

Dr. Anant Ramakant Kapdi

Department of Chemistry, Institute of Chemical Technology,
Nathalal Parekh road, Matunga, Mumbai-400019, India

Tel No. 00-91-22-33612682; Email:-ar.kapdi@ictmumbai.edu.in, anant.kapdi@gmail.com

URL:-<http://kapdiresearchgroup.com/index.html>

<http://orcid.org/0000-0001-9710-8146>

INVITED PROFESSORSHIPS

- **INVITED PROFESSOR** at Institute of Organic and Analytical Chemistry, University de Orleans, France from 16th May 2019 to 16th June 2019. Involves teaching for Ph.D. students for 6 hours on topic of Organometallic Chemistry: Basics to Applications and research talk on 'Rational ligand design for sustainable catalysis: Story of PTABS on 29th May 2019.

EMPLOYMENT HISTORY

- Former Deputy Director of ICT-IOC Bhubaneswar from 1st September 2018 till 31st December 2019.
- UGC-Appointed Assistant Professor of Chemistry in ICT (January 2014 onwards): To carry out independent research in Institute of Chemical Technology, Mumbai
- DST INSPIRE Faculty Award (October 2012 till September 2017; Rs. 83,00,000/-): To carry out independent research in Institute of Chemical Technology, Mumbai on the *Application of Palladacyclic Complexes in Synthesis*. Conducting lectures of M.Sc. Chemistry (Organic and Organometallic Chemistry) and Chemical Engineering First year (Organic and Analytical Chemistry).
- DST-SERC Fast Track Fellow(March 2011 to September 2012; Rs. 25,00,000/-): To carry out independent research in Institute of Chemical Technology, Mumbai on the *Application of Palladacyclic Complexes in Synthesis* under the Fast Track Scheme for Young Scientists. Conducting lectures of M.Sc. Chemistry (Organic and Organometallic Chemistry) and Chemical Engineering First year (Organic and Analytical Chemistry).
- Lecturer and Researcher (1st July 2010 to 28th February 2011): Teaching MSc Organic Students (In-charge of MSc unaided Organic Chemistry practicals) and carrying out independent research in RamnarainRuia College of Science and Arts.

PROFESSIONAL EXPERIENCE

- Responsibility as the Founding Deputy Director of ICT-IOC, Odisha campus, Bhubaneswar from 1st September 2018 till 31st August 2019.
- Alexander von Humboldt Research Cooperation programme visit to Prof. Carola Schulzke at Department of Biochemistry, University of Greifswald, Germany from 15th June 2017 till 10th July 2017.
- Alexander von Humboldt Research Cooperation programme visit to Prof. Carola Schulzke at Department of Biochemistry, University of Greifswald, Germany from 20th July 2016 till 10th August 2016.
- Alexander von Humboldt Research Cooperation programme visit to Prof. Carola Schulzke at Department of Biochemistry, University of Greifswald, Germany from 3rd August 2015 till 15th August 2015.
- DAAD Fellowship for Scientists (Did not avail in 2015) - with Prof. Moniek Tromp in Catalysis Research Centre, Technische Universitat Munchen, Germany
- Alexander von Humboldt Fellow Return Fellowship (25th May 2013 to 25th July 2013) - with Prof. Moniek Tromp on *The application of UV-Vis Stopped Flow Technique for Palladium-Mediated Oxidative Homocoupling Reactions*.
- Alexander von Humboldt Fellow (1st June 2008 to 31st March 2010)- with Prof. Lutz Ackermann on *The development of P-stereogenic air stable chiral secondary phosphine oxides for catalysis and C-H activation*.
- PhD. in Organic Chemistry, University of York, United Kingdom-(Received on 11th July 2008)- Under the supervision of Prof. Ian Fairlamb and Co-supervision of Prof. Richard Taylor (Title:*The Application of Palladium-Catalysed Cross-Coupling Processes in Synthesis: Towards the Synthesis of Likonide B*)

- MRes., Chemistry. University of York, United Kingdom. (Received on 14th July 2005- Distinction) – Under the Supervision of Prof. Ian Fairlamb (Title: *Novel Palladium(II) Precatalysts for Cross-Coupling Processes.*)
- MSc., Organic Chemistry. Institute of Science, Mumbai University, India. (Received on December 2002-Distinction)
- BSc., Chemistry. RamnarainRuia College, Mumbai University, India. (Received on December 2000-Distinction).
- Ph.D. students completed till date: 13 (Ongoing: Thesis submitted: 0; Synopsis submitted: 2)
- Ongoing Ph.D. students: 8
- Industrially sponsored PhD. Students: 4 (Ongoing: 3, Thesis submitted: 0)
- Research Associates: 3
- M.Sc. project completed: 50

ADMINISTRATIVE & PROFESSIONAL POSITIONS HELD

- Founding Deputy Director of Institute of Chemical Technology-Indian Oil Campus Odisha, Bhubaneswar from 1st September 2018 to 31st December 2019 (On deputation from ICT, Mumbai)
- Central Placement Chief Coordinator, ICT Mumbai from 1st April 2021 (for 3 years)
- M.Sc. Chemistry Course Coordinator (Aug 2023 onwards)
- Founding Coordinator of the India-UK Virtual Innovation & Sustainability Chemistry Consortium (Supported by Department of Business Energy and Industrial Safety with 100k pounds)
- Conceptualization and Execution of ICT-RSC Innovation lecture series for Scientific Innovators in Chemical Sciences in India

EDITORSHIP OF JOURNALS

- Editor of Sustainability and Circularity Now, Thieme Connect journal from November 2023 to December 2027
- Associate Editor of RSC Advances: Royal Society of Chemistry journal from November 2015 till May 2017.

GUEST EDITORSHIP

- [Guest editorship for a special issue](#) on ‘Nucleoside/nucleotides or nucleic acid modifications & applications’ for Chemical Records and Asian Journal of Organic Chemistry (2022).
- [Guest editorship for a special issue](#) on Advances in the Synthesis of Bio-Active Nucleosides and Functional Nucleotides and Oligonucleotide for SYNLETT (2023)-100 years commemorative issue on Prof. Hargobind Khorana

DAAD RESEARCH AMBASSADOR

- Appointment as a research ambassador for 3 years (2022-2025) for promoting research in Germany and supporting activities of DAAD India.

INSTITUTIONAL RESPONSIBILITIES:

- Founding Deputy Director of Institute of Chemical Technology-Indian Oil Campus Odisha, Bhubaneswar from 1st September 2018 to 31st December 2019 (On deputation from ICT, Mumbai)
- Central Placement Chief Coordinator, ICT Mumbai from 1st April 2021 (for 3 years)
- M.Sc. Chemistry Course Coordinator (Aug 2023 onwards)
- Lead Scientist for Academia Industry interaction between ICT and Syngene (February 2022-) Company sponsored Ph.D. program initiation for improved skill development.
- Member of the Committee for IPR, Legal and Ethical Matters as part of the Research Advisory Council of ICT Mumbai from 15th July 2023
- Editor-In-Chief of Bombay Technologist (Journal of Technological association of ICT- an internal undergraduate journal) since December 2017 till date.
- Member of the Purchase & Procurement Committee of ICT Mumbai (2015-18)
- Committee member for Institutional Handbook Committee: Compilation, Designing, Detailing and Final Compilation handled. (2016-20)
- Departmental placement in-charge (2017- till date)

- Departmental safety committee member (2018 onwards)

AWARDS AND RECOGNITIONS

- **Fellow of Royal Society of Chemistry**, London as **Leaders in the Field** category, 2021
- **British Council UK Education Alumni award finalist 2021-22.**
- **Awarded the Prof. M. M. Sharma Award for Science and Technology by the Marathi Vidnyan Parishad Dec 2023**
- **Thieme Journal Awardee for 2024**
- **Asian Journal of Organic Chemistry (Wiley) Lecture Award 2023**
- **C. B. Murarka Best Assistant Professor Award 2018-19: Rolling trophy**
- **Fellow of Maharashtra Academy of Sciences, 2016**
- Prof. N. R. Kamath Book Award for publishing a book on the topic of Strategies for Palladium-Catalyzed Non-Directed and Directed C-H Bond Functionalization. Volume 1: Latest Trends in Palladium Chemistry) Eds. A. R. Kapdi, D. Maiti, Elsevier, New York, 2017 (Rs. 30,000/- award prize)
- **Wellcome Trust/DBT India Alliance Early Career Fellow for 2021:** Africa-India Research mobility grant fund award: Jan 2021 till Dec 2021 for up to ₹ 3,54,004.00 over 1 month and made to Institute of Chemical Technology, Mumbai for your project titled “Flow-Chemistry Assisted Expedient Synthesis of Antiviral and Anticancer Nucleoside analogues.
- **DAAD Fellowship for Scientists** with Prof. Moniek Tromp in Catalysis Research Centre, Technische Universitat Munchen, Germany.(not availed)
- Alexander Von Humboldt Fellowship for Postdoctoral Research for carrying out postdoctoral research under the supervision of Prof. Lutz Ackermann in Georg-August-UniversitaetGoettingen, Germany (June 2008 to March 2010).
- Alexander von Humboldt Return Fellowship(25th May 2013 to 25thJuly 2013) - with Prof. Moniek Tromp in Catalysis Research Centre, Technische Universitat Munchen, Germany.
- Book Fund Award by Alexander von Humboldt Foundation worth Eur 1,000 (2013).
- Book Fund Award by Alexander von Humboldt Foundation worth Eur 1,000 (2010).
- Young Associate of Maharashtra Academy of Sciences 2012.
- Alexander von Humboldt Equipment Grant 2013 (Euros 16000)

BOARD OF STUDIES, State & National level committees

- Department of Chemistry, ICT Mumbai
- Board of studies, Humanities and Science department, Thakur education society, Mumbai.
- Board of studies, Humanities and Science department, SRTM University, Nanded
- Board of studies Chemistry department, Somaiya Vidyavihar University, Mumbai.
- Committee member of Special task Force of Govt of Maharashtra for Industrial Safety and Health.
- Core Committee member of RSC backed Industry-Academic Forum
- Committee member of Bureau of Indian Standards (National Standard Body-engaged in the activities of formulating Indian Standards and operating Certification Marks Licence Schemes and other related activities.

MEMBERSHIP OF PROFESSIONAL INSTITUTIONS

- Member of American Chemical Society 30690217 (expired)
- Member of Royal Society of Chemistry (MRSC)-membership no: 359354 (expired)
- Chemical Research Society of India life membership No: 828
- Alexander von Humboldt Alumni Association (Mumbai chapter)
- Life Member of Catalysis Society of India
- Life Member of Indian Society of Chemists and Biologists
- Life Member of Maharashtra Academy of Sciences (Young Associate)
- Life Member of Chemistry Teachers Association of India
- Member of International Society for Nucleosides, Nucleotides, and Nucleic Acids (IS3NA)

PROJECTS SANCTIONED (Overall 3.8+ crores)

Government funded:

- *Application of Palladacyclic Complexes in Synthesis.* DST INSPIRE Faculty Award (October 2012 till September 2017; Rs. 83,00,000/-)

- *Application of Palladacyclic Complexes in Aqueous Media:* DST-SERC Fast Track Fellow (March 2011 to September 2012; Rs. 25,00,000/-)-Completed
- ‘*Synthesis and Cellular Evaluation of Novel Palladacyclic Complexes for Breast Cancer*’ As a Co-Principal Investigator for a Pilot Project Grant for Young Investigators in Cancer Biology by Department of Bio-Technology for Rs. 25,00,000/- for 3 years 2014-17.
- ‘*Development of grafted resins and membranes (extractants) for precious metals*’ Principal investigator for a project from Department of Atomic Energy for Rs. 30,00,000/- from 2016-19.
- ‘*Metal-mediated One-Pot Sequential (Telescoping) Reactions for the Synthesis of Multifunctional Nucleosides/Nucleotides with Promising Photo- and Biophysical Properties.* Extra-Mural research grant from DST-SERB for Rs. 56,00,000/- from July 2017-June 2020.
- ‘*Development of Novel Approaches to Multifunctional C-Nucleosides using Palladium-Catalyzed Coupling Processes in Aqueous Media.*’ Extramural research grant from CSIR for Rs. 25,00,000/- from July 2017 to June 2020.
- Expedient Routes for (Hetero)Arene Modification via In and Ex-situ Gas (nucleophile) Generation. Core research grant sanctioned by SERB Dec 2023 to Nov 2026 (Rs. 48,00,000) File Number: CRG/2023/000045

Industry funded:

- Greener Approach for synthesis of synthetically important molecules. **GEM Aromatics** (January 2013 till December 2013; Rs. 2,00,000/- and March 2014 to February 2015; Rs. 2,50,000/-)
- *Development of new external donors (especially long chain esters and amides of fatty acid) for Homo-grade propene polymerization.* Reliance Industries Limited, India. (December 2014- November 2015; Rs. 10,90,000/-)
- *Development of efficient processes for commercially useful drugs.* Halcyon Pvt. Ltd. (August 2015 till Jan 2016; Rs. 6,50,000/-)
- *Development of Chemoluminescence molecules for Bio-Conjugation Assays.* Transasia Pvt. Ltd. (August 2018 to July 2019; Rs. 7,00,000/-)
- Development of efficient synthetic route for HFIP-based commercially relevant molecules. Navin Fluorine International Ltd. (January 2020 to December 2020; Rs. 10,00,000/-)
- *Project with Shogun Organic Pvt. Ltd. For the development of commercial process for agro-based molecules (Rs. 10,00,000/-) Start date: January 2022.*

International Fund

- Green Approach towards the synthesis of substituted nucleosides. Rasayan Inc. California, U.S.A (January 2013 till December 2024; \$140,000)
- Africa-India Mobility fund for project titled “*Flow-Chemistry Assisted Expedient Synthesis of Antiviral and Anticancer Nucleoside analogues*” with Prof. Paul Watts at Nelson Mandela University, South Africa from January 2021 till December 2021 (\$4700 or Rs. 3,44,451)
- *Multi-functional Nucleosides and Nucleotides via Palladium-Mediated Reactions Using Novel Palladacyclic Complexes with Promising Anticancer Activities* Alexander von Humboldt Research Linkage programme in Collaboration with Prof. Carola Schulzke (54,000 euros) 1st July 2015 till 30th June 2018.

Consultancy Projects

- *Development of efficient processes for commercially useful drugs.* Halcyon Pvt. Ltd. (January 2016 till December 2017; Rs. 10,00,000/-) (January 2017 till December 2017; Rs. 10,50,000/-)
- *Development of Chemoluminescence molecules for Bio-Conjugation Assays.* Transasia Pvt. Ltd. (2021-2024; Rs. 36,00,000/-)
- *Consultancy project of Balaji Formalin Pvt. Ltd. Rs. 1,00,000/- for expert opinion on Methanol denaturation (High court ruling)*

RESEARCH COLLABORATIONS

Academic Collaborations:

- Prof. Jose Luis Serrano (Department of Inorganic Chemistry, Universidad Politecnica de Cartagena, Murcia, Spain) on the *Application of Palladacyclic Complexes for the Development of Coupling Reaction in Green Solvents*
- Prof. Ian J. S. Fairlamb (University of York, England) on mechanistic studies in palladium-mediated synthesis.
- Prof. Carola Schulzke (Department of Biotechnology, University of Greifswald, Germany) on X-ray characterization of novel Palladacyclic complexes.

- Prof. Moniek Tromp (Structural Analytic Centre, Technische Universitat Munchen, Germany) on Catalyst Characterization techniques.
- Dr.PrajaktaDandekar Jain (Department of Pharmaceutical Engineering and Technology, ICT Mumbai, India) Palladacycles as anticancer agents
- Dr.DebabrataMaiti (Indian Institute of Technology, Mumbai, India) Novel C-H bond Functionalisation strategies for synthesis.
- Prof. K. Hara (Department of Chemistry, Tokyo Technological University, Japan) Synthesis and characterisation of palladium colloids/nanoparticles for synthesis.
- Prof. Lutz Ackermann Georg-Augustat Universitat, Goettingen, Germany.
- Prof. Fuk Yee Kwong (Department of Chemistry, Chinese University of Hong Kong, Hong Kong, China)
- Prof. Santosh J. Gharpure (Indian Institute of Technology, Bombay, India)
- Prof. Stellos Arseniyadis (Queen Mary University of London, United Kingdom)
- Prof. Mahesh K. Lakshman(City College Newyork, City University New York)

Industrial Collaborations

- Halcyon Pvt. Ltd.
- Rasayan Inc, California, United States of America on the metal-mediated modification of nucleotides.
- Gem Aromatics Ltd. On the synthesis of important organic molecules via Greener approach.
- Reliance Industries Limited
- Transasia Pvt. Ltd.
- Navin Fluorine International Limited
- Sapala Organic Pvt Ltd.
- Shogun Organics Pvt. Ltd.
- Syngene International Ltd.
- Evonik Catalyst India Ltd.

RESEARCH PUBLICATIONS (120+ publications)

- 1) **Beeby***, A., Bettington, S., **Fairlamb***, I. J. S., Goeta, A. E., Kapdi A. R. and Thompson, A. L.: A new precatalyst for the Suzuki reaction- a pyridyl-bridged dinuclear palladium complex as a novel source of mono-ligated palladium(0).*New. J. Chem.* **2004**, 28, 600-605. (Cited in *Chem Inform*, **2004**, 35, 103)
- 2) **Fairlamb***, I.J.S., Kapdi, A. R.,Lynam, J. M., **Taylor***, R. J. K. and Whitwood, A. C.: Bis (triphenylphosphine) palladium (II) Succinimide- a new precatalyst for Suzuki cross coupling. *Tetrahedron***2004**,60, 5711-5718. (Cited in *Chem Inform*, **2004**, 35, 94)
- 3) Chaignon, N., **Fairlamb***, I.J.S., Kapdi, A.R., **Taylor***, R.J.K. and Whitwood, A.C.: Bis (triphenylphosphine) palladium (II) Succinimide an easily prepared precatalyst for Suzuki-Miyaura coupling reactions. *J. Mol. Cat. A: Chem.***2004**, 219, 191-199. (cited **11 times**)
- 4) **Fairlamb***, I.J.S., Kapdi, A.R. and Lee, A.: η^2 -dba complexes of palladium (0): electron rich dba ligands enhance the reactivity of 'PdLn' catalyst species in Suzuki-Miyaura coupling. *Org. Lett.***2004**, 6, 4435-4438.(**78 citations**)
- 5) **Fairlamb***, I.J.S., Kapdi, A.R., Lee, A., Sanchez, G., Lopez, G., **Serrano***, J. L., Garcia, L., Perez, J. and Perez. E.: Mono- and binuclear cyclometallated palladium(II) complexes containing bridging (N, O-) and terminal (N-) imidate ligands: Air stable, thermally robust and recyclable catalysts for cross-coupling processes. *Dalton Trans.***2004**, 3970-3981.(**cited 27 times**)
- 6) Crawforth, C. M., Burling, S., **Fairlamb***, I.J.S., Kapdi, A.R., **Taylor***, R.J.K. and Whitwood, A. C.: Oxidative addition of N-halosuccinimides to palladium (0): The discovery of neutral palladium (II) imidate complexes which enhance Stille coupling of allylic and benzylic halides. *Tetrahedron***2005**, 61, 9736-9751.(**Cited in Chem Inform**, **2006**, 37, 57)
- 7) **Fairlamb***, I. J. S., Kapdi, A. R., Serrano, J. L., Taylor R. J. K. and Sanchez, G.: Air stable, phosphine-free anionic palladacyclopentadienyl catalysts: Remarkable halide and pseudohalide effects in Stille coupling. *Adv. Synth. Cat.* **2006**, 348, 405-412. (Cited in *Chem Inform*, **2006**, 37, 52)
- 8) Macé, Y., Kapdi, A. R., **Fairlamb***, I. J. S. and **Jutand***, A.: Influence of the dba substitution on the reactivity of Pd(0) complexes generated from Pd⁰(dba-n,n' Z)₃ or Pd⁰(dba-n,n' Z)₂ and PPh₃ in oxidative addition with iodobenzene. *Organometallics***2006**, 25, 1795-1800. (cited **31 times**)
- 9) **Fairlamb***, I. J. S., Kapdi, A. R., Lee, A. F., McGlacken, G. P., Weissburger F., de Vries, A. H. M. and Schmieder-van de Vondervoort, L.: Exploiting non-innocent (*E,E*)-dibenzylidene acetone (dba) effects in palladium(0) mediated cross-coupling reactions: modulation of the electronic properties of dba

- affects catalyst activity and stability in ligand and ligand-free reaction systems. *Chem. Eur. J.* **2006**, *12*, 8750 – 8761. (Cited **40** times)
- 10) **Fairlamb***, I. J. S. and Kapdi, A. R.: Synthesis of substituted dibenzylidene acetone (dba) derivatives. *Synthetic pages* **2004**, 221.
 - 11) Burns, M.J., **Fairlamb***, I.J.S., Kapdi, A. R., Sehnal, P. and Taylor*, R. J. K.: A simple palladium(II) precatalyst for Suzuki-Miyaura couplings: efficient reactions of benzylic, aromatic and heteroaromatic coupling partners. *Org. Lett.* **2007**, *9*, 5397-5400. (Cited in *Chem Inform*, **2008**, *39*, 93)
 - 12) **Ackermann***, L., Vicente, R., Kapdi, A. R.: Review Article- Transition Metal-Catalyzed Direct Arylations of (Hetero)Arenes via C–H Bond Cleavage. *Angew. Chem. Int. Ed.* **2009**, *48*, 9792-9827; *Angew. Chem.* **2009**, *121*, 9976–10012. (Cited **209** times) (Cover Page Article; Cited in *Chem Inform*, **2010**, *41*, 243)
 - 13) **Ackermann***, L., Weschler, C., Kapdi, A. R., Althammer, A.: Air-Stable DiaminophosphineSulfides as Preligands for Nickel-Catalyzed Cross-Couplings of Fluoroarenes. *Synlett*, **2010**, 294-298. (Cited in *Chem Inform*, **2010**, *41*, 76 and *Synfacts*)
 - 14) **Ackermann***, L., Potukuchi, H., Kapdi, A.R., Schulzke, C.: Efficient Kumada Cross-Coupling of 2-Pyridyl Grignard Reagent with Aryl Bromides. *Chem. Eur. J.* **2010**, *16*, 3300-3303. (Cited in *Chem Inform*, **2010**, *41*, 158)
 - 15) **Ackermann***, L., Kapdi, A. R., Schulzke, C.: Air-Stable Secondary Phosphine Oxide or Chloride (Pre)Ligands for Cross-Couplings of Unactivated Alkyl Chlorides. *Org. Lett.* **2010**, *12*, 2298–2301. (Cited on Organic Chemistry Portal <http://www.organic-chemistry.org/abstracts/lit2/911.shtm>; Cited in *Chem Inform*, **2010**, *41*, 47))
 - 16) **Ackermann***, L., Kapdi, A. R., Kornhass, C.; Fenner, S., Schulzke, C.: Highly Active Air-Stable Dimeric Palladium(II)- Phosphonite Complex for Efficient Kumada-Corriu Cross-Coupling of (Hetero)Aryl and Alkenyl Tosylates. *Chem. Eur. J.* **2011**, *17*, 2965-2971. (Cited in *Chem Inform*, **2011**, *42*, 86)
 - 17) **Ackermann***, L.; Barfusser, S.; Kornhass, C.; Kapdi, A. R. C-H bond Arylations and Benzylations on Oxazol(in)es with a Palladium Catalyst of a Secondary Phosphine Oxide. *Org. Lett.* **2011**, *13*, 3082-3085. (Cited in *Chem Inform*, **2011**, *42*, 131)
 - 18) **Kapdi***, A. R.; Taylor, R. J. K.; **Fairlamb***, I. J. S. Highly Regio- and Chemoselective Palladium(0)-Mediated Allylic Substitution of Difunctional Allylic Halides with Phenols. *Tetrahedron Lett.* **2010**, *51*, 6378-6380.
 - 19) Sirisha, P.; **Pednekar***, S.; Kapdi, A. R. Facile *p*-TSA Catalyzed One Pot Synthesis of Tetrahydropyrimidinones Derivatives in Water and Under Solventless Condition. *Bull. Catal. Soc. India* **2010**, *9*, 138-141.
 - 20) **Kapdi***, A. R. Innocent Or Non-Innocent: Towards Understanding The Role Of DBA In Palladium(0) Mediated Cross-Coupling Reactions. Review article in *Bull. Catal. Soc. India* **2010**, *9*, 12-28.
 - 21) **Sánchez***, G.; García, J.; Martínez, M.; Pérez, J.; García, L.; Serrano, J. L.; Kapdi, A. R. Bis(imidate)palladium(II) complexes with labile ligands. Mimics of classical precursors? *Dalton Trans.* **2011**, *40*, 12676-12689. (Cover Page Article)
 - 22) Sirisha, P.; **Pednekar***, S.; Kapdi, A. R.; Naik, M. Facile One Pot Synthesis of Pyranobenzopyran and Their Derivatives. *J. Chem. Sci.* **2011**, *123*, 667-672. (cited in *Chem Inform*, **2012**, *43*, 123)
 - 23) Santana, M. D.; García-Bueno, R.; García, G.; Sánchez, G.; García, J.; Naik, M.; Pednekar, S.; **Kapdi, A. R.***; Pérez, J.; García, L.; Pérez L.; **Serrano, J. L.***. A new route towards cyclopalladated complexes with saccharinate ligands: luminescence properties and catalytic activity. *Dalton Trans.* **2012**, *41*, 3832-3842.
 - 24) **Kapdi, A. R.*** In *Organometallic Aspects of C-H bond activation/functionalization: Specialist Periodical Reports- Organometallic Chemistry* (Eds.: I. J. S. Fairlamb) RSC, *Organomet. Chem.* **2012**, *38*, 47-73 (cited in *Chem Inform*, **2013**, *44*).
 - 25) **Ackermann***, L., Kapdi, A. R., Kozhuskov, S. I., Potukuchi, H. In *Synthesis via C-H Bond Functionalization: In Handbook of Green Chemistry Series (Green Synthesis)* (Ed.: C. J. Li) Wiley, New Weinheim, **2012**, 259-305.
 - 26) **Kapdi, A. R.***, **Fairlamb, I. J. S.*** In *Alkynylzinc and Other Cross-Coupling: C-C Cross-Coupling and Heck Reactions. Science of Synthesis-Houben Weyl Series* (Eds.: G. Molander) Thieme, Invited Book Chapter **2012**.
 - 27) **Serrano, J. L.***, Perez, J., Garcia, L., Sanchez, G., Garica, J., Tyagi, K., **Kapdi, A. R.*** New Phosphapalladacycles: Efficient Catalysts for Formylation of Aryl Chlorides. *RSC Advances* **2012**, *2*, 12237-12244.

- 28) Shah, P. A.; Garcia, J.; Santana, M. D.; Serrano, J. L.; Naik, M.; Pednekar, S.; **Kapdi, A. R.**.[Pd(PPh₃)₂(Saccharinate)₂]- General Catalyst for Suzuki-Miyaura, Negishi cross-coupling and C-H bond functionalization of coumaryl and pyronesubstrates. *Tetrahedron***2013**, *69*, 1446-1453. (Cited in *Chem Inform*, **2013**, *44*, 136)
- 29) **Kapdi, A. R.,* Fairlamb, I. J. S.***Synthesis of Macrocyclic Ketones Exploiting Palladium-Catalyzed Activation of Carboxylic Acids as an Enabling Step. *New J Chem*.**2013**, *37*, 961-964 (cited in *Chem. Inform*, **2013**, *44*).
- 30) Kapdi, A. R., Whitwood, A. C., Burns, M. J., **Fairlamb, I. J. S***. Dinuclearpalladium(0) complexes containing symmetrical and unsymmetrical aryl substituted *E,E*- dibenzylideneacetone ligands: The importance of aryl substituents and 1,4-dien-3-one conformation.*J. Am. Chem. Soc.***2013**, *135*, 8388-8399.
- 31) **A. R. Kapdi,*** C. Jain, T.Padte, U.Shevde, S.Pednekar, C. Fischer and C.Schulzke, Tween-80: A Biodegradable and Recyclable Phase Transfer Catalyst for Microwave Assisted Synthesis of Highly Substituted Dicoumarols. *Int. J. Green Chem. Bioprocess***2013**, *3*, 17-23.
- 32) **A. R. Kapdi,***A. Karbelkar, M. Naik, S. Pednekar, C. Fischer, C. Schulzke^c and M. Tromp: Efficient Synthesis of coumarin based Tetra and Pentacyclic rings using Phospha-Palladacycles. *RSC Advances***2013**, *3*, 20905-20912..
- 33) **Kapdi, A. R.**, Chaughule, R. S.,*Nanotechnology: Bridging Aspects of Catalysis, Energy and Drug Delivery Contents and Scope:Nanoparticles for Catalysis, Energy and Drug Delivery* (Eds.: R. G. Chaughule and A. R. Kapdi) American Scientific Publishers, **2014**.
- 34) **Kapdi, A. R.*** In*Metal Nanoparticles: Green Catalysis in Water-Nanoparticles for Catalysis, Energy and Drug Delivery* (Eds.: R. G. Chaughule and A. R. Kapdi) American Scientific Publishers, **2014**.
- 35) **Kapdi, A. R.***, Organometallic Aspects of Transition-Metal Catalysed Regioselective C–H Bond Functionalisation of Arenes and Heteroarenes. *Dalton Trans.* **2014**, *43*, 3021-3034 (Invited Article).
- 36) **Kapdi, A. R.,***Gayakhe, V., Sanghvi, Y. S., García, J., Lozano, P., da Silva, I., Pérez J. and Luis Serrano, J. New water soluble Pd-Imidate complexes as highly efficient catalysts for the synthesis of C5-arylated pyrimidine nucleosides via Suzuki-Miyaura cross-coupling. *RSC Advances***2014**, *4*, 17567-17572.
- 37) **Kapdi A. R.,*** Fairlamb, I. J. S. Anti-cancer palladium complexes: a focus on PdX₂L₂ and palladacycles. Invited article to *Chem. Soc. Rev.* **2014**, *43*, 4751-4777.
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Tiwari, S., Pednekar, S., Kapdi, A. R. 'Tetrazolinohydrazino pyrazolin-5-one, useful antibacterial molecule' Patent filed PCT. IND 2012.

BOOKS EDITED

1. Nanoparticles for Catalysis, Energy and Drug Delivery (American Scientific Publishers, USA) Dr. Anant R. Kapdi and Dr. Ramesh S. Chaugule (2015).
2. "Strategies for Palladium-Catalyzed Non-Directed and Directed C-H Bond Functionalization" Elsevier, New York, 2017. Part I of a III volume series on Latest Trends in Palladium Chemistry. Editor: Dr. A. R. Kapdi and Dr. D. Maiti (2017)
3. "Strategies for Palladium-Catalyzed Modification of Nucleosides, Nucleotides and Oligonucleotides" Elsevier, New York, 2018. Part II of a III volume series on Latest Trends in Palladium Chemistry. Editor: Dr. A. R. Kapdi and Dr. D. Maiti, Dr. Y. S. Sanghvi (2018)
4. "Palladacycles: Catalysis and Beyond" Elsevier, New York, 2019. Part III of a III volume series on Latest Trends in Palladium Chemistry. Editor: A. R. Kapdi and Dr. D. Maiti (To be Published by June 2019)

CONFERENCES, Seminars and invited talks

- 7th International Green Solvents Conference: Hosted by Dechema at **Dresden** from 19th October to 22nd October 2014 (Poster presented: *New water soluble Pd-Imidate complexes: Catalysts for efficient modification of nucleosides in neat water.*)
- 10th International Symposium on Bio-Organic Chemistry: Hosted by Indian Institute of Science and Educational Research, **Pune** from 11th January 2015 till 15th January 2015 (Poster presented: *Pd-Imidate complexes: Catalysts for the synthesis of pyrimidine nucleosides.*)
- 9th Chemical Research Society of India-RSC and 17th CRSI-NSC held from 5th to 8th February 2015 in National Chemical Laboratory, **Pune**. (Poster presented: *Synthesis of Biaryls Using Palladacyclic Complex and its Mechanistic Study.*)
- Invited talk at Institute of Organic and Biomolecular Chemistry, University of **Goettingen**, Germany (Organic Colloquia) on 29th July 2016.
- Attended the 21st International Conference on Organic Synthesis held at IIT Bombay from 11th December to 16th December 2016 as an Organising Committee Member.
- Invited talk at **BARC**, Chembur in the Department of Radiochemistry on "Sustainable Palladium Catalysis: Bio-applications and Mechanistic Implications" 11th January 2017.
- Invited talk at New Innovation Centre of **BASF** (Mumbai), at Turbhe on "Sustainable Palladium Catalysis for the Synthesis of Multi-functional Nucleosides in Water" on 5th May 2017.
- Invited talk at Institute für Organische Chemie, Technical University of **Braunschweig**, Germany titled "Sustainable Palladium Catalysis for the Synthesis of Multi-functional Nucleosides in Water" on 21st June 2017.
- Invited talk at Leibniz Institute for Catalysis (LIKAT), **Rostock**, Germany titled "Sustainable Palladium Catalysis for the Synthesis of Multi-functional Nucleosides in Water" on 29th June 2017.
- Invited talk on "Sustainable Palladium Catalysis for the Synthesis of Multi-functional Nucleosides in Water" at the 'Advances in Catalysis' one day symposium in Department of Chemistry, IIT **Kanpur** on 12th January 2018.
- Invited talk on 'Sustainable Palladium Catalysis: New C-C Bond Forming Technologies and Mechanistic Implications' at Advances in Organometallic and Bio-Organometallic Chemistry, held in K. V. Auditorium, Institute of Chemical Technology, Mumbai on 20 and 21 February 2018.
- Invited talk on 'Phosphotriazines: Versatile ligands for bio-active molecules modification via sustainable palladium catalysis' at Tokyo University of Technology, Hachioji, **Tokyo**, Japan on 18th May 2018.
- Invited talk on 'Phosphotriazines: Versatile ligands for bio-active molecules modification via sustainable palladium catalysis' at Nobel Prize exhibition Hall, Department of Chemistry, **Nagoya** University, Nagoya, Japan on 21st May 2018.

- Invited talk on ‘Phosphotriazines: Versatile ligands for bio-active molecules modification via sustainable palladium catalysis’ at Department of Chemistry, Osaka University, **Osaka**, Japan on 25th May 2018.
- Invited talk titled ‘Phosphotriazines: Versatile ligands for bio-active molecules modification via sustainable palladium catalysis’ at IIT **Dhanbad**, Department of Chemistry on 2nd November 2018 at 5.00 p.m.
- Invited talk titled ‘Phosphotriazines: Versatile ligands for bio-active molecules modification via sustainable palladium catalysis’ at The Chinese University of Hong Kong, **Hong Kong** on 8th January 2019 at 2.00 p.m.
- Invited talk titled ‘Phosphotriazines: Versatile ligands for bio-active molecules modification via sustainable palladium catalysis’ at Hong Kong Baptist University, **Hong Kong** on 9th January 2019 at 2.00 p.m.
- Invited research talk ‘Phosphotriazines: Versatile ligands for bio-active molecules modification via sustainable palladium catalysis’ at Indian Oil Corporation **Faridabad** R&D centre on 9th May 2019.
- Invited research talk at Institute of organic and analytical chemistry, ‘Rational Ligand design for sustainable palladium catalysis: Story of PTABS’ University de **Orleans**, France on 29th May 2019.
- Invited research talk at Institute National de Sciences Appliquees, ‘Rational Ligand design for sustainable palladium catalysis: Story of PTABS’ University de **Roceun** (Normandie), France on 7th June 2019.
- Invited research talk at Laboratory Chemistry Coordination of CNRS **Toulouse**, ‘Rational Ligand design for sustainable palladium catalysis: Story of PTABS’ Paul Sabatier University, France on 12th June 2019.
- Invited research talk at Department of Chemistry, University of **Dijon**, ‘Rational Ligand design for sustainable palladium catalysis: Story of PTABS’ France on 14th June 2019.
- Invited research talk at Department of Chemistry, IIT **Bhubaneswar**, ‘Rational Ligand design for providing highly efficient catalytic solutions for academia and industry’ Bhubaneswar on 31st January 2020.
- Invited research talk at Department of Chemistry, IIT **Delhi**, ‘Rational Ligand design for providing highly efficient catalytic solutions for academia and industry’ New Delhi on 13st March 2020.
- Invited talk at the 57th Annual Convention of Chemists (ACC)-**Indian Chemical Society** (ICS) Recent trends in Chemical Sciences (RTCS 2020) on 29th December 2020 titled ‘Caged phosphines: Fascinating journey from academia to industry.’
- Invited talk at the Young Scientists Conclave conducted by the **Indian Chemical Society** with the talk titled: Caged Phosphines: Fascinating Journey from Academia to Industry on 8th August 2021 at 3.00 p.m.
- Invited for attending National Organic Synthesis Trust (NOST) conference held at Leela Palace, Chennai on 25-28 November 2021.
- Invited talk at the Sustainability & Digitalisation in Chemical Sciences: An Industry Academia Conclave organized by DRILS and RSC on 1st and 2nd February 2022. Title of talk: India UK ISCC: Innovation Sustainability Chemistry Consortium.
- Invited talk to deliver at the Recent Trends in Green Chemistry & Nanotechnology held at NMU Jalgaon on March 8th 2022. Title of the talk: **Caged Phosphines: Controlling Metal Electronics for the Exploration of Novel Synthetic Pathways**
- Invited talk to deliver at the RSC-CRSI conference held at IIT Guwahati on March 24th 2022. Title of the talk: **Caged Phosphines: Controlling Metal Electronics for the Exploration of Novel Synthetic Pathways**
- Invited talk to deliver a “**Plenary Lecture**” in the SERB sponsored e-Workshop on “Recent Advances in Inorganic Chemistry (AIC-2022)” at IIT Bhubaneswar on March 25-26, 2022. Title of the talk: **Caged Phosphines: Controlling Metal Electronics for the Exploration of Novel Synthetic Pathways**
- Invited talk at Department of Chemistry, Stockholm University, Sweden on 25th August 2022 on ‘Caged phosphines: Fascinating journey from academia to industry’.
- Invited talk at Department of Chemistry, Uppsala University, Sweden on 30th August 2022 on ‘Caged phosphines: Fascinating journey from academia to industry’.
- Poster presentation at XXIV International round table on nucleosides, nucleotides and nucleic acids from 28-31st August 2022 in Karolinska Institute, Stockholm University, Stockholm, Sweden.

- Invited research talk at Discovery Chemistry department of Syngene International Bengaluru on PTABS (KapdiPhos): Versatile π -Acceptor Caged Phosphine for Heteroarene Modifications on 3rd January 2023.
- Invited research talk at The University of Oxford, Department of Chemistry on PTABS (KapdiPhos): Versatile π -Acceptor Caged Phosphine for Heteroarene Modifications on 17th January 2023.
- Invited research talk at The Department of Chemistry, University of Manchester on Rapid access to modified nucleosides and related drugs using an expedient flow chemistry pathway on 18th January 2023.
- Invited talk on PTABS (KapdiPhos): Versatile π -Acceptor Caged Phosphine for Heteroarene Modifications at the Indo-UK Symposium for enabling chemical technologies for sustainability held at Queen Mary University, London on 20th January 2023.
- Invited research talk on PTABS (KapdiPhos): Versatile π -Acceptor Caged Phosphine for Heteroarene Modifications at Evonik Catalyst India facility, Mumbai on 9th February 2023.
- Invited research talk in the Departmental symposium INTeRaCTiONS-2023 at IISER Bhopal on 17-18th March 2023 on 'PTABS (KapdiPhos): Versatile π -Acceptor Caged Phosphine for Heteroarene Modifications'.
- Invited research talk in the Department of Chemistry, IISER Mohali on 12th May 2023 on 'PTABS (KapdiPhos): Versatile π -Acceptor Caged Phosphine for Heteroarene Modifications'.
- Invited research talk in the Department of Chemistry, Technische Universitat Munchen, Germany on 25th May 2023 at 4.15 p.m. on **π -Acceptor Caged Phosphine Ligands: Exploration of Novel Catalytic Reactivity and Mechanism.**
- Invited research talk in the Department of Chemistry, Technische Universitat Berlin, Germany on 1st June 2023 on **π -Acceptor Caged Phosphine Ligands: Exploration of Novel Catalytic Reactivity and Mechanism.**
- Invited research talk in the Department of Biomolecular Chemie, University of Greifswald, Germany on 5th June 2023 on.
- Invited research talk in the Liebenese Institute of Technology (LIKAT) Rostock, Germany on 7th June 2023 at 10.30 a.m. on **π -Acceptor Caged Phosphine Ligands: Exploration of Novel Catalytic Reactivity and Mechanism.**
- Invited research talk in the Department of Chemistry & Biomolecular Chemie, University of Goettingen, Germany on 9th June 2023 on **π -Acceptor Caged Phosphine Ligands: Exploration of Novel Catalytic Reactivity and Mechanism.**
- Invited research talk in the Department of Chemistry, University of Tuebingen, Germany on 13th June 2023.
- Invited research talk in the Indo-French conference, IISER Trivandrum on 10-13 December 2023 on **π -Acceptor Caged Phosphine Ligands: Exploration of Novel Catalytic Reactivity and Mechanism.**
- Invited research talk in the Global research trends in Chemical Sciences on 15 December 2023 on **π -Acceptor Caged Phosphine Ligands: Exploration of Novel Catalytic Reactivity and Mechanism** at Odisha University of Technology and Research, Bhubaneswar
- Invited research talk in the SCNow WebCheminar (online) on 26th January 2024 on **Can it be Copper? Sustainable alternative to precious metal heteroarene modification** organized by Thieme.
- Invited research talk in the National Organic Synthesis Trust Conference on 29th February to 3rd March 2024 on **π -Acceptor Caged Phosphine Ligands: Exploration of Novel Catalytic Reactivity and Mechanism** at ICT Welcome Hotel, Bhubaneswar
- Invited research talk in the RSC/CRSI National Conference on 2nd February to 4th February 2024 on **π -Acceptor Caged Phosphine Ligands: Exploration of Novel Catalytic Reactivity and Mechanism** at BITS Pilani
- Invited research talk in the Emerging Trend in Catalysis and Synthesis at IIT Kharagpur on 7-9th March 2024 on **π -Acceptor Caged Phosphine Ligands: Exploration of Novel Catalytic Reactivity and Mechanism.**

ORGANIZATION OF CONFERENCE OR EVENTS:

- Convener for the Advances in Organometallic and Bio-Organometallic Chemistry, held in K. V. Auditorium, Institute of Chemical Technology, Mumbai on 20 and 21 February 2018.

- Convener for ChemCareers and One-Day Symposium on Young Talent in Chemical Sciences in India held in Sandy Towers, Bhubaneswar on 21 and 22 November 2019.
- Convener for 1st Virtual ChemCareers in association with RSC on 3rd September 2020 at 3.00 PM.
- Convener of ReDiscover Germany and Ph.D. Proposal Writing Workshop in conjunction with DAAD India on the 12th October 2022 from 10 A.M. to 4.00 P.M.
- Convener of ICT-RSC Innovation lecture series: Invited talks by Innovators-Dr. Jayant Khandare on 11th August 2023 at 4.00 p.m. in K. V. Auditorium ICT Mumbai
- Convener of Organic Chemistry Symposium on Synthesis, Catalysis and Chemical Biology held on 18-19 January 2024 at K. V. Auditorium, ICT Mumbai.

PUBLIC LECTURES

- **Invited public lecture on 'India's scientific development, the way ahead'** at Vigyan Sarvatra Pujyate- Festival of Scope for all organized by Sathaye College, Mumbai on 27th February 2022 at 2.00 p.m.