Curriculum Vitae

Srinivasan Easwar

Associate 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

Academic Background

• **B.Sc. Chemistry** (1998)

Ramakrishna Mission – Vivekananda College, University of Madras

• M.Sc. Chemistry (2000)

Department of Chemistry, University of Pune, India

Ranked FIRST in the batch with an overall score of 76%

• Ph.D. (2006)

National Chemical Laboratory (NCL), Pune, India

Supervisor: Dr. Narshinha P. Argade

Research field: Biocatalysis and total synthesis of natural products

Professional & Research Experience (18 years, post-Ph.D.)

F 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

> Teaching Experience (13.5 years)

- At C. U. Rajasthan, 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 the curricula for the 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 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 Jyvaskyla, Finland)

⇒ Projects currently in progress:

 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

 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

Research Supervision

No. of Ph.D.'s graduated:
No. of scholars pursuing Ph.D.:
Master's Dissertations:

Awards & Recognitions

- "Prof. D. K. Banerjee Memorial Lecture Award" conferred by Indian Institute of Science, Bangalore, 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 & Achievements

- Ranked <u>first</u> 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.
- Co-authored an article entitled "Natural Products & Total Synthesis: Serving Mankind in Unison", published in a college annual magazine.

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 (recent)

- 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

Significant publications (recent)

- 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
- 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: <u>10.1039/D4Q000352G</u>
- 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
- 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
- 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
- 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
- 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

5