Curriculum Vitae

Srinivasan Easwar
Professor, Department of Chemistry
Central University of Rajasthan (CURAJ)
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➢ Personal details

Name: Srinivasan Easwar
Father's name: K. N. Srinivasan
Date of Birth: 10th Oct 1977
Nationality: Indian
Marital Status: Married
Languages known: Tamil, Hindi, English
Hobbies: Vedic chanting, Jogging, Crossword puzzles

➢ Academic Background

- **B.Sc. Chemistry** (1998)
  Ramakrishna Mission – Vivekananda College, University of Madras
- **M.Sc. Chemistry** (*Organic Chemistry specialization*) (2000)
  Department of Chemistry, University of Pune, India
  Ranked FIRST in the program with an overall score of 76%
- **Ph.D.** (2006)
  National Chemical Laboratory (NCL), Pune, India
  Supervisor: Dr. Narshinha P. Argade
  Research field: *Biocatalysis, kinetic resolutions and total synthesis of natural products*

➢ Professional & Research Experience (*~20 years post-Ph.D. experience*)

☞ **Jun 2022 – present**, *Professor*
Department of Chemistry, Central University of Rajasthan, Ajmer

☞ **Jun 2019 – Jun 2022**, *Associate Professor*
Department of Chemistry, Central University of Rajasthan, Ajmer

☞ **Aug 2011 – May 2019**, *Assistant Professor*
Department of Chemistry, Central University of Rajasthan, Ajmer

☞ **Aug 2008 – Aug 2011**, *Research Scientist*
Sai Life Sciences, Pune (Medicinal Chemistry R & D)
Team leader for medicinal chemistry R&D projects involving design and synthesis of a variety of scaffolds and compounds

☞ **Oct 2006 – Jul 2008**, *Post-doctoral Research Fellow*

Department of Chemistry "G. Ciamician", University of Bologna, Italy

Mentors: Prof. Claudio Trombini and Dr. Marco Lombardo

Research field: *Asymmetric Organocatalysis*, focusing on the design of ion-tagged prolines as catalysts in green reaction media

➢ Teaching Experience (14 years)

- Teaching at the Department of Chemistry, C. U. Rajasthan, since Aug 2011
- Handled 3-4 courses every year since 2011, having between 20 to 175 students each
- **Courses taught**: Pericyclic reactions & Photochemistry, Synthetic methods in Organic Chemistry, Natural Products, Organometallic Chemistry (PG); Advanced Organic Chemistry and Asymmetric Synthesis (Ph.D. coursework); Basic Organic Chemistry (UG)
- Developed new Elective Courses such as Natural Products – Biosynthesis and Total Synthesis and Advanced Asymmetric Synthesis
- Involved in the design of curricula for undergraduate and postgraduate chemistry programs, including credit framework and design of laboratory experiments
- Developed extensive ONLINE course content using the SWIVL platform for carrying out teaching through online mode during COVID-19 and beyond

➢ Research Interests

- **Synthetic Organic Chemistry**
  - Development of novel methodologies based on the Morita-Baylis-Hillman reaction
  - Total synthesis of natural products and analogs
  - Synthesis of heterocyclic scaffolds renowned for significant biological activity
- **Asymmetric Synthesis**
  - Design of proline-derived bifunctional organocatalysts
  - Enantioselective access to tetrahydroxanthenones and carbazoles
  - Asymmetric desymmetrisation reactions

➢ Grants & Research Funding

- Research Grants received from ANRF, MoE STARS, SERB, DST, CSIR and UGC, India, with a **total funding > Rs. 2.5 crore**
- Two collaborative projects carried out in collaboration with **RFBR, Russia** (*with Prof. Sergei Zlotin, Zelinsky Institute of Organic Chemistry, Moscow*) and **Academy of Finland** (*with Prof. Petri Pihko, University of Jyvaskyla, Finland*)

⇒ **Projects currently in progress:**

1. **ANRF-ARG**: Exploring a cyclic dienamine as a template for the construction of complex molecular frameworks and natural product analogs
   Duration: 2025-'28; Sanction: **~Rs. 70 lakhs**
2. **SERB-CRG**: Investigation of Diverse Reactivity Patterns in Morita–Baylis–Hillman Ketones to access Biologically Significant Heterocyclic Scaffolds
   Duration: 2023-'26; Sanction: **~Rs. 35 lakhs**
3. **MoE-STARS**: Exploring Conformationally Constrained and Cooperatively Assisted Bifunctional Organocatalysts for Enantioselective Mannich / Michael Addition Reactions
   Duration: 2023-'26; Sanction: **~Rs. 22 lakhs**
4. **SERB-POWER (*Co-PI*)**: Development of L-proline modified magnetoreceptor protein–coated iron beads as recyclable heterogenous biocatalyst for asymmetric transformations
   Duration: 2022-'25; Sanction: **~Rs. 44 lakhs**

⇒ **Projects completed:**

1. **SERB-CRG**: Studies on the organocatalytic enantioselective construction of tetrahydroxanthenones
   Duration: 2018-'22; Sanction: **~Rs. 43 lakhs**
2. **CSIR-EMR**: Design of Novel Bifunctional Amine-Urea/Thiourea Catalysts for Asymmetric C-C Bond Forming Applications
   Duration: 2018-'21; Sanction: **~Rs. 28 lakhs**
3. **DST – Academy of Finland Collaborative Project** – "Studies on the Asymmetric Mannich and Michael Addition Reactions Catalyzed by a Folding Bifunctional Organocatalyst"
   In collaboration with and in the laboratory of ***Prof. Petri Pihko****, University of Jyvaskyla, Finland*
   Duration: Aug-Oct 2019; **Rs. 1 lakh (*Mobility Grant*)**
4. **DST – RFBR Indo-Russian Collaborative Project** – "Synthesis and studies on catalytic performance of novel ion-tagged recyclable chiral organocatalysts generated from suitable dipeptides"
   In collaboration with ***Prof. Sergei Zlotin****, Zelinsky Institute of Organic Chemistry, Moscow*
   Duration: 2014-'16; Sanction: **~Rs. 26 lakhs**
5. **UGC Start-up**: Studies towards the total synthesis of protoberberine based natural products
   Duration: 2015-'17; Sanction: **Rs. 6 lakhs**

Department Level Project Funding:

- **Coordinator** for the **DST-FIST Level C** Grant sanctioned to the Department of Chemistry, Central University of Rajasthan
  Year of sanction: **2023** Extent of Funding: **Rs. 2.43 Cr**

➢ Awards & Recognitions

- "**Prof. D. K. Banerjee Memorial Lecture Award**" conferred by Indian Institute of Science, for "*Notable Contributions in Developing Methods in Organic Synthesis*" Apr 2023
- **Member, National Level Subject Expert Committee** for evaluation of proposals and Review of Projects in Chemical Sciences under the **DST-FIST** Program, *2022-'24*
- **Co-Convener, Rajasthan Chapter**, Chemical Research Society of India, *July '20-till date*
- *Invited* as a *Selection Committee Member* for Faculty Recruitment, **Banasthali Vidyapith**, Rajasthan, *Jan 2024*
- *Invited* as *Selection Committee Member* for Interviews conducted by **Rajasthan Public Service Commission (RPSC)**
- Served as Examiner for several Ph.D. thesis and invited as reviewer to evaluate proposals for research grant applications and manuscripts for publication (*multiple*)

➢ Scholarships & Miscellaneous Achievements

- Ranked **first** in the M.Sc. Chemistry batch of 1998-2000, Department of Chemistry, University of Pune.
- Qualified **GATE** (2000) in Chemical Sciences with an **All India Rank of 76**.
- Twice qualified the CSIR-UGC-NET exam for **Junior Research Fellowship**, one of which was in the **top 20% rank**.
- University of Bologna, Bologna, Italy – **Post-Doctoral Fellowship** Oct 2006 – Jun 2008.
- Twice received the **Star Performer** award at Sai Advantium Pharma Limited on the basis of performance in coordinating research projects as a team leader.
- **Twice winner** (1997 & 1998) of the "**Chemistry Crossword**" competition held at Ramakrishna Mission Vivekananda College, Chennai.

➢ Roles in Organizing Scientific Conferences

- **Convener** – International Conference on "*Frontiers in Catalysis*" organized by Department of Chemistry, C. U. Rajasthan, during *Jan 04-05, 2024*
- **Joint Secretary** – International Conference on Green Chemistry, *Dec 07-09, 2011*
- **Organizing Secretary** – National Conference on "Emerging Trends in Applied Chemical Sciences", *Mar 2016*

➢ Memberships in Scientific Societies

- Life Member – Chemical Research Society of India (CRSI)

➢ Administrative Roles & Additional Responsibilities

- ***Dean***, School of Chemical Sciences and Pharmacy, C. U. Rajasthan, **Mar '23 – till date**
- ***Head***, Department of Chemistry, C. U. Rajasthan, **Aug '19 – Sep '24**
- *Member*, Executive Council, C. U. Rajasthan, Apr 2025 – till date
- *Member*, Central Instrumentation Management Committee (CIMC), 2021 – till date
  - Responsible in part for the procurement of high-end research instruments

- *Coordinator* – Malaviya Mission Centre (for Teachers' Training), C. U. Rajasthan, Oct '23 – Feb '25
- *Member*, SSR Committee C. U. Rajasthan for NAAC data compilation, Aug '23 – till date
- *Member*, Research & Development Cell, C. U. Rajasthan, Aug '23 – till date

➢ Invited Lectures / Resource Person (*recent*)

- *Invited Lecture* – 61st Annual Convention of Chemists organized by the *Indian Chemical Society* at Jaipur, *Dec 2024*
- *Invited Lecture* – International Conference on "Emerging Trends in Catalysis and Synthesis (ETCS) at IIT Kharagpur, *Mar 2024*
- *Invited Lecture* – Indo-French Conference on "Fostering Catalysis for Societal Benefit (FCSB)" at University of Hyderabad, *Jan 2024*
- *Resource Person* – Two-Week Online Faculty Development Program in Chemistry and Allied Sciences [FDPCAS], Central University of Jammu, *Oct 2023*
- *Invited Lecture* – International Conference on Organometallics and Catalysis (ICOC), Goa, *Oct-Nov 2023*
- *Resource Person* – DST-STUTI Program of Central University of Rajasthan, *Aug 2023*

➢ Research Supervision

- No. of Ph.D.'s graduated: **7**
- No. of scholars pursuing Ph.D.: **3**
- Master's Dissertations: **~50**

List of Publications

1. One-Pot Access to Dibenzodiazepines and 9-Arylacridines from a Cyclic Dienamine; N. Kanwar, S. Sharma, P. Priya and **S. Easwar**, *Org. Lett.* **2026**, *28*, *in press*; DOI: 10.1021/acs.orglett.5c05439.
2. A Base-dependent Switch in the Reactivity of Baylis–Hillman Ketones with Hydrazines: Access to *N'*-Alkyl Benzohydrazides and Fluorescent Dihydropyrazoles; S. Sharma, A. K. Jha, S. Kumawat and **S. Easwar**, *Org. Biomol. Chem.* **2025**, *23*, 5863-5871; DOI: 10.1039/D5OB00649J.
3. Access to Isolable Cyclic Dienamines and *N*-Aryl-2-aminobenzophenones from Morita–Baylis–Hillman Ketones; S. Sharma, N. Kanwar, A. G. H. Khan and **S. Easwar**, *New J. Chem.* **2025**, *49*, 4639-4646; DOI: 10.1039/D5NJ00182J.
4. A Formal [3+3] Annulation of Morita-Baylis-Hillman Ketones to Construct Pyrimidobenzothiazoles; R. Kumari, S. Kumawat and **S. Easwar**, *SYNTHESIS* **2025**, *57*, 209-217; DOI: 10.1055/a-2373-0255.
5. Contrasting Facial Selectivity of a Squaramide-Tagged Proline in the Asymmetric Michael Addition of Ketones to Maleimides; K. Kumari, A. G. H. Khan and **S. Easwar**, *Adv. Synth. Catal.* **2024**, *366*, 4715-4722; DOI: 10.1002/adsc.202400791.
6. A squaramide-tagged proline mediated direct asymmetric aldol addition in the presence of water; K. Kumari, A. G. H. Khan, A. K. Dhiya and **S. Easwar**, *Eur. J. Org. Chem.* **2024**, *27*, e202400992; DOI: https://doi.org/10.1002/ejoc.202400992.

7. A *retro*-Mannich mediated transformation of Morita-Baylis-Hillman ketones to saturated imidazo[1,2-*a*]pyridines; S. Sharma, A. K. Jha and **S. Easwar**, *Org. Chem. Front.* **2024**, *11*, 3137-3150; DOI: 10.1039/D4QO00352G.
8. Mechanistic Investigations on the Interaction of Morita-Baylis-Hillman Ketones with 2-Aminothiophenol; R. Kumari, A. K. Jha, A. G. H. Khan and **S. Easwar**, *J. Org. Chem.* **2024**, *89*, 7263-7269; DOI: 10.1021/acs.joc.3c02993.
9. Cooperative assistance of a sulfonamide in a proline-mediated direct asymmetric aldol addition; K. Kumari, M. Bhati, R. S. Madhukar, A. G. H. Khan, P. Janjani, S. R. Reddy and **S. Easwar**, *New J. Chem.* **2023**, *47*, 17042-17050; DOI: 10.1039/d3nj02685j.
10. Acyl Transfer Driven Rauhut-Currier Dimerization of Morita-Baylis-Hillman Ketones; R. Kumari, A. K. Jha, S. Goyal, R. Maan, S. R. Reddy and **S. Easwar**, *J. Org. Chem.* **2023**, *88*, 2023-2033; DOI: 10.1021/acs.joc.2c02244.
11. Synthesis of 2,2-Disubstituted Dihydro-1,4-benzothiazines from Morita-Baylis-Hillman Ketones by an Oxidative Cyclization, A. K. Jha, R. Kumari and **S. Easwar**, *J. Org. Chem.* **2022**, *87*, 5760-5772; DOI: 10.1021/acs.joc.2c00087.
12. An isatin aldol adduct as a precursor to α,α'-difunctionalized methyl vinyl ketones; A. K. Jha, H. Inani, Deeksha and **S. Easwar**, *Results in Chemistry* **2022**, *4*, 100339; DOI: 10.1016/j.rechem.2022.100339.
13. Plight of Chemistry Teachers in Remote Teaching during COVID-19 Pandemic; N. Kumar, Nidhi and **S. Easwar**, *Voices of Teachers and Teacher Educators* **2022**, *11*, 81-88.
14. Proline-Histidine Dipeptide: A Suitable Template for Generating Ion-tagged Organocatalysts for the Asymmetric Aldol Reaction; H. Inani, A. Singh, M. Bhati, K. Kumari, A. S. Kucherenko, Sergei G. Zlotin and **S. Easwar**, *SYNTHESIS* **2021**, *53*, 2702-2712; DOI: 10.1055/a-1477-4871.
15. Unsymmetrical N,N'-functionalization of hydrazine by insertion into Morita-Baylis-Hillman ketones; A. K. Jha, Sarita and **S. Easwar**, *Tetrahedron Lett.* **2021**, *69*, 159271; DOI: 10.1016/j.tetlet.2021.152971.
16. Diamine-Mediated Degradative Dimerisation of Morita-Baylis-Hillman Ketones; A. K. Jha, A. Kumari and **S. Easwar**, *Chem. Commun.* **2020**, *56*, 2949-2952; DOI: 10.1039/c9cc10068g.
17. A Hydrazine Insertion Route to N'-alkyl Benzohydrazides by an Unexpected Carbon-Carbon Bond Cleavage; A. K. Jha, R. Kumari and **S. Easwar**, *Org. Lett.* **2019**, *21*, 8191-8195; DOI: 10.1021/acs.orglett.9b02657.
18. Probing the Synergistic Catalytic Model: A Rationally Designed Urea-Tagged Proline Catalyst for the Direct Asymmetric Aldol Reaction; M. Bhati, K. Kumari and **S. Easwar**, *J. Org. Chem.* **2018**, *83*, 8225-8232; DOI: 10.1021/acs.joc.8b00962.
19. An expedient access to chromanols via an arginine-mediated cascade cyclisation in water; A. K. Jha, H. Inani and **S. Easwar**, *Tetrahedron Lett.* **2018**, *59*, 2356-2359; DOI: 10.1016/j.tetlet.2018.05.015.
20. Exploring "Through-Bond" Proximity between the Ion-Tag and Reaction Site of an Imidazolium-Proline Catalyst for the Direct Asymmetric Aldol Reaction; M. Bhati, S. Upadhyay and **S. Easwar**, *Eur. J. Org. Chem.* **2017**, 1788-1793; DOI: 10.1002/ejoc.201700021.

21. An Arginine-Mediated Protocol for the Aldol Addition of Methyl Vinyl Ketone in Water; H. Inani, A. K. Jha and **S. Easwar**, *ChemistrySelect* **2017**, *2*, 11666-11672; DOI: 10.1002/slct.201702502.
22. A Nucleophilic Activation of Carboxylic Acids by Proline: Oxa-Michael Addition to Methyl Vinyl Ketone under Solvent-free Conditions; A. K. Jha, H. Inani and **S. Easwar**, *Synlett* **2017**, *28*, 1473-1477; DOI: 10.1055/s-0036-1588172.
23. Proline-Mediated Baylis-Hillman Reaction of Methyl Vinyl Ketone without a Co-catalyst under Solvent-Free Conditions; H. Inani, A. K. Jha and **S. Easwar**, *Synlett* **2017**, *28*, 128-132; 10.1055/s-0036-1588320.
24. Ionic liquid supported 4-HO-Pro-Val derived organocatalysts for asymmetric aldol reactions in the presence of water; A. S. Kucherenko, V. V. Perepelkin, G. M. Zhdankina, G. V. Kryshtal, **Easwar S.**, H. Inani and S. G. Zlotin, *Mendeleev Commun*. **2016**, *26*, 388-390; DOI: 10.1016/j.mencom.2016.09.007.
25. Synthesis of the reported protoberberine gusanlung D; P. B. Wakchaure, **S. Easwar** and N. P. Argade, *SYNTHESIS* **2009**, 1667-1672; DOI: 10.1055/s-0028-1088050.
26. The ion tag strategy as a route to highly efficient organocatalysts for the direct asymmetric aldol reaction; M. Lombardo, **S. Easwar**, F. Pasi and C. Trombini, *Adv. Synth. Catal*. **2009**, *351*, 276-282; DOI: 10.1002/adsc.200800608.
27. Facile air-oxidation of *N*-homopiperonyl-5,6-dimethoxy-homophthalimide: simple and efficient access to nuevamine; P. B. Wakchaure, **S. Easwar**, V. G. Puranik and N. P. Argade, *Tetrahedron* **2008**, *64*, 1786-1791; DOI: 10.1016/j.tet.2007.11.104.
28. A modular approach to catalyst hydrophobicity for an asymmetric aldol reaction in a biphasic aqueous environment; M. Lombardo, **S. Easwar**, A. De Marco, F. Pasi and C. Trombini, *Org. Biomol. Chem*. **2008**, 4224-4229; DOI: 10.1039/B812607K.
29. Direct asymmetric aldol reaction catalyzed by an imidazolium-tagged *trans*-4-hydroxy-*L*-proline under aqueous biphasic conditions; M. Lombardo, F. Pasi, **S. Easwar** and C. Trombini, *Synlett* **2008**, 2471-2474; DOI: 10.1055/s-2008-1078055.
30. Protonated arginine and lysine as catalysts for the direct asymmetric aldol reaction in ionic liquids; M. Lombardo, **S. Easwar**, F. Pasi, C. Trombini and D. D. Dhavale, *Tetrahedron* **2008**, *64*, 9203-9207; DOI: 10.1016/j.tet.2008.07.061.
31. An improved protocol for the direct asymmetric aldol reaction in ionic liquids, catalysed by onium ion-tagged prolines; M. Lombardo, F. Pasi, **S. Easwar** and C. Trombini, *Adv. Synth. Catal*. **2007**, *349*, 2061-2065; 10.1002/adsc.200700136.
32. A Facile Synthesis and Enzymatic Resolution of Naturally Occurring Remotely Functionalized Alkylmethylmaleic Anhydrides from Aspergillus wentii: Aspergillus Acids A-D; **S. Easwar** and N. P. Argade, *SYNTHESIS* **2006**, 831-838; DOI: 10.1055/s-2006-926326.
33. Amano PS-catalysed enantioselective acylation of (±)-a-methyl-1,3-benzodioxole-5-ethanol: an efficient resolution of chiral intermediates of the remarkable antiepileptic drug candidate, (-)-talampanel; **S. Easwar** and N. P. Argade, *Tetrahedron*: *Asymmetry* **2003**, *14*, 333-337; DOI: 10.1016/S0957-4166(02)00836-4.

34. Enantioselective enzymatic approach to (+)- and (-)-2-acetoxy/hydroxycyclopentanones; **S. Easwar**, S. B. Desai, N. P. Argade and K. N. Ganesh, *Tetrahedron*: *Asymmetry* **2002**, *13*, 1367-1371; DOI: 10.1016/S0957-4166(02)00366-X.
35. Amano PS catalysed methanolysis of maleimides: an efficient synthesis of methyl maleanilates; **S. Easwar** and N. P. Argade, *Indian J. Chem*. **2002**, *41B*, 1899-1901; ChemInform DOI: 10.1002/chin.200301068.

Manuscripts submitted / under preparation:

1. Enantioselective Synthesis of Tetrahydroxanthenones using a Proline-Histidine Derived Dipeptide Catalyst; A. G. H. Khan, H. Inani and **S. Easwar**, *manuscript communicated*.
2. A 4-*cis*-Hydroxy Proline Derivative Catalyzed Direct Asymmetric Aldol Addition in Aqueous Medium; A. G. H. Khan, M. Bhati, Priyanshu and **S. Easwar**, *manuscript communicated*.
3. Access to Dihydroquinolines by an Aza-Michael – Aldol Addition – Haller-Bauer Reaction Sequence; R. Kumari, S. Kumawat and **S. Easwar**, *manuscript under preparation*.