

Curriculum Vitae

Srinivasan Easwar

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➤ Personal details

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| Name: Srinivasan Easwar | Father's name: K. N. Srinivasan |
| Date of Birth: 10 th 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 (18 years, post-Ph.D.)

- ☞ **Jun 2019 – till date**, 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 (13.5 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
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➤ **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
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➤ **Grants & Research Funding**

- Research Grants received from MoE STARS, SERB, DST, CSIR and UGC, India, with a **total funding > Rs. 1.5 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 Jyväskylä, Finland)

⇒ **Projects currently in progress:**

1. **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**
2. **MoE-STARS:** Exploring Conformationally Constrained and Cooperatively Assisted Bifunctional Organocatalysts for Enantioselective Mannich / Michael Addition Reactions
Duration: 2023-‘26; Sanction: ~**Rs. 22 lakhs**
3. **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 Jyväskylä, 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*)
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➤ 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.
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➤ 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*
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➤ Memberships in Scientific Societies

- Life Member – Chemical Research Society of India (CRSI)
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➤ 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**, Academic Council, C. U. Rajasthan, 2023 – 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: **6**
- No. of scholars pursuing Ph.D.: **4**
- Master’s Dissertations: **~50**

Details of Graduated Doctoral Students

(latest students first)

| S. No. | Name | Year of Graduation | Current Position |
|---------------|---------------------|---------------------------|---|
| 1 | Dr. Sachin Sharma | 2024 | Post-doctoral Research Fellow, Indian Institute of Technology Madras, Chennai |
| 2 | Dr. Rajkiran Kumari | 2023 | Post-doctoral Research Fellow, Purdue University, USA |
| 3 | Dr. Kiran Kumari | 2023 | Senior Research Associate, SRF Ltd, Bhiwadi, India |
| 4 | Dr. Ajit Kumar Jha | 2021 | Post-doctoral Research Fellow, Centre of New Technologies (CeNT), University of Warsaw, Poland |
| 5 | Dr. Meeta Bhati | 2019 | Patent Associate, Obhan and Associates, New Delhi, India |
| 6 | Dr. Heena Inani | 2018 | Assistant Professor, Lord’s University, Rajasthan, India |

List of Publications

1. 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](https://doi.org/10.1039/D5OB00649J).
2. 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](https://doi.org/10.1039/D5NJ00182J).
3. 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](https://doi.org/10.1055/a-2373-0255).
4. 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](https://doi.org/10.1002/adsc.202400791).
5. 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>.
6. 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](https://doi.org/10.1039/D4QO00352G).
7. 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](https://doi.org/10.1021/acs.joc.3c02993).
8. 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](https://doi.org/10.1039/d3nj02685j).
9. 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](https://doi.org/10.1021/acs.joc.2c02244).
10. 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](https://doi.org/10.1021/acs.joc.2c00087).
11. 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](https://doi.org/10.1016/j.rechem.2022.100339).
12. 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.

13. 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](https://doi.org/10.1055/a-1477-4871).
14. 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](https://doi.org/10.1016/j.tetlet.2021.152971).
15. 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](https://doi.org/10.1039/c9cc10068g).
16. 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](https://doi.org/10.1021/acs.orglett.9b02657).
17. 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](https://doi.org/10.1021/acs.joc.8b00962).
18. 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](https://doi.org/10.1016/j.tetlet.2018.05.015).
19. 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](https://doi.org/10.1002/ejoc.201700021).
20. 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](https://doi.org/10.1002/slct.201702502).
21. 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](https://doi.org/10.1055/s-0036-1588172).
22. 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](https://doi.org/10.1055/s-0036-1588320).
23. 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](https://doi.org/10.1016/j.mencom.2016.09.007).
24. 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](https://doi.org/10.1055/s-0028-1088050).

25. 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](https://doi.org/10.1002/adsc.200800608).
26. 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](https://doi.org/10.1016/j.tet.2007.11.104).
27. 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](https://doi.org/10.1039/B812607K).
28. 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](https://doi.org/10.1055/s-2008-1078055).
29. 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](https://doi.org/10.1016/j.tet.2008.07.061).
30. 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](https://doi.org/10.1002/adsc.200700136).
31. 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](https://doi.org/10.1055/s-2006-926326).
32. Amano PS-catalysed enantioselective acylation of (\pm)- α -methyl-1,3-benzodioxole-5-ethanol: an efficient resolution of chiral intermediates of the remarkable antiepileptic drug candidate, (-)-talampandel; **S. Easwar** and N. P. Argade, *Tetrahedron: Asymmetry* **2003**, 14, 333-337; DOI: [10.1016/S0957-4166\(02\)00836-4](https://doi.org/10.1016/S0957-4166(02)00836-4).
33. 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](https://doi.org/10.1016/S0957-4166(02)00366-X).
34. 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](https://doi.org/10.1002/chin.200301068).

Manuscripts submitted / under preparation:

1. Enantioselective Synthesis of Tetrahydroxanthrenones using a Proline-Histidine Derived Dipeptide Catalyst; A. G. H. Khan, H. Inani and **S. Easwar**, *manuscript communicated*.
2. One-pot Access to Dibenzodiazapines and Acridines from Morita-Baylis-Hillman Ketones; N. Kanwar, S. Sharma and **S. Easwar**, *manuscript under preparation*.
3. Access to Dihydroquinolines by an Aza-Michael – Aldol Addition – Haller-Bauer Reaction Sequence; R. Kumari, S. Kumawat and **S. Easwar**, *manuscript under preparation*.