-1, Nov 15, **2019**. International Conference on "Modern Synthetic Methodologies for Creating Medicines and Functional Materials (MOSM 2019)" Organised by the Department of Chemistry, Ural Federal University, Ekaterinburg, Russia. Nov 13-16, 2019
140. "Novel Anti-Inflammatory Scaffolds through New Tools of Sustainable Chemistry," Feb 16, **2018**. "International Conference on Drug Discovery: Biotech & Pharma at CrossRoads." Feb 15-17, 2018. Organised by the Department of Biotechnology, Thapar Institute of Engineering & Technology, Patiala, Punjab, India.
141. "Sustainable Chemistry Development: New Concepts and Applications," Jan 09, **2018**. "International Conference on Chemistry for Human Development (ICCHD-2018)." Jan 8-10, 2018. Jointly Organised by Professor Asima Chatterjee Foundation (PACF) with the Department of Chemistry, University of Calcutta and Heritage Institute of Technology, Kolkata, West Bengal, India.
142. "Integrating Sustainable Chemistry and Drug Discovery and Development," Oct 27, **2017**. "NIPER-Shizuoka University Meet: Prospects for Collaborations." Oct 27, 2017. Organised by NIPER, S. A. S. Nagar, Punjab, India.
143. "Enrichment of Medicinal Chemists' Tool-Box: Search for New Therapeutic Leads," Oct 27, **2017**. International Workshop Chemical Biology and Drug Discovery under "Global Initiative of Academic Network (GIAN)-10." Oct 24-30, 2017. Organised by Panjab University, Chandigarh in association with NIPER, S. A. S. Nagar, India.
144. "Introduction to Medicinal Chemistry: On Medicinal Chemistry Education," Oct 25, **2017**. International Workshop Chemical Biology and Drug Discovery under "Global Initiative of Academic Network (GIAN)-10." Oct 24-30, 2017. Organised by Panjab University, Chandigarh in association with NIPER, S. A. S. Nagar, India.
145. "Rational Design of Sustainable Chemistry and Generation of New Therapeutic Hits/Leads," Apr 21, **2017**, International Conference on Science "Green Chemistry/Engineering and Technologies for Sustainable Development." Apr 20-22, 2017. Organised by Panjab University, Chandigarh, India and Florida Polytechnic University, Lakeland, Florida, USA.
146. "Enrichment of Medicinal Chemists' Tool-Box: Search for Novel Antiinflammatory Scaffold," Mar 02, **2017**, International Conference on Challenges in Drug Discovery and Delivery: ICCD3-2017, Organised by BITS Pilani, Pilani, Rajasthan. Mar 02-04, 2017.

147. *“Cooperative Nanocatalysis: Applications in the Sustainable Synthesis of Drugs and Pharmaceuticals,”* Invited Lecture delivered on Mar 2, **2016** in the INTERNATIONAL CONFERENCE ON MATERIAL SCIENCE AND TECHNOLOGY- 2016 (ICMTech- 2016). Organised by the Department of Chemistry, Delhi University, India, Mar 1-4, 2016.
148. *“Ionic Liquids as Novel Materials: Applications in Supramolecular Organocatalysis,”* Invited Lecture (**IL-16**) delivered on February 27, **2016** in the DU-JAIST Indo-Japan Symposium on Chemistry of Functional Molecules/Materials. Organised by the Department of Chemistry, Delhi University, India, February 26-27, 2016.
149. *“Implementing Sustainable Medicinal Chemistry in Drug Discovery Research,”* Plenary Lecture (**PL-11**) delivered on November 25, **2015** in the International Conference on ‘Current Challenges in Drug Discovery Research,’ Organised by the Department of Chemistry, MNIT, Jaipur, Rajasthan, India, November 23-25, 2015.
150. *“New Anti-inflammatory Scaffolds Through Sustainable Medicinal Chemistry,”* Invited Lecture (**IL-16**) delivered on November 21, **2015** in the International Conference on ‘Drug Discovery & Development: Global Scenario-Indian Perspective,’ Organised by NIPER (Hyderabad), Hyderabad, India, November 20-21, 2015.
151. *“Integrating Sustainable Chemistry Development and Discovery Medicinal,”* Plenary Lecture (**PL-02**) delivered on October 16, **2015** in the International Conference on ‘Nascent Developments in Chemical Sciences: Opportunities for Academia-Industry Collaboration (NDCS-2015),’ Organised by BITS, Pilani, Rajasthan, India, October 16-18, 2015.
152. *“Anti-inflammatory Scaffold and Enrichment of Medicinal Chemists’s Tool Box,”* July 24, **2015**, Special Pharma & Medical Sessions. Indo-Global Pharma Expo & Summit 2015: Innovations and Advances, Organised by The Indus Foundation, Park View Enclave, Hyderabad, India. July 23-26, 2015.
153. *“Rational Design of Sustainable Chemistry,”* **2015**, Jan 16 Keynote Lecture 4 The 5th Asia Oceania Conference on Green and Sustainable Chemistry (AOC-5 GSC), 15-17 Jan 2015, India Habitat Center, New Delhi, India.
154. *“Green Approaches in Drug Discovery and Process Development,”* **2013**, Dec 03, International Workshop on Green Initiatives in Energy, Environment & Health, Organised by Green Chemistry Network Centre, Delhi University, Dec 2-3, 2013.
155. *“Mass Spectrometry in Designing Sustainable synthetic Methods to Prepare New Chemical Entities for Potential Therapeutic Applications,”* **2013**, Mar 05, “12th ISMAS Triennial International Conference on Mass Spectrometry (12th ISMAS-TRICON-2013),” Organised by ISMAS, Dona Paula, Goa, India, Mar 3-8, 2013.
156. *“Novel Anti-inflammatory Scaffolds through Sustainable Chemistry Development,”* **2012**, Mar 12. Indo-US Workshop on Green Chemistry for Environments & Sustainable Development. Organised by H. N. B. Garhwal University, Srinagar, Uttarakhand, India at Dehradun, Mar 11-13, 2012.
157. *“Extracting Newer Chemistries in Aqueous Medium: Non-heme Model of Dioxygen Activation,”* **2011**, Dec 7, “International Symposium on Green Chemistry (ICGC-2011),” Department of Chemistry, School of Chemical Sciences & Pharmacy, Central University of Rajasthan, Kisangarh, Rajasthan, India, Dec 7-9, 2011.

158. “*Novel Anti-inflammatory Scaffolds: Design, Synthesis and Biological Evaluation*,” **2011**, Oct 11, “9th Indo-Italian Workshop on Chemistry and Biology of Antioxidants: Natural Products-based Antioxidants from Medicinal Plants as Leads towards Development of Novel Drugs,” Department of Chemistry, University of Delhi, Delhi, Oct 10-11, 2011.
159. “*Rationally Designing Sustainable Medicinal Chemistry*,” **2011**, Apr 21, “Indo-US Symposium on Frontiers in Medicinal Chemistry and Drug Discovery,” JSS Univ, Mysore, Apr 21-23, 2011.
160. “*Alternative Reaction Media: Molecular Basis of Selection*,” **2011**, Jan 12, International Conference on Emerging Areas of Chemistry (ICEAC-2011). Department of Chemistry, Tripura University, Agartala, Tripura. Jan 12-14, 2011.
161. “*Sustainable Development: An Exploration to the Wonderland of Ionic Liquids*,” **2010**, Jan 16, 14th ISCB International Conference (ISCBC-2010) Chemical Biology for Discovery: Perspective and Challenges. Central Drug Research Institute, Lucknow. January 15-18, **2010**.
162. “*Role of Mass Spectrometry in the Conceptual Advancement towards Sustainable Development in Pharmaceutical research*,” **2009**, Nov 22, Award Lecture 1. 11th ISMAS Triennial Conference on Mass Spectrometry, Nov 24-28, 2009, Ramoji Film City, Hyderabad, India.
163. “*Understanding Organic Chemistry in aqueous Medium*,” 12th ISCBC, **2008**, Feb 22-24, International Conference on the Interface of Chemistry-Biology in Biomedical Reserach, BITS, Pillani, India.
164. “*Sustainable Chemistry in Drug Discovery*,” **2008**, Jan 27-29, International Conference on Drug Discovery and Nanotechnology, Yeshwant Mahavidyalaya, Nanded, Maharashtra, India.
165. “*Excercising Green Chemistry in Academic Research: Scope and Implementation*,” **2008**, Jan 7-9, Third Indo-US Workshop on Green Chemistry. University of Delhi, India.
166. “*The Nucleophilic and Electrophilic Activation Strategies: Applications in Developing Reactions used for the Preparation of Drug Molecules*,” **2007**, Feb 25, 11th ISCB International Conference on Advances in Drug Discovery Research. Dr. Babasaheb Ambedkar Morathwada University, Aurangabad, India.
167. “*Single Electron Transfer process for in situ Thiolate Anion Generation: Applications in Organic Synthesis*,” **2006**, Feb 24-25, 10th International Conference on Drug Discovery Perspectives and Challenges, CDRI, Lucknow.
168. “*Mass Spectrometry in Pharmaceutical research*,” **2006**, Jan 28- Feb. 1. 10th ISMAS Triennial International Symposium on Mass Spectrometry, Munnar, Kerala.
169. Resource Faculty in “*Development, Scale up and Production of Biopharmaceuticals (ITEC-SCAPP Programme)*,” **2006**, Oct. 9 - 28. National Institute of Pharmaceutical Education and Research (NIPER), S. A. S. Nagar.
170. Resource Faculty in “*Development, Scale up and Production of Biopharmaceuticals (ITEC-SCAPP Programme)*,” **2005**, Sept 5 - 23. National Institute of Pharmaceutical Education and Research (NIPER), S. A. S. Nagar.

171. Resource Faculty in “*Development, Scale up and Production of Biopharmaceuticals (ITEC-SCAPP Programme)*,” **2004**, Aug. 30 - Sept. 17. National Institute of Pharmaceutical Education and Research (NIPER), S. A. S. Nagar.
172. “Applications of UV-VIS Spectroscopy,” in “*Management Development Programme on Operation, Maintenance & Repair of Analytical Instruments (ITEC-SCAPP Programme)*,” **2004**, Mar. 3. Central Scientific Instruments Organisation, Chandigarh.
173. “Applications of NMR Spectroscopy,” in “*Management Development Programme on Operation, Maintenance & repair of analytical Instruments (ITEC-SCAPP Programme)*,” **2004**, Mar. 3. Central Scientific Instruments Organisation, Chandigarh.
174. Resource Faculty in “*Modern Analytical Techniques in Quality Control of Drugs and Pharmaceuticals (ITEC-SCAPP Programme)*,” **2003**, Sept. 1-19. National Institute of Pharmaceutical Education and Research (NIPER), S. A. S. Nagar.
175. Resource Faculty in “*Modern Analytical Techniques in Quality Control of Drugs and Pharmaceuticals (ITEC-SCAPP Programme)*,” **2002**, Sept. 2-20. National Institute of Pharmaceutical Education and Research (NIPER), S. A. S. Nagar.