Dr. G. ANILKUMAR

Professor (Organic Chemistry)

School of Chemical Sciences,

Mahatma Gandhi University, Kottayam

Kerala-686560, India

+91 9496722065

anilgi1@yahoo.com, anil@mgu.ac.in

Academic profile

- **Ph. D** CSIR-NIIST, Trivandrum (University of Kerala)
- **M. Phil** CUSAT, Cochin
- **M. Sc** University of Kerala, Trivandrum

Professional experience

- **Scientist**, Leibniz-Institüt für Katalyse, (LIKAT), Rostock, Germany
- **Leibniz Fellow**, Leibniz-Institüt für Katalyse, (LIKAT), Rostock, Germany
- **Senior Scientist**, AstraZeneca, India
- **MvP State Fellow**, Leibniz-Institüt für Organische Katalyse (IfOK), Germany
- **NIH Fellow**, Temple University, Philadelphia, USA
- **JSPS Fellow**, Osaka University, Osaka, Japan
- **NSR Fellow**, Katholike Universitat Nijmegen, The Netherlands

Research highlight

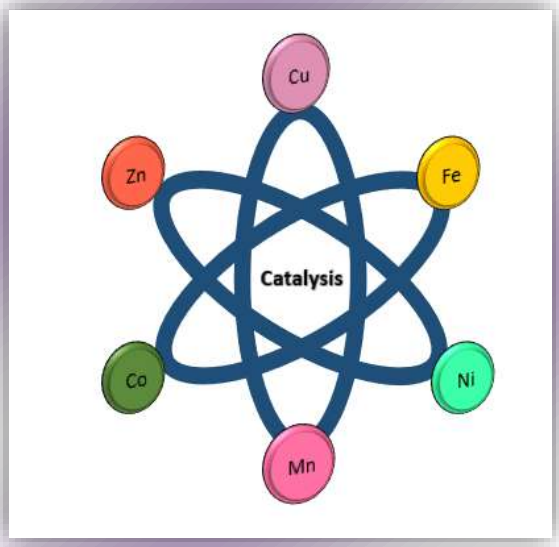
- **H-index- 45**
- **i10-index- 146**
- **Publications- 220**
- **Patents-7 (granted), 1 (filed)**
- **Citations- 6656**

Teaching areas

- **Stereochemistry**
- **Reaction Mechanism**
- **Reactions and Reagents**
- **Organic Synthesis**
- **Medicinal Chemistry**
- **Asymmetric Catalysis**
- **Research Methodology**

Research areas

Transition metal catalysis



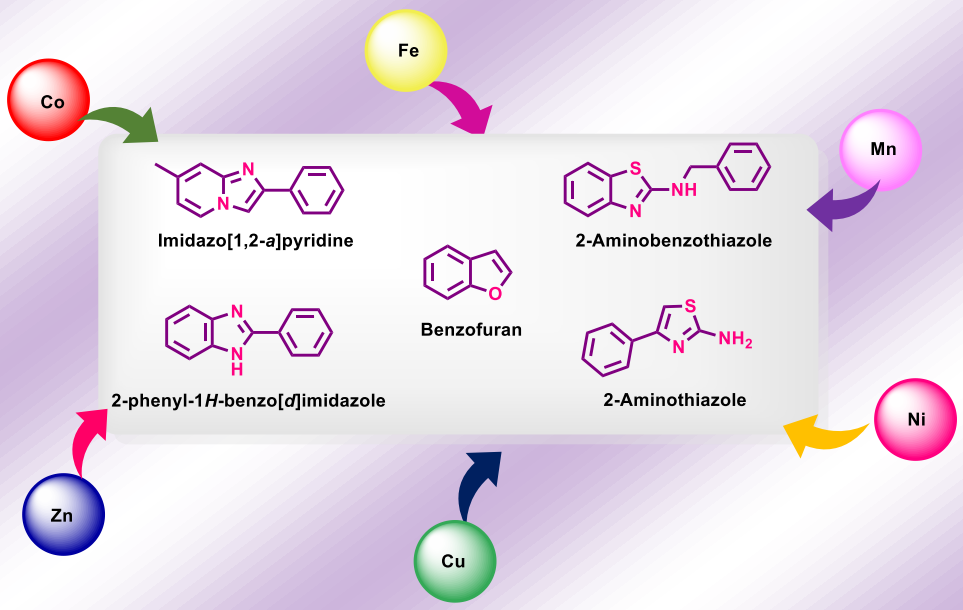
Exploring 3d series active transition metals in catalysis and particularly for

- Coupling reactions
- C-H activation

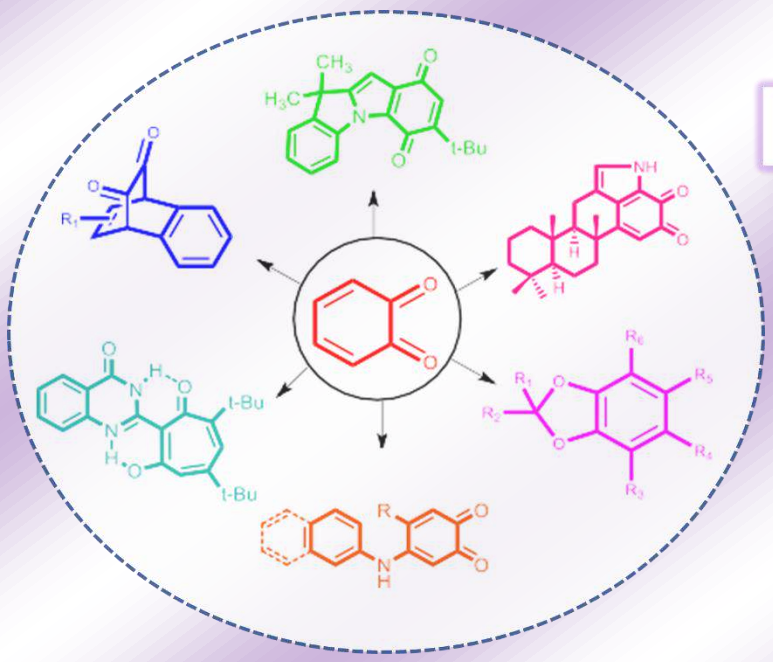
Heterocycle synthesis

- Synthesis of nitrogen, oxygen and sulphur containing heterocycles such as 2-aminobenzothiazole, 2-aminothaizole, imidazo[1,2-*a*]pyridine, benzofuran etc. via transition metal catalysis

Organic synthesis



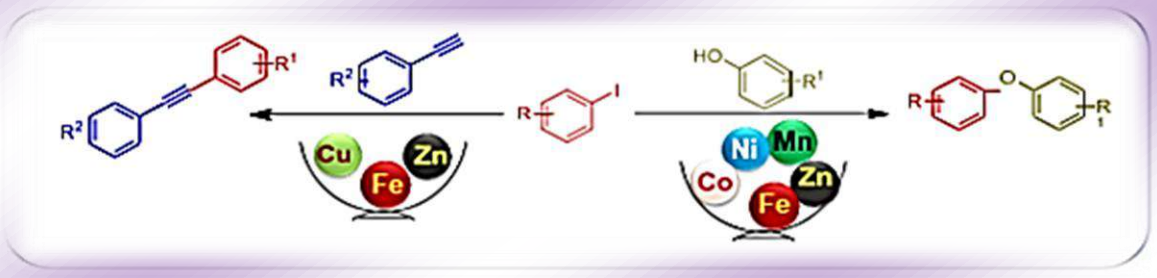
Research areas



Chemistry of *o*-benzoquinones and its applications

Synthetic methodology

Novel methods for the establishment of C-C and C-Heteroatom bond



Phytochemistry

Isolation characterization and biological screening of bioactive molecules from flora

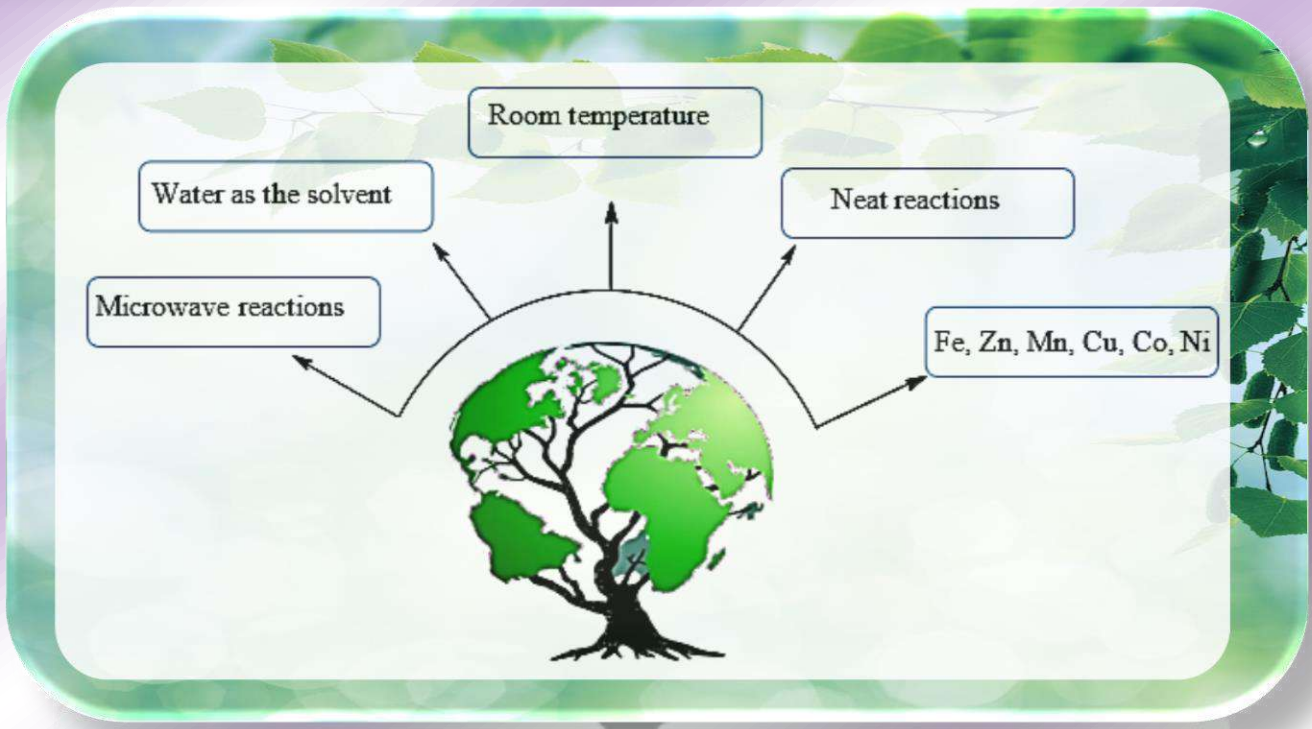
Research areas

Hydrogen generation by water splitting

Synthesis and application of sensitizers for water splitting

Green chemistry

Synthesizing pharmacologically important molecules under microwave, Neat and on-water conditions without transition metals or by using Fe, Zn or Mn as the eco-friendly catalysts



Honors and Awards

37. Editorial board member- *Results in Chemistry* (Elsevier)

36. Editorial board member-*Tetrahedron* (Elsevier).

35. Editorial board member- *Tetrahedron Letters* (Elsevier).

34. One of the papers has been selected amongst the top 10% of highly cited paper across all RSC journals in 2021 (*Org. Biomol. Chem.*, **2021**, *19*, 4228) 2023.

33. One of the papers has been selected amongst the top 10% of highly cited paper across all RSC journals in 2021 (*RSC Advances*, **2021**, *11*, 3452) 2023.

32. University Nominee, Chemistry Board of Studies, M. A. College (Autonomous), Kothamangalam 2022-25.

31. University Nominee, Academic Council, M. A. College (Autonomous), Kothamangalam 2022-25.

30. Selected as the Fellow of the Royal Society of Chemistry -FRSC-2022

29. One of the papers has been selected as the RSC Advances 10th anniversary collection focusing on Sustainable Synthesis (*RSC Adv*., 2020, 10, 36031) 2021

28. One of the papers has been selected amongst the top 5% of highly cited paper across all RSC journals in 2020 (*Catal. Sci. Technol.*, 2019, 9, 1726) 2021

27. University Nominee, Chemistry Board of Studies, S. B. College (Autonomous), Changanasserry, 2021

26. University Nominee, College Governing body, Assumption College (Autonomous), Changanasserry, 2021

25. A paper has become the top downloaded paper during 2018-2019 in *Asian J. Org. Chem*. (2019, 8, 197 – 233). 2020

24. A paper has become the top downloaded paper during 2018-2019 in *Asian J. Org. Chem*. (2018, 7, 613 – 633). 2020

23. Member, Editorial board, *Current Catalysis* (Bentham), 2020

22. Member, Editorial board, *Current Organic Synthesis* (Bentham), 2020

21. G. Anilkumar has become one of the top 5% of highly cited authors in Royal Society of Chemistry journals during 2019

20. Visiting Professor, Leibniz-Institüt für Katalyse an der Universitat, Rostock, Germany 2018

Honors and Awards

19. Adjunct faculty, International and Interuniversity Centre for Nanoscience and Nanotechnology (IIUCNN), Mahatma Gandhi University

18. Adjunct faculty, Interuniversity Instrumentation Centre (IUIC), Mahatma Gandhi University

17. Adjunct faculty, Advanced Molecular Materials Research Centre (AMMRC), M G University

16. Adjunct faculty, Institute for Integrated programmes and Research in Basic Sciences (IIRBS), Mahatma Gandhi University

15. Member, Institute Programme Advisory Committee (IPAC), IIRBS, M G University

14. Selected a paper in Journal of Catalysis (Impact factor 7.35) as a feature article 2017

13. Recipient of Dr. S. Vasudev award from Kerala State Council for Science, Technology and Environment (KSCSTE), Govt: of Kerala, for best research in 2016

12. Recipient of the Evonik Research Proposal Competition, Germany- 2nd Prize 2016

11. Recipient of the Leibniz fellowship, Rostock, Germany 2009

10. Recipient of the Mecklenburg-vor Pommern fellowship, Germany 2004-2006

9. Recipient of the National Institute of Health (NIH) Postdoctoral fellowship, Temple University, USA 2002-2004

8. Recipient of the Japan Society for the Promotion of Science (JSPS) Postdoctoral fellowship, Osaka University, Japan 2000-2002

7. Recipient of the *Naturae Species Ratioque* (NSR, The Netherlands) Postdoctoral fellowship, University of Nijmegen, The Netherlands 1997- 2000

6. Recipient of the Council of Scientific & Industrial Research (CSIR, New Delhi) Senior research fellowship 1993-1996

5. Recipient of the Council of Scientific & Industrial Research (CSIR, New Delhi)

Junior research fellowship 1991-1993

Honors and Awards

4. Recipient of the University Grants Commission (UGC, New Delhi) Junior research fellowship 1989-1991

3. Awarded UGC Junior research fellowship in 1989 and 1990

2. Awarded CSIR Junior research fellowship in 1989

1. Awarded UGC Junior research fellowship in 1993

Group Members

Ph.D. Students

Neetha Mohan

Aneeja T.

Afsina Abdulla C. M.

Saranya P. V.

Rose Mary Philip

Devi P. S.

Alumni

Dr. Amrutha P. Thankachan
Ph.D.
(Asst Prof. St. Joseph's College of Engineering and Technology, Pala)

Dr. Seetha Lakshmi K. C.
Ph.D.
(PostDoc, Japan)

Dr. Sindhu K. S.
Ph.D.
(Asst Prof. and Head Morning Star College, Angamaly)

Dr. Asha S.
Ph.D.
(Asst Prof. Maharajas College Ernakulam)

Dr. Arun Divakar M.
PDF
(Senior Scientist, Sravathi Advance Process Technologies Pvt. Ltd., Bengaluru)

Dr. Anns Maria Thomas
Ph.D.
Asst Prof.
Nirmala College, Moovattupuzha

Dr. K. Keerthi Krishnan
Ph.D.
HSS Teacher
Govt. Higher Secondary School, Kannur

Dr. Ujwaldev S. M.
Ph.D.
Asst Prof.
Sree Kerala Varma College, Thrissur

Dr. Nissy Ann Harry
Ph.D.
Asst Prof.
Catholicate College, Pathanamthita

Dr. Rohit K. R.
Ph.D.
Laboratory Demonstrator, Indian Navy
Pune

Dr. Saranya Salim
Ph.D.
Guest Lecturer, Government College Kottayam, Nattakom

Dr. Radhika S.
Ph.D.
Asst Prof.
Department of Basic Sciences,
Amal Jyothi College of Engineering
Kanjirappally

Group Members (M. Phil.)

Thrisandhya K P

Govt: HSS Teacher, Kasaragod, 2010

Nisha K N
Asst. Professor
Adishankara Institute of Engg. & Tech. Kalady, 2011

Shyma Raj M S
HSST Chemistry N G P M HSS Venchempu, Punalur, 2012

Sruthi P R
CSIR-SRF, School of Chemical Sciences Mahatma Gandhi University, 2012

Harinarayanan P
R&D Engineer IMEC, Kapeldreef 75 3001 Leuven, Belgium, 2012

Priya Sebastian

2013

Keerthi Krishnan. K
HSS Teacher Govt. Higher Secondary School, Kannur, 2013

Ranjeesh. K. C
CSIR-SRF, National Chemical Laboratory-CSIR, Pune, 2014

Shiyasunnisa. P. A

2014

Ummu Jumaila C P.
2015

Sreelekshmi V
2015

Rinu Thresia P X
2017

Rohit K R
UGC-JRF part time scholar MGU, Lab Demonstrator Naval Base, Lonavla, 2017

Sheba Ann Babu
CSIR-JRF, CSIR-NIIST, Trivandrum, 2018

Sarah John
Lecturer at Kerala State Centre for Advanced Printing & Training, Thiruvananthapuram, 2018

Reeba Mary Cherian
Ph.D. Scholar
MGU

Group Members (M. Phil.)

Sreedevi R

2019

Meera Gopinadh
Ph.D. Scholar
Maharaja's College,
Ernakulam

Treesa Susan G. S.
Guest Lecturer
St. George's College,
Aruvithura

Dhanya Raju
Teacher
Indian Language
School, Lagos,
Nigeria

Biya Elsa Biju
Guest Lecturer
St. Mary's College,
Manarcaud,

Nandhu C. T.
Ph.D. Scholar
MGU

Yamuna P.
Ph.D. Scholar
MGU

Co- Authors

Shilpa Thomas
PhD Scholar
Institute for Biomedicine and Glycomics,
Griffith University,
Nathan, Queensland, 4111

Fairoosa Jaleel P.
Doctoral student
Prof. Matthias Beller group
Institute - Leibniz institute for catalysis (LIKAT)
Rostock, Germany

Nathaniel C. Roy
PhD Scholar
Ariel University, Israel

Thoufiq Salam
Global PhD fellow
New York University (NYU),
USA.

Anagha Nandan
Research Scholar
Department of Chemistry
University of Calicut

Aleena Mary Baby
PhD Scholar
Department of Chemical Sciences,
Ariel University.

Manujyothi Ravi
PhD Scholar
University of Pittsburgh,
Pittsburgh, Pennsylvania,
USA.

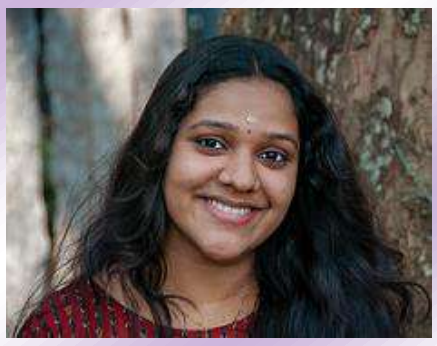
Shamna Salahudeen
PhD Scholar
Leibniz-Institute for Catalysis (LIKAT),
Rostock, Germany

P. C. Dhanush
PhD Scholar
University of Missouri-Columbia USA

Pravya P. Nair
PhD Scholar
CISSE (Chiral Induced Spin Selectivity Effect) Consortium at University Libre de Brussels, Belgium.

Rakendu Pramod
Ph.D Scholar
University of Minnesota, Twincities
Minnesota, USA

Alisha Mathews
PhD Scholar
RMIT University,
Australia



Umabharathi S. Bhattathiripad
Executive Chemist
Quality Control (QC) Department
Piramal Pharma Limited, Dahej,
Gujarat

Neeraja M. Kaimal
PhD Scholar
Leibniz Institute for
Catalysis (LIKAT),
Rostock, Germany

Ananthu Sudheesh
Technician process
Fertilisers and Chemicals
Travancore

Anju P. Joseph
Teacher
Noble International
School Qatar

K. T. Ibrahim
HSS teacher, Chemistry
Rahmania HSS,
Medical College Kozhikode

Julie mole
Instructor,
Developmental Studies,
Aurora College, North
West Territories,
Canada

Maneesha Mohammed
Assistant Engineer in
Production & Process
department
JSW Cement Ltd. Vijayanagar,
Bellary Karnataka

Sivakumar S.
Tutor Brilliant Study
Centre, Pala

Anand N. S.
Central control room operation,
Sharjah cements and industrial
development,
Al sajja, Sharjah,
United Arab Emirates

Avinash Kiran
Ph.D. Scholar
Purdue University,
West Lafayette,
Indiane, U S A

Lamine Fall
Chemist
ICS SA (INDUSTRIES
CHIMIQUES DU
SENEGAL),
Mboro, Senegal

Awards Received by Students

1. Anns Maria Thomas won the **first prize** in paper presentation in the National Seminar on *Recent Trends in Chemistry (Rtric 2014)* organized by Baselius College, Kottayam on 6-7 November, 2014.

2. Amrutha P Thankachan won the **first prize** in paper presentation in the 13th Prof. K. V. Thomas Endowment national Seminar on *New Frontiers in Chemical Research* organized by Sacred Heart College, Thevara, Cochin on 4-5 December, 2014.

3. Amrutha P Thankachan won the **second prize** in poster presentation in the National Seminar on *Chemistry for Tomorrows world* organized by B. K. College, Amalagiri, Kottayam on 22-23 January, 2015.

4. Amrutha P Thankachan won the **best paper award** in Chemical Sciences in the 28th Kerala Science Congress organized by Govt of Kerala at Calicut University, Calicut on 28-30 January, 2016.

5. K. S. Sindhu's paper entitled *"A green approach for arylation of phenols using iron catalysis in water under aerobic condition"* was selected as Editor-in Chief's featured article in *J. Catalysis* 2017.

6. Keerthi Krishnan's paper entitled *"A novel zinc-catalyzed Cadiot-Chodkiewicz cross-coupling reaction of terminal alkynes with 1-bromoalkyne in ethanol solvent"* was selected as Editor's choice paper in *Molecular Catalysis* 2017.

7. Ujwaldev S M won the **best paper award** in Chemical Sciences in the 30th Kerala Science Congress organized by Govt of Kerala at Govt Brennen College, Thalassery on 28-30 January, 2018.

8. Rohit K R won the **best paper presentation award** in the National Seminar *Neoteric Advances in Chemical Sciences* (NACS-2018) organized by University of Kerala, Trivandrum on 12 October, 2018.

9. Rohit K R won the **best paper award** in *Chemical Sciences in the International conference on Sustainable Innovation in Green Chemistry and New Technological Development* (ICSIG-2018) organized by Maharaja's College, Ernakulam on 11-12 December, 2018.

10. Rohit K R won the **best paper award** in the National Seminar on *Recent Trends in Organic and Computational Chemistry* (CTROC-2019) organized by Morning Star Home Science College, Angamaly on 14-15 February, 2019.

11. Meera Gopinadh won the **Second best poster award** in the Albertian Knowledge Summit 2020 organized by St. Alberts College, Ernakulam on 6 January, 2020.

12. S. Radhika won the **third prize in Poster presentation** in the *International Workshop on Catalysis and Applications (IWCA-2020)* organized by International and InterUniversity Center for Nanoscience and Nanotechnology (IIUCNN), Mahatma Gandhi University, Kottayam on 28-30 January, 2020.

Awards Received by Students

13. T. Aneeja won the **best poster award** in the National Seminar on NMR Spectroscopy held at St. Thomas College, Palai, on 22-23 April, 2022.

14. T. Aneeja won the **best oral presentation award** in the National Seminar on Neoteric Advances in Chemical Sciences (NACS 2022) at the Department of Chemistry, University of Kerala, Kariavattom, on 15-16 December, 2022.

List of Publications

220. Unravelling the synthesis of 2-aminobenzo[d]thiazole derivatives via a novel zinc(II)-catalyzed strategy, M. Neetha, S. B. Umabharathi, G. Anilkumar, Catal. Lett., 2024, (Accepted).

219. Recent Advances and Prospects in Manganese-Catalyzed C-H Activation, G. Anusree, P. S. Devi, G. Anilkumar, Adv. Synth. Catal., 2024, 366, 3963.

218. Gold-Catalyzed Lactone Synthesis: Advancements and Insights, D. R. Sankar, M. Neetha, G. Anilkumar, *Chem. Rec*., **2024**, *24*, e202400071.

217. Synthesis of 2-Aminobenzothiazoles via Nickel-Catalyzed Tandem Reaction of 2-Bromophenylisothiocyante with Amines, R. M. Philip, P. V. Saranya, G. Anilkumar, *ChemistrySelect*, **2024**, *9*, e202400001.

216. Synthesis of imidazo[1,2-*a*]pyridines via cobalt/iodine-catalyzed Ortoleva-King type approach, P. V. Saranya, R. M. Philip, G. Anilkumar, *Tetrahedron Lett.*, **2024**, *14*, 155188.

215. Nickel-Catalysed Decarboxylative Coupling Reactions – An Overview T. K. Arunkumar, M. Pallavi, R. M. Philip, G. Anilkumar, *ChemistrySelect*, **2024**, *9*, e202400367.

214. Recent advances in palladium-catalyzed α-arylation reactions, K. J. Swathy, P. V. Saranya, G. Anilkumar, *Appl Organomet Chem*. **2024**, *38*, e7508.

213. An insight into structural, spectroscopic and nonlinear optical Application of a promising malononitrile derivative: (Z)-2-(3-chloro-3-(4-chlorophenyl) allylidene)malononitrile, L. Vidya, A. Ghosh, A. Raj, V. M. Aparna, S. Neelima, G. Anilkumar, S. R. G. Naraharisetty, M. Joy, E. R. Anabha, C Sudarsanakumar, *Chem. Phys. Impact*, **2024**, *8*, 100640.

212. Recent progress and prospects in the organocatalytic Morita–Baylis–Hillman reaction, M. Maneesha, S. H. Haritha, T. Aneeja, G. Anilkumar, *RSC Adv*., **2024**, *14*, 14949.

211. Recent advances in Chan–Lam coupling reaction, P. S. Devi, S. Saranya, G. Anilkumar, *Catal. Sci. Technol*., **2024**, *14*, 2320.

210. A tandem strategy for the synthesis of 2-aminobenzothiazoles via manganese catalyzed C–S bond formation, T. Aneeja, A. Chandravarkar, G. Anilkumar, *Catal. Commun*, **2024**, *187*, 106875.

209. Structural, Spectroscopic, DFT studies, Hirshfield surface analysis and antibacterial activity of *Z*-3-(4-bromophenyl)-3-Chloroacrylaldehyde, L. Vidya, A. Raj, E. R. Anabha, K. Sreekanth, S. Neelima, V. M. Aparna, G. Anilkumar, M. K. Dash, G. Roymahapatra, E. K. Radhakrishnan, C. Sudarsanakumar, *J. Mol. Str*. **2024**, *1309*. 138147.

208. Advances and Prospects in Rhodium catalysed domino reactions, M. Maneesha, T. Aneeja, G. Anilkumar, *J. Organomet. Chem.*, **2024**, *1008*, 123049.

207. Palladium N-Heterocyclic carbene catalysed aminations: An overview, S. B. Umabharathi, M. Neetha, G. Anilkumar. *Top. Curr. Chem*., **2024**, *382*, 3.

206. Advances in Biginelli reaction: A comprehensive review, A. Chandravarkar, T. Aneeja, G. Anilkumar, *J. Heterocyclic Chem.*, **2024**, *61*, 5.

List of Publications

205. An overview of Julia-Lythgoe olefination, V. Varsha, S. Radhika, G. Anilkumar, *Curr. Org. Synth*., **2024**, *21*, 97.

204. Montmorillonite-catalysed coupling reactions: a green overview, S. Meenakshy, M. Neetha, G. Anilkumar, *Org. Biomol. Chem*., **2024**, *22*, 1961.

203. Recent applications of zinc and its compounds in coupling reactions, P. X. T. Rinu, S. Saranya, G. Anilkumar, *Arkivoc*, **2023**, *i*, 202312122.

202. Silver-catalysed decarboxylative cross-couplings N. S. Anand, R. M. Philip, G. Anilkumar, *Tetrahedron*, **2023**, *149*, 133715.

201. Rhodium-catalyzed allylic amination reactions: Recent advances, E. Biya, M. Neetha, G. Anilkumar, *Syn. Commun*., **2023**, *53*, 1855-1877.

200. Low-cost transition metal catalysed Negishi coupling: an update, P. X. T. Rinu, R. M. Philip, G. Anilkumar, *Org. Biomol. Chem*., **2023**, *21*, 6438.

199. Synthesis of imidazo[1,2-*a*]pyridine derivatives and Zolimidine *via* a novel zinc/iodine-catalyzed Ortoleva-King type protocol, M. Neetha, E. Biya, G. Anilkumar, *RECHEM*., **2023**, *6*, 101070.

198. Photocatalytic multi-component reactions: An emerging avenue, S. Ariya, M. Neetha, G. Anilkumar, *Curr. Catal.* **2023**, *12*, 1.

197. Copper-catalyzed alkylation reactions of indole: An overview, M. B. Fizala, P. V. Saranya, G. Anilkumar, *Chemical Papers*, **2023**, *77*, 6425.

196. Cu(II)-catalyzed C–N coupling of 2-aminobenzothiazoles with boronic acids at room temperature, S. Radhika, A. Chandravarkar, G. Anilkumar, *RSC Adv*., **2023**, *13*, 17188.

195. Silver-catalyzed synthesis of nitrogen heterocycles: recent advancements, P. S. Devi, M. Neetha, G. Anilkumar, *Org. Biomol. Chem*., **2023**, *21*, 4332.

194. Ruthenium-catalyzed hydroarylation reactions as the strategy towards the synthesis of alkylated arenes and substituted alkenes, S. Thowfik, C. M. A. Afsina, G. Anilkumar, *RSC Adv.*, **2023**, *13*, 6246.

193. Copper-catalyzed Sonogashira reactions: advances and perspectives since 2014, K. V. Arundhathi, P. Vaishnavi, T. Aneeja, G. Anilkumar, *RSC Adv.*, **2023**, *13*, 4823.

192. Nickel/iodine-catalyzed synthesis of 2-arylimidazo[1,2-*a*]pyridines through Ortoleva-King type protocol R. M. Philip , T. Aneeja , G. Anilkumar, *RECHEM* , **2023**, *5*, 100750.

191. Iron-catalyzed borylation reactions: An overview, R. Farzana, P. V. Saranya, G. Anilkumar, *J. Organomet. Chem.*,**2023**, *983*, 122549.

List of Publications

190. Palladium-catalyzed aminocarbonylation of aryl halides, C. M. A. Afsina, R. M. Philip, P. V. Saranya, G. Anilkumar, *Curr. Org. Synth*, **2023**, *20*, 308.

189. Green Synthesis of 2-Aminobenzothiazoles via Copper Catalysis under Microwave irradiation, P. V. Saranya, S. Saranya, R. Dhanya, G. Anilkumar, *ChemistrySelect*, **2022**, *7*, e202202718.

188. A Novel Cu(II)-Iodine Catalyzed Hantzsch Type Synthesis of 2-Aminothiazole Derivatives, S. Radhika, P. Yamuna, G. Anilkumar, *Curr. Org. Chem.*, **2022**, *26*, 1779.

187. Progress and prospects in the Ruthnium catalyzed allylic amination reactions, R. Archana, T. Aneeja, G. Anilkumar, *Curr. Org. Chem.*, **2022**, 26, 1615.

186. An overview of Ruthenium-catalyzed multicomponent reactions, P. V. Saranya, M. Neetha, C. M. A. Afsina, G. Anilkumar, *Curr. Org. Chem.*, **2022**, *26*, 1119.

185. Recent advances and prospects in palladium-catalyzed Hiyama coupling reaction, S. Sivakumar, T. Aneeja, G. Anilkumara, *Arkivoc*, 2022, *VIII*, 295.

184. Nickel-Catalyzed Multicomponent Reactions: An Overview C. R. Nathaniel, R. Dhanya, P. V. Saranya, G. Anilkumar, *ChemistrySelect*, **2022**, *7*, e202202763.

183. A green aerobic Fe (III) Catalyzed base-free Synthesis of 2-Aminobenzothiazoles in Water, S. Radhika, M. B. Aleena, G. Anilkumar, *J. Catal.*, **2022**, *416*, 233.

182. Advancements in the Synthesis of Oxazolines K. T. Ibrahim, M. Neetha, G. Anilkumar,*Monats. Chem.*, **2022**, *153*, 837.

181. Recent Trends and Prospects in the Iron-Catalyzed Amination Reactions, R. Bartholomew, T. Aneeja, G. Anilkumar, *Curr. Catal.*, **2022**, *11*, 41.

180. Recent advances in Palladium-catalyzed borylation, F. Lamine, C. M. A. Afsina, R. Archana, **G. Anilkumar**, *Curr. Catal.*, **2022**, *11*, 16.

179. Recent advances in ruthenium-catalyzed hydrosilylation of unsaturated compounds: Applications and mechanistic studies A. P. Thankachan, C.M.A. Afsina, S. Shamna, **G. Anilkumar**, *RECHEM*, **2022**, *4*, 100511.

178. An overview of palladium-catalyzed trifluoromethylation reactions R. Arun, S. Stiniya, P. V. Saranya, **G. Anilkumar**, *J. Organometal. Chem.*, **2022**, *979*, 122492.

177. Applications of iron pincer complexes in hydrosilylation reactions R. Nihala, K. N. Hisana, C. M. A. Afsina, **G. Anilkumar**, *RSC Adv.*, **2022**, *12*, 24339.

List of Publications

175. Recent applications and trends in the Julia-Kocienski olefination, P. X. T. Rinu, S. Radhika, **G. Anilkumar**, *ChemistrySelect*, **2022**, *7*, e202200760.

174. A novel manganese/iodine-catalyzed Ortoleva-King type protocol for the synthesis of imidazo[1,2-*a*]pyridines and Zolimidine, T. Aneeja, R. M. Philip, **G. Anilkumar**, *RECHEM*, **2022**, *4*, 100474.

173. Nickel-catalyzed amination of arenes and heteroarenes, R. M. Philip, P. V. Saranya, **G. Anilkumar**, *Eur. J. Org. Chem*, **2022**, e202200184.

172. Nickel catalyzed hydroamination reactions: An overview, P. Yamuna, R. M. Philip. **G. Anilkumar**, *Tetrahedron*, **2022**, *122*, 132936.

171. Copper-catalyzed *N*-arylation of indoles, K. N. Hisana, C M A Afsina, **G. Anilkumar**, *Curr. Org. Chem.*, **2022**, *26*, 857.

170. Recent trends in non-noble metal-catalyzed hydroxylation reactions, R. Das, K. R. Rohit, **G. Anilkumar**, *J. Organomet. Chem*, **2022**, *977*, 122456.

169. A Green Protocol for the Synthesis of *N*-Aryl Pyrroles: A Modified Clauson-Kaas Approach Using Zinc Catalyst, C M A Afsina, K. R. Rohit, **G. Anilkumar**, *RECHEM*, 2022, *4*, 100350.

168. A Detailed Theoretical Investigation to Unravel the Molecular Mechanism of Ligand-free Copper-Catalyzed Suzuki Cross-Coupling Reaction, C. Rajalakshmi, A. Krishnan, S. Saranya, **G. Anilkumar**, V. I. Thomas, *Org. Biomol. Chem.*, 2022, *20*, 4539.

167. Unravelling the mechanism of cobalt (II) catalyzed O-arylation reaction between aryl halides and phenols: A DFT study, C. Rajalakshmi, A. Radhakrishnan, S. M. Ujwaldev, **G. Anilkumar**, V. I. Thomas, *J. Organomet. Chem.*, 2022, *972*, 122385.

166. Nickel-catalyzed (hetero)aryl borylations: an update, J. Mole, R. M. Philip, **G. Anilkumar**, *Arkivoc.*,**2022**, *i*, 165.

165. Recent Advances and Prospects in the Amination of Benzoxazoles K. Ibrahim, P. V. Saranya, **G. Anilkumar**, *ChemistrySelect*, **2022**, *7*, e202200601.

164. Advances and perspectives in the rhodium catalyzed reductive amination reactions, C T Nandhu, T. Aneeja, **G. Anilkuma**r, *J. Organomet. Chem.*, **2022**, *965–966*, 122332.

163. Recent developments and trends in the iron and cobalt catalyzed Sonogashira reactions, S. Amrutha, S. Radhika, **G. Anilkumar**, *Beilstein J. Org. Chem.*, **2022**, *18*, 262.

162. Low-cost Transition Metal-Catalyzed Heck-type Reactions: An Overview, M. Alisha, R. M. Philip, **G. Anilkumar**, *Eur. J. Org. Chem.* **2022**, e2021101384.

List of Publications

159. A solvent-free manganese (II) –catalyzed Clauson-Kaas protocol for the synthesis of N-aryl pyrroles under microwave irradiation, K. R. Rohit, G. Meera, **G. Anilkumar**, *J. Heterocycl. Chem.*, **2022**, *59*, 194.

158. Microwave-assisted C-H activation reaction: An overview, P. C. Dhanush, P. V. Saranya, **G. Anilkumar**, *Tetrahedron*, **2022**, *105*, 132614.

157. Recent advances and prospects in the cobalt-catalyzed amination reactions, P. V. Saranya, M. Neetha, R. M. Philip, **G. Anilkumar**, *Tetrahedron* **2022**, *104*, 132582.

156. Recent advances and perspectives in the ruthenium-catalyzed cyanation reactions, T. Aneeja, C. M. Afsina, P. V. Saranya, **G. Anilkumar**, *Beilstein J. Org. Chem.*, **2022**, *18*, 37.

155. Palladium catalyzed hydrosilylation of unsaturated compounds, S. Shamna, J. Fairoosa, C. M. A. Afsina, **G. Anilkumar**, *J. Organomet. Chem.*, **2022**, *960*, 122236.

154. An overview of rhodium-catalyzed Heck type reactions, M. Alisha, R. M. Philip, **G. Anilkumar**, *J. Organomet. Chem.*, **2022**, *959*, 122207.

153. Iron-catalyzed synthesis of benzimidazoles: An overview, N. Anagha, M. Neetha, **G. Anilkumar**, *J. Organomet. Chem.*, **2022**, *958*, 122174.

152. Iron, Cobalt and Nickel-catalyzed hydrosilylative reduction of functional groups, K. Avinash, K. R. Rohit, **G. Anilkumar**, *Curr. Catal.*, **2021**, *10*, 179.

151. An overview of iron-catalyzed N-alkylation reactions, S. Stiniya, P. V. Saranya, **G. Anilkumar**, *Appl Organomet Chem*. **2021**, *35*, e6444.

150. Advances in non-palladium-catalysed Stille couplings, M. B. Aleena, R. M. Philip, **G. Anilkumar**, *Appl Organomet Chem.*, **2021**, *35*, e6430.

149. Manganese-catalyzed amination reactions: An overview, R. Farzana, S. Radhika, S. Saranya, **G. Anilkumar**, *Appl Organomet Chem.*, **2021**, *35*, e6421.

148. Gold-Catalyzed Amination Reactions: Progress and Prospects, C.T. Nandhu, T. Aneeja, **G. Anilkumar**, *Eur. J. Org. Chem.* **2021**, 5799.

147. An Overview of Silver-Catalyzed Mannich Reactions, M. Neetha, P. V. Saranya, R. M. Philip, **G. Anilkumar**, *ChemistrySelect* **2021**, *6*, 11162.

146. An Overview of Iridium-Catalyzed Allylic Amination Reactions, E. Biya, M. Neetha, **G. Anilkumar**, *ChemistrySelect* **2021**, 6, 10127.

145. Nickel-catalysed fluoromethylation reactions, P. P. Nair, R. M. Philip, **G. Anilkumar**, *Catal. Sci. Technol.*, **2021**, 11, 6317.

List of Publications

143. N-Arylation of Imidazoles: An Overview, S. Ananthu, T. Aneeja, **G. Anilkumar**, *ChemistrySelect*., **2021**, 6, 9794.

142. Copper-catalyzed N-arylation of pyrroles: an overview, K. N. Hisana, C. M. A. Afsina, **G. Anilkumar**, *New J. Chem.*, **2021**, *45*, 17061.

141. An overview of microwave assisted cyanation reactions, J. Fairoosa, S. Shamna, M. Neetha, **G. Anilkumar**, *Appl. Organomet. Chem.*, **2021**, *35*, e6356.

140. Silver-catalysed C–H bond activation: a recent review, S. Radhika, C. M. A. Abdulla, T. Aneeja, **G. Anilkumar**, *New J. Chem.*, **2021**, *45*, 15718.

139. Recent advances in the rhodium-catalyzed cyanation reactions, P. K. Soumya, T. B. Vaishak, S. Saranya, **G. Anilkumar**, *Appl. Organomet. Chem.*, **2021**, *35*, e6340.

138. Ultrasound irradiation in heterocycle synthesis: An overview, S, Saranya, S. Radhika, C. M. A. Afsina, **G. Anilkumar**, *J. Heterocyclic Chem.*, **2021**, *58*, 1570.

137. Recent advances and prospects in the iron-catalyzed trifluoromethylation reactions, T. B. Vaishak, P. K. Soumya, P. V. Saranya, **G. Anilkumar**, *Catal. Sci. Technol.*, **2021**, *11*, 4690.

136. Ligand- and base-free Cu-catalyzed C-N coupling of Aminoquinolines with boronic acids, S. Saranya, S. Radhika, **G. Anilkumar**, *ChemistrySelect*, **2021**, *6*, 6847.

135. Recent advances in the microwave assisted synthesis of benzofuran and indole derivatives, T. Aneeja, S. Radhika, C. M. A. Afsina, **G. Anilkumar**, *Heterocycles*, **2021**, *103*, 65.

134. Applications of aryl-sulfinamides in the synthesis of N-heterocycles, R. M. Philip, G. S. S. Treesa, S. Saranya, **G. Anilkumar**, *RSC Adv.*, **2021**, *11*, 20591.

133. Solvent-free synthesis of propargylamines: an overview, R. Manujyothi, T. Aneeja, **G. Anilkumar**, *RSC Adv.*, **2021**, *11*, 19433.

132. Nickel catalysts in Sonogashira coupling reactions, P. P. Nair, R. M. Philip, **G. Anilkumar**, *Org. Biomol. Chem.* **2021**, *19*, 4228.

131. Recent advances and trends in the biomimetic iron-catalyzed asymmetric epoxidation, S. Radhika, T. Aneeja, R. M. Philip, **G. Anilkumar**, *Appl. Organomet Chem.* **2021**, *35*, e6217.

130. Copper-Catalyzed Cross-Dehydrogenative Coupling Reactions, C. M. A. Afsina, T. Aneeja, M. Neetha, **G. Anilkumar**, *Eur. J. Org. Chem.* **2021**, 1776.

129. Recent Trends and Prospects in the Copper-Catalysed "on Water" Reactions, T. Shilpa, M. Neetha, **G. Anilkumar**, *Adv. Synth. Catal.* **2021**, 363, 1559.

List of Publications

127. Palladium-Catalyzed C-P Bond Forming Reactions: An Overview, U. S. Kanchana, E. J. Diana, T. V. Mathew, **G. Anilkumar**, *ChemistrySelect* **2021**, *6*, 1579.

126. Recent advances in the synthesis of pyrazole derivatives, C. M. A. Afsina, T. Aneeja, M. Neetha, **G. Anilkumar**, *Curr. Org. Synth.*, **2021**, *18*, 197.

125. Recent Trends and Prospects in Homogeneous Manganese-Catalysed Epoxidation, R. M. Philip, S. Radhika, C. M. A. Afsina, **G. Anilkumar**, *Adv. Synth. Catal.* **2021**, *363*, 1272.

124. An Overview of Palladium-catalyzed Synthesis of Seven-membered Heterocycles, P V Saranya, M. Neetha, S. Radhika, **G. Anilkumar**, *J. Heterocycl. Chem*, **2021**, *58*, 673.

123. Recent advances and prospects in the Zn-catalysed Mannich reaction, S. Shamna, C. M. A. Afsina, R. M. Philip, **G. Anilkumar**, *RSC Adv.*, **2021**, *11*, 9098.

122. Novel Synthesis of 2-Aminothiazoles *via* Fe(III)-Iodine Catalyzed Hantzsch Type Condensation, S. M. Ujwaldev, N. A. Harry, M. Neetha, **G. Anilkumar**, *J. Heterocycl. Chem*, **2021**, *58*, 646.

121. A Comprehensive overview of perimidines: Synthesis, chemical transformations, and applications, N. A. Harry, S. M. Ujwaldev, T. Aneeja, **G. Anilkumar**, *Curr. Org. Chem.*, **2021**, *25*, 248.

120. Transition metal-catalyzed synthesis of spirooxindoles, P. V. Saranya, M. Neetha, T. Aneeja, **G. Anilkumar**, *RSC Adv.*, **2021**, *11*, 7146.

119. A novel eco-friendly on-water protocol for the synthesis of 2,2-disubstituted 2,3- dihydro-1H-perimidines, N. A. Harry, T. Shilpa, S. M. Ujwaldev, **G. Anilkumar**, *J. Heterocycl. Chem*, **2021**, *58*, 375.

118. Recent advances and perspectives in manganese catalyzed C–H activation, T. Aneeja, M. Neetha, C. M. A. Afsina, **G. Anilkumar**, *Catal. Sci. Technol.*, **2021**, *11*, 444.

117. Recent developments and perspectives in the copper-catalyzed multicomponent synthesis of heterocycles, J. Fairoosa, M. Neetha, **G. Anilkumar**, *RSC Adv*, **2021**, *11*, 3452.

116. Theoretical investigation into the mechanism of copper-catalyzed Sonogashira coupling using *trans*-1,2-diamino cyclohexane ligand, C. Rajalakshmi, S.S. Jibin, R. Sulay, S. Asha, V. I. Thomas, **G. Anilkumar**, *Polyhedron*, **2021**, *193*, 114869.

115. An overview of the one pot synthesis of Imidazolines, T. Aneeja, S. Radhika, M. Neetha, **G. Anilkumar**, *Curr. Org. Chem*, **2020**, *24*, 2341.

114. Recent Advances in the Silver Catalysed Synthesis of Furan and Its Applications, C.M.A. Afsina, M. Neetha, T. Aneeja, **G. Anilkumar**, *Current Catalysis*, **2020**, *9*, 111.

113. Recent advances and prospects in the metal-free synthesis of quinolines, N. A. Harry, S. M. Ujwaldev, **G. Anilkumar**, *Org. Biomol. Chem*, **2020**, *18*, 9775.

List of Publications

111. Applications of *tert*-butanesulfinamide in the synthesis of N-heterocycles via sulfinimines, R. M. Philip, S. Radhika, P. V. Saranya, **G. Anilkumar**, *RSC Adv*, **2020**, *10*, 42441.

110. Recent advances in the iron-catalysed multicomponent reactions, S. Saranya, T. Aneeja, M. Neetha, **G. Anilkumar**, *Appl. Organomet. Chem*, **2020**, *34*, e5991.

109. Recent developments in the metal catalysed cross-coupling reactions for the synthesis of the enone system of chalcones, E. J. Diana, U.S. Kanchana, T. V. Mathew, **G. Anilkumar**, *Appl. Organomet. Chem*, **2020**, *34*, e5987.

108. Palladium-catalyzed cross-coupling reactions of coumarin derivatives: An overview, U.S. Kanchana, E. J. Diana, T. V. Mathew, **G. Anilkumar**, *Appl. Organomet. Chem*, **2020**, *34*, e5983.

107. Recent Trends in the Iron-Catalyzed Cyanation Reactions, S. Saranya, M. Neetha, T. Aneeja, **G. Anilkumar**, *Adv. Synth. Catal*,, **2020**, *362*, 4543.

106. Recent studies in Suzuki-Miyaura cross-coupling reactions with the aid of phase transfer catalysts, D. E. Jose, U S Kanchana, T. V. Mathew, **G. Anilkumar**, *J. Organomet. Chem*, **2020**, *927*, 121538.

105. Microwave assisted synthesis of five membered nitrogen heterocycles, G. Meera, K. R. Rohit, S. Saranya, **G. Anilkumar**, *RSC Adv*, **2020**, *10*, 36031.

104. Progress and prospects in copper-catalyzed C–H functionalization, T. Aneeja, M. Neetha, C. M. A. Afsina, **G. Anilkumar**, *RSC Adv*, **2020**, *10*, 34429.

103. Recent advances and prospects in the palladium-catalyzed cyanation of aryl halides, M. Neetha, C. M. A. Afsina, T. Aneeja, **G. Anilkumar**, *RSC Adv*, **2020**, *10*, 33683.

102. Synthesis and Applications of Imidazothiazoles: An Overview, C. M. A. Afsina, M. Neetha, T. Aneeja, **G. Anilkumar**, *ChemistrSelect*, **2020**, *5*, 10374.

101. An overview of Ag-catalyzed synthesis of six-membered heterocycles, M. Neetha, T. Aneeja, C. M. A. Afsina, **G. Anilkumar**, *ChemCatChem*, **2020**, *12*, 5330.

100. Cobalt-Catalyzed Multi-Component Reactions: Recent Advances and Perspectives in Organic Synthesis, G. S. S. Treesa, M. Neetha, S. Saranya, **G. Anilkumar**, *ChemistrySelect*, **2020**, *5*, 7400.

99. Recent developments and perspectives in the C-Se cross-coupling reactions, D. E. Jose, U. S. Kanchana, T. V. Mathew, G. Anilkumar, *Curr. Org. Chem.*, **2020**, 24, 1230.

98. Recent Advances and Prospects in the Nickel-Catalyzed Cyanation, U.S. Kanchana, T. V. Mathew, **G. Anilkumar**, *J. Organomet Chem.*, **2020**, *920*, 121337.

List of Publications

95. An Overview of Microwave-Assisted Kabachnik-Fields Reactions, T. Shilpa, N. A. Harry, S. M. Ujwaldev, and **G. Anilkumar**, *ChemistrySelect* **2020**, *5*, 4422.

94. Manganese-Catalysed Dehydrogenative Coupling – An Overview, K. R. Rohit, S. Radhika, S. Saranya, **G. Anilkumar**, *Adv. Synth. Catal.* **2020**, *362*, 1602.

93. A novel catalyst-fre mechanochemical protocol for the synthesis of 2,3-dihydro-1H- perimidines N. A. Harry, S. Radhika, M. Neetha, **G. Anilkumar**, *J. Heterocyclic Chem.* **2020**, *57*, 2037.

92. Advances and Prospects in Gold-Catalyzed C-H Activation, G. Meera, K. R. Rohit, G. S. S. Treesa, **G. Anilkumar**, *Asian J. Org. Chem.* **2020**, *9*, 144.

91. Cyclodextrin based palladium catalysts for Suzuki reaction: An overview, U.S. Kanchana, E. J. Diana, Thomas V. Mathew, **G. Anilkumar**, *Carbohydr. Res.*, **2020**, *489*, 107954.

90. Zinc-Catalysed Multi-Component Reactions: An Overview, M. Neetha, K. R. Rohit, S. Saranya, **G. Anilkumar**, *ChemistrySelect*, **2020**, *5*, 1054.

89. An Overview of Rhodium-Catalysed Multi-Component Reactions, T. Shilpa, R. Dhanya, S. Saranya, **G. Anilkumar**, *ChemistrySelect* ,**2020**, *5*, 898.

88. Recent Advances and Prospects in the Tishchenko Reaction, R. Dhanya, T. Shilpa, S. Saranya, **G. Anilkumar**, *ChemistrySelect*, **2020**, *5*, 754.

87. Recent Advances and Perspectives in the Copper-Catalysed Amination of Aryl and Heteroaryl Halides, M. Neetha, S. Saranya, N. A. Harry, **G. Anilkumar**, *ChemistrySelect*, **2020**, *5*, 736.

86. Exploration of the mechanism and scope of the CuI/DABCO catalysed C-S coupling reaction, A. M. Thomas, D.R. Sherin, S. Asha, T.K. Manojkumar, **G. Anilkumar**, *Polyhedron*, **2020**, *176*, 114269.

85. Sonochemistry in Transition metal catalyzed cross-coupling reactions:Recent developments, S. M. Ujwaldev, K. R. Rohit, S. Radhika, **G. Anilkumar**, *Curr. Org. Chem.*, **2019**, *23*, 3737.

84. Recent Advances and Prospects of Organic Reactions "On Water", N. A. Harry, S. Radhika, M. Neetha, **G. Anilkumar**, *ChemistrySelect*, **2019**, *4*, 12337.

83. Recent trends and applications of the Cadiot–Chodkiewicz reaction, S. Radhika, N. A. Harry, M. Neetha, **G. Anilkumar**, *Org. Biomol. Chem.*, **2019**, *17*, 9081.

82. Recent Trends in the Silver-Catalyzed Synthesis of Nitrogen Heterocycles, R. Sreedevi, S. Saranya, **G. Anilkumar**, *Adv. Synth. Catal.*, **2019**, *361*, 4625.

81. Palladium-catalyzed multicomponent reactions: an overview, S. Saranya, K. R. Rohit, S. Radhika, **G.**

List of Publications

79. Novel one step synthesis of imidazo[1,2-a]pyridines and Zolidimine via iron/iodine catalysed Ortoleva-King type reaction, S. M. Ujwaldev, K. R. Rohit, N. A. Harry, **G. Anilkumar**, *Tetrahedron Lett.*, **2019,** *60*, 150950.

78. A novel catalyst-free eco-friendly on water protocol for the synthesis of 2,3-dihydro-1H- perimidines, N. A. Harry, R. M. Cherian, S. Radhika, **G. Anilkumar**, *Tetrahedron Lett.*, **2019,** *60*, 150946.

77. Recent advances and applications of p-toluenesulfonylmethyl isocyanide (TosMIC), A. D. Mathiyazhagan, **G. Anilkumar**, *Org. Biomol. Chem*, **2019,** *17*, 6735.

76. One-Pot Synthesis of Benzofurans via Cu–Catalyzed Tandem Sonogashira CouplingCyclization Reactions, A. M. Thomas, S. Asha, R. Menon, **G. Anilkumar**, *ChemistrySelect*, 2019, 4, 5544.

75. Recent trends in Iron-catalyzed reactions towards the synthesis of nitrogen-containing heterocycles, R. Sreedevi, S. Saranya, K. R. Rohit, **G. Anilkumar**, *Adv. Synth. Catal*, **2019,** *361*, 2236.

74. A novel ligand-free manganese-catalyzed C-O coupling protocol for the synthesis of biaryl ethers, K. R. Rohit, S. Saranya, N. A. Harry, **G. Anilkumar**, *ChemistrySelect*. **2019**, *4*, 5150.

73. Recent advances and prospects in nickel-catalyzed C-H activation, N. A. Harry, S. Saranya, S. M. Ujwaldev, **G. Anilkumar**, *Catal. Sci. Technol.*, **2019**, *9*, 1726.

72. A novel zinc-catalyzed Suzuki-type cross-coupling reaction of aryl boronic acids with alkynyl bromides, K. K. Krishnan, S. Saranya, K. R. Rohit, **G. Anilkumar**, *J. Catal*, **2019**, *372*, 266.

71. Recent advances and perspectives in the synthesis of heterocycles via Zinc catalysis, K. K. Krishnan, S. M. Ujwaldev, S. Saranya, **G. Anilkumar**, M. Beller, *Adv. Synth. Catal*, **2019,** *361*, 382.

70. Copper-catalysed multicomponent syntheses of heterocycles, R. M. Cherian, N. A. Harry, S. Saranya, K. R. Rohit, **G. Anilkumar**, *Asian J. Org. Chem*, **2019**, *8*, 197.

69. A convenient route to 1,3-diynes using ligand-free Cadiot-Chodkiewicz coupling reactions at room temperature under aerobic conditions, S. Asha, S. Anjana, A. M. Thomas, M. E. Thomas, K. R. Rohit, K. K. Krishnan, S. M. Ujwaldev, **G. Anilkumar**, *Synth. Commun*, **2019**, *49*, 256.

68. Ligand-free Copper-catalyzed Suzuki coupling of alkynyl bromides with boronic acids in ethanol under microwave irradiation, S. A. Babu, S. Saranya, K. R. Rohit, **G. Anilkumar**, *ChemistrySelect*, **2019**, *4*, 1019.

67. Novel Cobalt-Valine Catalyzed O-Arylation of Phenols with Electron Deficient Aryl iodides, S. M. Ujwaldev, S. Saranya, N. A. Harry, **G. Anilkumar**, *Monatshefte*, **2019**, *150*, 339.

66. An efficient protocol for the synthesis of thioethers via iron-catalyzed cross-coupling reactions and its mechanistic investigation. K. S. Sindhu, T. G. Abi, G. Mathai, **G. Anilkumar**, *Polyhedron*, **2019**, *158*, 270.

List of Publications

64. Recent advances in the creation of asymmetric carbon by generation of carbon-heteroatom bonds using metal-pybox complexes, K. R. Rohit, S. M. Ujwaldev, S. Saranya, **G. Anilkumar**, *Asian J. Org. Chem*, **2018,** *7*, 2338.

63. Cobalt-catalyzed C-H activation: recent progress in heterocyclic chemistry, S. M. Ujwaldev, N. A. Harry, M. A. Divakar, **G. Anilkumar**, *Cat. Sci. Tech*, **2018,** *8*, 5983.

62. Applications of Pybox complexes in asymmetric catalysis, S. A. Babu, K. K. Krishnan, S. M. Ujwaldev, **G. Anilkumar**, *Asian J. Org. Chem*, **2018,** *7*, 1033.

61. Recent developments and perspectives in the asymmetric Mannich reaction, S. Saranya, N. A. Harry, K. K. Krishnan, **G. Anilkumar**, *Asian J. Org. Chem*, **2018,** *7*, 613.

60. Zinc-catalyzed etherification reaction of aryl iodides with phenol, K. K. Krishnan, N. A. Harry, S. M. Ujwaldev, **G. Anilkumar**, *ChemistrySelect*, **2018,** *3*, 3984.

59. Recent developments and perspectives in the zinc-catalyzed Michael addition, K. R. Rohit, S. M. Ujwaldev, K. K. Krishnan, **G. Anilkumar**, *Asian J. Org. Chem*, **2018,** *7*, 85.

58. Recent advances and perspectives in the zinc-catalyzed nitroaldol (Henry) reaction, S. Saranya, N. A. Harry, S. M. Ujwaldev, **G. Anilkumar**, *Asian J. Org. Chem*, **2017**, *6*, 1349.

57. Recent Advances in the Chemistry of Masked Ortho-Benzoquinones and Their Applications in Organic Synthesis, N. A. Harry, S. Saranya, K. K. Krishnan, **G. Anilkumar**, *Asian J. Org. Chem*, **2017**, *6*, 945.

56. A novel Zinc-catalyzed Cadiot-Chodkiewicz cross-coupling reaction of terminal alkynes with 1-bromoalkynes in ethanol solvent, K. K. Krishnan, S. M. Ujwaldev, A. P. Thankachan, N. A. Harry, **G. Anilkumar**, *Mol. Catal*. **2017**, *440*, 140.

55. A green approach for arylation of phenols using iron catalysis in water under aerobic conditions, K. S. Sindhu, S. M. Ujwaldev, K. K. Krishnan, **G. Anilkumar**, *J. Catal*, **2017**, *348*, 146.

54. Synthesis of substituted benzofurans and indoles by Zn-catalyzed tandem Sonogashira- cyclization strategy, A. P. Thankachan, K. S. Sindhu, S. M. Ujwaldev, **G. Anilkumar**, *Tetrahedron Lett*, **2017**, *58*, 536.

53. Synthesis of diaryl and arylalkyl sulfides via zinc-catalyzed thioetherification reactions, A. P. Thankachan, K. S. Sindhu, K. K. Krishnan, **G. Anilkumar**, *The Chemist* **2016**, *89 (2)*, 9.

52. Recent advances in the transition metal catalyzed etherification reactions, K. K. Krishnan, S. M. Ujwaldev, K. S. Sindhu, **G. Anilkumar**, *Tetrahedron* **2016**, *72*, 7393.

51. Recent Developments and Perspectives in the Ruthenium-catalyzed Olefin Epoxidation, S. M. Ujwaldev, K. S. Sindhu, A. P. Thankachan, **G. Anilkumar**, *Tetrahedron* **2016**, 72, 6175.

List of Publications

49. Experimental and Mechanistic Exploration of Zn-Catalyzed Sonogashira–type Cross- Coupling Reactions, A. P. Thankachan, T. G. Abi, K. S. Sindhu, **G. Anilkumar**, *ChemistrySelect* **2016**, 1, 3405.

48. Iron-Catalyzed Sonogashira Type Cross-Coupling Reaction of Aryl Iodides with Terminal Alkynes in Water under Aerobic Conditions, K. S. Sindhu, A. P. Thankachan, A. M. Thomas, **G. Anilkumar**, *ChemistrySelect*, **2016**, *3*, 556

47. Structural and optical properties of functionalized multi- carbon nanotubes, S. Yaragalla, **G. Anilkumar**, N. Kalarickal, S. Thomas, *Mater. Science Semiconduct Processing*, **2016**, *41*, 491

46. Recent advances and perspectives in the manganese-catalyzed epoxidation reactions K. K. Krishnan, A. M. Thomas, K. S. Sindhu, **G. Anilkumar**, *Tetrahedron*, **2016**, *72*, 1

45. A general and inexpensive protocol for the Cu-catalyzed C-S cross-coupling reaction between aryl halides and thiols A. M. Thomas, S. Asha, K. S. Sindhu **G. Anilkumar**, *Tetrahedron Lett.*, **2015**, *56*, 6560

44. Preparation of epoxy graphene and its structural and optical properties S. Yaragalla, **G. Anilkumar**, T. V. Vineeshkumar ,N. Kalarikkal, S. Thomas, *Adv. Mater. Lett.*, **2015**, *6*, 848

43. An efficient zinc-catalyzed cross-coupling reaction of aryl iodides with terminal aromatic alkynes A. P. Thankachan, K. S. Sindhu, K. K. Krishnan and **G. Anilkumar**, *Tetrahedron Lett.*, **2015**, *56*, 5525

42. Recent advances in the syntheses, transformations and applications of 1,1- dihalocyclopropanes A. P. Thankachan, K. S. Sindhu, K. K. Krishnan and **G. Anilkumar**, *Org. Biomol. Chem.*, **2015**, *13*, 8780

41. An overview of Zn-catalyzed enantioselective Aldol type C-C bond formation A. P. Thankachan, K. K. Krishnan, **G. Anilkumar**, *RSC Adv.*, **2015**, *5*, 62179

40. An efficient iron-catalyzed S-arylation of aryl and alkylthiols with aryl halides in the presence of water under aerobic conditions K. S. Sindhu, A. P. Thankachan, A. M. Thomas, **G. Anilkumar** *Tetrahedron Lett.*, **2015**, *56*, 4923

39. Recent developments and applications of Cadiot-Chodkiewicz reaction K. S. Sindhu, A. P. Thankachan, P. S. Sajitha, **G. Anilkumar**, *Org. Biomol. Chem.*, **2015**, *13*, 6891

38. A novel and efficient Zn-catalyzed thioetherification of aryl halides A. P. Thankachan, K. S. Sindhu, K. K. Krishnan, **G. Anilkumar**, *RSC Adv.*, **2015**, *5*, 32675

37. Recent advances and perspectives in the synthesis of heterocycles via carbenes K. K. Krishnan, A. P. Thankachan, **G. Anilkumar**, *Tetrahedron* **2015**, *71*, 2333

36. Goldberg reaction: Development, Mechanistic insights and Applications A. M. Thomas, A. Sujatha, **G. Anilkumar**, *Mini Rev. Org. Chem.*, **2015**, *12*, 3

List of Publications

34. A Novel Intramolecular Homoenolate Annulation leading to the formation of Cyclopentene fused Macrocycles K. C. Seetha Lakshmi, C. R. Sinu, D. V. M. Padmaja, **G. Anilkumar**, E. Suresh, V. Nair, *Org. Lett.*, **2014**, *16*, 5532

33. Recent Advances and Applications of Glaser coupling employing greener protocols K. S. Sindhu, **G. Anilkumar**, *RSC Adv.*, **2014**, *4*, 27867.

32. Recent Advances and Perspectives in Copper-catalysed Sonogashira Coupling Reactions A. M. Thomas, A. Sujatha, **G. Anilkumar**, *RSC Adv.*, **2014**, *4*, 21688.

31. Synthesis, characterisation and application of Iridium (III) photosensitisers for catalytic water reduction F. Gaertner, D. Cozzula, S. Losse, A. Boddien, **G. Anilkumar**, H. Junge, T. Schulz, .N. Marquet, A. Spannenberg, S. Gladiali and M. Beller *Chem. Eur. J* **2011**, *17*, 6998.

30. Structure and function of natural and synthetic signaling molecules in parasitic weed germination. B. Zwanenburg, A, S. Mwakaboko, A. Reizelman, **G. Anilkumar**, and D. Sethumadhavan. *Pest Manag Sci.* **2009**, *65*, 478.

29. Biomimetic Iron-catalyzed asymmetric epoxidation of aromatic alkenes by using hydrogen peroxide. F. G. Gelalcha, **G. Anilkumar**, M. K. Tse A. Brückner and M. Beller *Chem. Eur J* **2008**, *14*, 7687.

28. Iron-catalyzed asymmetric epoxidation of aromatic alkenes using hydrogen peroxide. F. G. Gelalcha, B. Bitterlich, **G. Anilkumar**, M. K. Tse and M. Beller *Angew. Chem. Int. Ed.* **2007**, *46*, 7293. (**Hot paper**)

27. Eisen katalysierte asymmetrische epoxidierung von aromatischen alkenen mit wasserstoffperoxid. F. G. Gelalcha, B. Bitterlich, **G. Anilkumar**, M. K. Tse and M. Beller *Angew. Chem*. **2007**, *119*, 7431.

26. New Ruthenium Catalysts for Asymmetric Transfer Hydrogenation of prochiral Ketones. S. Enthaler, B. Hagemann, S. Bhor, **G. Anilkumar**, M. K. Tse, B. Bitterlich, K. Junge, G. Erre and M. Beller *Adv. Synth. Catal*. **2007**, *349*, 853.

25. Development of a general and efficient iron-catalyzed epoxidation using hydrogen peroxide as oxidant. B. Bitterlich, **G. Anilkumar**, F. G. Gelalcha, B. Spilker, A. Grotevendt, R. Jackstell, M. K. Tse, and M. Beller *Chem. Asian J*. **2007**, *2*, 521.

24. A novel biomimetic Fe-catalyzed epoxidation of olefins using hydrogen peroxide. **G. Anilkumar**, B. Bitterlich, F. G. Gelalcha M. K. Tse and M. Beller *Chem. Commun*. **2007**, 289.

23. Synthetic, spectral and catalytic activity studies of some ruthenium bi- and ter-pyridine complexes: implications on the mechanism of ruthenium(pyridine-2,6-bisoxazoline)(pyridine-2,6- dicarboxylate) catalyzed asymmetric epoxidation of olefins utilizing H_2O_2. M. K. Tse, H. Jiao, **G. Anilkumar**, B. Bitterlich, F. G. Gelalcha and M. Beller *J. Organomet. Chem*. **2006**, *691*, 4419.

List of Publications

21. Ruthenium Catalyzed Asymmetric Epoxidation of Olefins using H_2O_2 part II: Catalysis and Mechanistic Studies. M. K. Tse, S. Bhor, M. Klawonn, **G. Anilkumar**, H. Jiao, A. Spannenberg, C. Dobler, W. Magerlein, H. Hugl and M. Beller *Chem. Eur. J.* **2006**, *12*, 1875.

20. Synthesis of a novel class of chiral *N,N,N*-tridentate pyridinebisimidazoline ligands and their application in Ru-catalyzed asymmetric epoxidations. **G. Anilkumar**, S. Bhor, M. K. Tse, M. Klawonn, B. Bitterlich and M. Beller *Tetrahedron Asymmetry* **2005**, *16*, 3536.

19. Synthesis of New Chiral *N,N,N*-tridentate Pyridinebisimidazoline Ligands and their Application in Ruthenium-catalyzed Asymmetric Epoxidations. S. Bhor, **G. Anilkumar**, M. K. Tse, M. Klawonn, C. Dobler, B. Bitterlich, A. Grotevendt and M. Beller *Org. Lett.*, **2005**, *7*, 3393.

18. A Convenient Method for Epoxidation of Alkenes using Aqueous Hydrogen Peroxide. M. K. Tse, M. Klawonn, S. Bhor, C. Dobler, **G. Anilkumar** and M. Beller, *Org. Lett*., **2005**, *7*, 987.

17. Asymmetric Synthesis Using Sulfinimines (N-Sulfinyl Imines) (Review). F. A. Davis, B. Yang, J. Deng, Y. Wu, Y. Zhang, A. Rao, T. Fang, R. Goswami, K. R. Prasad, M. B. Nolt, G. Anilkumar Phosphorus, Sulfur, and Silicon, 2005, 180, 1109.

16. Asymmetric Synthesis of the Quinolizidine Alkaloid (-)-Epimyrtine using Intramolecular Mannich Cyclization and N-Sulfinyl d-amino b-ketoesters. F. A. Davis, Y. Zhang and **G. Anilkumar**, *J. Org. Chem*. **2003**, *68*, 8061.

15. An Efficient methodology for the C-C Bond-forming Radical Cyclization of Hydrophobic Substrates in water: Effect of Additives on Radical Reaction in water. H. Nambu, **G. Anilkumar**, M. Matsugi and Y. Kita, *Tetrahedron* **2003**, *59*, 77.

14. A Novel and Useful Oxidative Intramolecular Coupling Reaction of Phenol Ether Derivatives on Treatment with a Combination of Hypervalent Iodine(III) Reagent and Heteropoly Acid. H. Hamamoto, **G. Anilkumar**, H. Tohma and Y. Kita, *Chem. Eur. J.*, **2002**, *8*, 5377.

13. A Novel and Efficient Oxidative Biaryl Coupling Reaction of Phenol Ether Derivatives Using a Combination of Hypervalent Iodine(III) Reagent and Heteropoly Acid. H. Hamamoto, **G. Anilkumar**, H. Tohma and Y. Kita, *Chem. Commun.*, **2002**, 450.

12. A Simple and Efficient Iodination of Alcohols on Polymer Supported Triphenylphosphine. **G. Anilkumar**, H. Nambu and Y. Kita, *Org. Proc. Res. Dev.* **2002**, *6*, 190.

11 Regioselective Nucleophilic Addition of Methoxybenzene Derivatives to the -carbon of *p*- Benzoquinone mono O,S –Acetal. M. Matsugi, K. Murata, **G. Anilkumar**, H. Nambu and Y. Kita, *Chem. Pharm. Bull.* **2001**, *49*, 1658.

10. A Novel and Efficient Methodology for the C-C Bond-forming Radical Cyclization of Hydrophobic Substrates in Water. Y. Kita, H. Nambu. N. G. Ramesh, **G. Anilkumar** and M. Matsugi, *Org. Lett.*, **2001**, *3*,

List of Publications

8. A Facile Photolytic Approach to the Synthesis of Bicyclo[3.3.0]octa-3,7-diene-2,6-diones. V. Nair, D. Maliakal, **G. Anilkumar** and N. P. Rath、*Synlett*, **2000**, 1139.

7. BF_3-OEt_2 Induced Rearrangement of Bicyclo[2.2.2]octenediones: An Efficient Synthesis of Bicyclo[3.2.1]octenediones. V. Nair, D. Maliakal, P. M. Tresa, **G. Anilkumar,** M. Vairamani and S. Prabhakar, *Tetrahedron* **2000**, *56*, 3735.

6. Novel Cycloaddition Reactions of *o*-Benzoquinones and Related Chemistry.
V. Nair, S. Kumar, **G. Anilkumar**, K. V. Radhakrishnan, J. S. Nair, D. Maliakal, K. C. Sheela, B. Mathew, P. M. Tresa, A. U. Vinod, V. Sheeba and A. Thomas, *Proc. Indian Acad. Sci. (Chemical Sci.)* **1998**, *110*, 507.

5. Photochemical di-pi-methane Rearrangement of Quinoxalinobarrelenes.
V. Nair, **G. Anilkumar**, D. Maliakal, G.K. Eigendorf and P.G. Williard, *J. Photochem. Photobiol. A: Chem.* **1997**, *111*, 57.

4. A Facile Synthesis of Novel Pyrazinobarrelenes from Bicyclo[2.2.2]octenediones.
V. Nair, **G. Anilkumar** and G.K. Eigendorf, *Indian J. Chem.* **1997**, *36B*, 65.

3. Photolytic Double Decarbonylation Route to Highly Substituted Indenes and Benzene Derivatives. A. Thomas, **G. Anilkumar** and V. Nair, *Tetrahedron* **1996**, *52*, 2481.

2. Boron trifluoride-Etherate Induced Rearrangement of Bicyclo[2.2.2]octene-7,8-diones: An Efficient Synthesis of Bicyclo[3.2.1]octene-2,8-diones. V. Nair, **G. Anilkumar**, G.K. Eigendorf and P.G. Williard, *Tetrahedron Lett.* **1996**, *37*, 8271.

1. Diels-Alder Reactions of *o*-Benzoquinones with 6-Substituted Fulvenes: Facile Synthesis of 1- Aryl and 1,1-Diarylmethylene-4,7-ethanoindene-8,9-diones. V. Nair, S. Kumar, **G. Anilkumar** and J.S. Nair, *Tetrahedron* **1995**, *51*, 9155.

Patents

7. Photosensitizers and use thereof for generating hydrogen from water. N. Stefan, D. Uwe, B. Jens, H. Sascha, B. Matthias, Z. Horst-Werner, G. Felix, C. Daniela, D. Stefania, **G. Anilkumar**, L. Sebastian, J. Henrik, G. Serafino, B. Matthias US patent. **US 2014/0023582 A1. (2014)**

6. Verfahren zur katalytischen oxidation von Wasser. **G. Anilkumar**, S. Losse, S. Gladiali, N. Marquet, F. Gartner, S. Dennura, H. Junge, M. Beller, D. Cozzula, German patent. **DE 10 2011 079424 A1 (2013)**

5. Process for catalytic oxidation of water. N. Marquet, **G. Anilkumar**, F. Gartner, S. Losse, S. Dennura, D. Cozzula, S. Gladiali, M. Beller International patent. **WO 2013/010902 A1 (2013)**

4. Photosensitizers and use thereof for generating hydrogen from water. N. Stefan, D. Uwe, B. Jens, H. Sascha, B. Matthias, Z. Horst-Werner, G. Felix, C. Daniela, D. Stefania, **G. Anilkumar**, L. Sebastian, J. Henrik, G. Serafino, B. Matthias International patent. **WO 2012/065833 A1. (2012)**

3. Photosensibilisatoren und deren Einsatz zur wasserstoffereugung aus wasser. N. Stefan, D. Uwe, B. Jens, H. Sascha, B. Matthias, Z. Horst-Werner, G. Felix, C. Daniela, D. Stefania, **G. Anilkumar**, L. Sebastian, J. Henrik, G. Serafino, B. Matthias European patent. **DE 10 2010044155 A1**. **(2012)**

2. Process for the Ruthenium catalysed Epoxidation of Olefins by means of Hydrogen peroxide. W. Magerlein, M. Beller, M. K. Tse, S. Bhor, M. Klawonn, **G. Anilkumar** US patent. **US 2006/0161011 A1**. **(2006)**

1. Verfahren zur Ruthenium-katalysierten Epoxidierung von Olefinen mit Wasserstoffperoxid. W. Magerlein, M. Beller, M. K. Tse, S. Bhor, M. Klawonn, **G. Anilkumar** European Patent. **DE 102005002821**. **(2006)**

Books

Book Chapters:

1. Hydrogels, DNA, and RNA polypeptides for the preparation of biomaterials, L. V. Korah, **G. Anilkumar**, S. Thomas in Fundamental Biomaterials: Polymers, S. Thomas, P. Balakrishnan, M. S. Sreekala (Eds.), Elsevier Woodhead Publishing, UK, 2018, pp 85-104. (ISBN: 978-0-08- 102194-1)

2. Copper Catalysis: An Introduction, S. Saranya, **G. Anilkumar** in Copper Catalysis in Organic Synthesis, G. Anilkumar, S. Saranya (Eds.), Wiley-VCH Verlag GmbH&Co.KGaA, 2020, pp 1-6. (ISBN: 978-3-527-82642-1)

3. Copper Catalyzed Amination, **N. A. Harry**, R. V. Jagadeesh in Copper Catalysis in Organic Synthesis, G. Anilkumar, S. Saranya (Eds.), Wiley-VCH Verlag GmbH&Co.KGaA, 2020, pp 239- 260. (ISBN: 978-3-527-82642-1)

4. Organic Reactions in Water, N. A. Harry, K. R. Rohit, **G. Anilkumar** in Green Organic Reactions, G. Anilkumar, S. Saranya (Eds.), Springer Nature, Singapore Pte Ltd., 2021, pp 33-49. (ISBN 978-981-336-896-5).

5. Microwave Assisted Amination Reaction: A Green Approach, S. Saranya, T. Aneeja, **G. Anilkumar** in Green Organic Reactions, G. Anilkumar, S. Saranya (Eds.), Springer Nature, Singapore Pte Ltd., 2021, pp 51-61. (ISBN 978-981-336-896-5).

6. Green in Pharmaceutical Chemistry, S. Radhika, M. Neetha, **G. Anilkumar** in Green Organic Reactions, G. Anilkumar, S. Saranya (Eds.), Springer Nature Singapore Pte Ltd., 2021, pp 131- 147. (ISBN 978-981-336-896-5).

7. Atom Economic Green Organic Reactions, M. Neetha, S. Radhika, **G. Anilkumar** in Green Organic Reactions, G. Anilkumar, S. Saranya (Eds.), Springer Nature Singapore Pte Ltd., 2021, pp 201-219. (ISBN 978-981-336-896-5).

8. Visible light Catalyzed Asymmetric Synthesis: A Green Perspective, S. M. Ujwaldev, **G. Anilkumar** in Green Organic Reactions, G. Anilkumar, S. Saranya (Eds.), Springer Nature Singapore Pte Ltd., 2021, pp 237-256. (ISBN 978-981-336-896-5).

9. Zinc-Catalyzed C-C Coupling Reactions, C. M. A. Afsina, T. Aneeja, **G. Anilkumar** in C-C Cross Couplings with 3d Base Metal Catalyst, X-F Wu (Ed.), Springer Nature Switzerland AG, 2023, pp 385-400. (ISBN 978-3-031-32866-4).

10. Iron and Manganese Catalyzed Hydrosilylation Reactions, *T. Aneeja, P. X. T. Rinu, G. Anilkumar* in Perspectives of Hydrosilylation Reactions, B. Marciniec, H. Maciejewski, (Eds.), Springer Nature Switzerland, 2023, pp 225-252, (ISBN: 978-3-031-45959-7).

11. Synthesis of Amines and Ammonium Salts, *P. V. Saranya, P. M. Philip, G. Anilkumar* in Comprehensive

Books

13. Nanocomposite as smart polymeric biomaterials, J. Thomas, S. Thomas, G. Anilkumar, in Nanocomposites Recent Developments in Biomedical Applications, S. R. Kumar, A. Patnaik, (Eds.), Woodhead Publishing India, New Delhi, 2024, pp. 79-118 (ISBN: 9788196791858).

14. Carbonylation of aryl halides using homogeneous catalysts, N. A. Harry, S. M. Ujwaldev, G. Anilkumar, in Homogeneous Catalysis: Homogeneous Carbonylation and Hydroformylation Reactions Volume 3 M. R. Rahimpour, M. A. Makarem, T. Roostaei, M. Meshksar (Eds.)., Elsevier, Amsterdam, 2024, pp. 57-75 (ISBN: 978-0-443-15560-4).

15. Homogeneous Rhodium based hydroformylation processes, A. P. Thankachan, G. Anilkumar, in Homogeneous Catalysis: Homogeneous Carbonylation and Hydroformylation Reactions Volume 3 M. R. Rahimpour, M. A. Makarem, T. Roostaei, M. Meshksar (Eds.)., Elsevier, Amsterdam, 2024, pp. 195-209 (ISBN: 978-0-443-15560-4).

Books Edited:

1. Copper Catalysis in Organic Synthesis, **G. Anilkumar**, S. Saranya (Eds.), Wiley-VCH Verlag GmbH&Co.KGaA, 2020 (ISBN: 978-3-527-82642-1).

2. Green Organic Reactions, **G. Anilkumar**, S. Saranya (Eds.), Springer Nature, Singapore Pte Ltd., 2021 (ISBN 978-981-336-896-5).

3. *Organic Transformations in Water: Principles and Applications*, **G. Anilkumar**, N. A. Harry, S. M. Ujwaldev (Eds.), Wiley-VCH Verlag GmbH&Co.KGaA, 2025 (in press).

Gallery

Gallery

Gallery

Gallery

Gallery

Gallery