

Professor Anil Kumar Singh



Prof. Anil Kumar Singh earned PhD in 1978 from IIT Kanpur. After post-doctoral stints at Florida State University (Tallahassee, USA), University of Hawaii at Manoa (USA), and Columbia University in the city of New York (USA) he returned to India in 1982 to join University of Roorkee as a Lecturer in chemistry. In January 1983, he moved to IIT Bombay as Lecturer in Chemistry where he subsequently rose to the rank of full Professor in 1990. During 1989, he was visiting scientist in the Département de Chimie, Université de Montréal, Canada. He has briefly also worked at Syracuse University (New York, USA). He superannuated from in IIT Bombay in April 2017 as Professor in the Highest Academic Grade (HAG) scale. Subsequently he was reemployed by IIT Bombay as HAG Professor, and served there till June 30, 2017.

Currently Prof. Singh is:

- **Director** (Independent) of Rashtriya Chemicals & Fertilizers Ltd. Mumbai – a PSU of Government of India, Ministry of Chemicals & Fertilizers,
- **Adjunct Professor** at the Institute of Chemical Technology, Mumbai (Category-1 Deemed to be University (MHRD & UGC) & Elite Status – Centre of Excellence, Government of Maharashtra.
- **Hon. Visiting Professor** at the B.K. Birla College (Autonomous), Kalyan, Thane.
- **Chairman** of Mumbai Chapter of the National Academy of Sciences, India..
- **Member of Board of Trustees, ‘The Academy Trust’** of the Indian Academy of Sciences, Bangaluru.
- **Executive Board Member (National Representative)** of Asia & Oceania Society for Photobiology (Japan).
- **Council Member** of The National Academy of Sciences, India.
- **National Advisory Board Member** of the Indian Society of Chemists and Biologists.
- **AICTE-Nominated Margdarshak** to some higher educational institutions, etc.

With teaching/ research/ administrative career spanning over more than three and half decades, Prof. Singh embodies a wealth of expertise and experience. He has been associated in multiple capacities with several educational institutions, R&D organizations, scientific societies, administrative and policy making bodies, to drive organizational excellence. As member of the Board of Governors, Governing Council, University Court, Executive and Academic Councils, Senate, Peer Group Member, Editor and Editorial Board Member, Reviewer, Adjudicator, etc., Prof. Singh has contributed to the advancement and development of higher education and policy formulation across the country.

At IIT Bombay he has served as Head of Chemistry Department, **Convener** of Post-Graduate Academic Performance Evaluation, **Chairman** of IIT-JEE, **Dean** of Academic Programs, and **Convener** of IIT Gandhinagar Cell.

Prof. Singh has also served as Director of CSIR-Regional Research Laboratory (present-day North-East Institute of Science & Technology) Jorhat, and as **Vice-Chancellor** of two major Universities, the Bundelkhand University and the University of Allahabad (a Central University in Prayagraj).

He has been member of: i) **Board of Governors** of Indian Institute of Management Lucknow, ii) **Governing Council** of Inter-University Accelerator Centre New Delhi, iii) **Executive Council** of Central University of Gujarat, iv) **Visitor’s Nominee** on the University Court of North-Eastern Hill University Shillong, v) **Chairman** of Academic Committee of Gujarat Technical University, vi) **Academic Council** of Central University of Himachal Pradesh, vii)

Academic Council of University of Rajasthan, viii) **Academic Council** of Central University of Gujarat, ix) **Governing Council** of Atomic Energy Education Society, x) **Senate** of SV National Institute of Technology, xi) **Science Academies Joint Science Education Panel**, xii) **Planning Commission Subcommittee** on Institutional Management and Leadership development in Higher Education, xiii) **Sub-group on ACCESS under UGC Expert Working Group** for Higher Education in the 12th Five Year Plan, xiv) **Board of Directors** of KOP Research Centre Pvt. Ltd. Bangalore, xv) **Department of Atomic Energy (DAE) Specialist Group** (R&D Sector) of Advanced Chemical Sciences, xvi) **Project Advisory Committee** (Basic Sciences – I) of the Board of Research in Nuclear Sciences of the DAE, xvii) **DST-TIFAC Committee for review of autonomous institutions** in areas of chemical sciences, materials sciences and engineering.

He has been President of: i) Physical Sciences Section of 80th Annual Session of the National Academy of Sciences-India, ii) Chemical Sciences Section of 94th Session of the Indian Science Congress Association, iii) Organic Chemistry Section of Indian Council of Chemists Annual Session. He has also served as Scientist-in-Charge of Organic and Biochemistry Section of the Annual Conventions of Chemists of the Indian Chemical Society (2006-10).

He is Editorial Board member of several research journals in chemical and allied sciences, reviewer of research articles from prestigious national and international organizations and journals, adjudicator of doctoral theses from various institutions across India, and reviewer of research projects from various national and international funding agencies like DST, DBT, BRNS-DAE, CSIR, UGC, State-CSTs, DST-Indo-French, Indo-US S&T Forum/ Swiss National Science Foundation, etc.

He has also served as member/ chairman in different peer review committees, e.g., committees for Research Degrees/ Faculty Boards/ Board of Studies/ Academic Audit, UGC-SAP/CAS Advisory committees, UPSC-PT Board, recruitment of faculty and scientists in national/ international institutions, IIT-JEE reforms committees, UGC-NAAC committee, Academic Audit committees, committees for selection of awards of academic and research institutions, science academies and societies, AICTE-nominated Margdarshak / Mentor to higher educational institutions, etc.

Prof. Singh has also served as President of the Indian Society of Radiation & Photochemical Sciences and **Executive Board Member (National Representative)** of Asia & Oceania Society for Photobiology, Japan. He has been: i) **Council Member** of National Academy of Sciences India, Chemical Research Society of India, Indian Chemical Society, Indian Society of Radiation and Photochemical Sciences, ii) **National Advisory Board Member** of Indian Society of Chemists and Biologists, and **Executive Committee Member** of Indian Photobiology Society. He is has also been on the **Advisory Board** of many important national and international Conferences in India and abroad. **Currently Prof. Singh is Chairman** of the National Academy of Sciences, **India (Mumbai Chapter)**, and a Member of the Board of Trustees of 'The Academy Trust (tAcT)' of Indian Academy of Sciences, Bangalore.

Prof. Singh's teaching experience is vast and varied. Besides teaching and supervising research, he is credited with developing innovative academic policies and programs of education and research, modernization of educational and research facilities, designing new age courses, and expansion of collaborations both in India and abroad. Prof. Singh has also contributed towards design and development of academic and research programs of several other institutions in India.

His research interests and experiences are equally vast and varied, which broadly span the areas of organic and bioorganic chemistry, chemical biology, medicinal chemistry, natural products, photochemistry, photobiology, molecular spectroscopy, and nanoscience. He has contributed towards: i) photocontrol of structure and reactivity of organic and biomolecular

systems, in particular, in building molecular understanding of structure and mechanism of function of Rhodopsins – the retinal-bound biological photoreceptors involved in sensory (e.g. Vision) and energy transductions (e.g. proton ion-pump), ii) excited state chemistry of linear polyenes, iii) photochemistry of organic compounds in organized assemblies, iv) photocatalytic routes to novel heterocyclic systems, v) design and development of: fluorescent molecular probes, caged compounds, phototriggers and photoswitches, vitamin E-based radioprotectants, vitamin A analogues as anticancer compounds, organic nanoparticles (ONPs) and fluorescent ONPs of low molecular weight organic compounds.

He has undertaken a number of sponsored research projects and industrial consultancy assignments. Besides IIT Bombay, his academic and research endeavors have been supported by various funding agencies like DST, DBT, DAE-BRNS, CSIR, UGC, MHRD, Indian Navy, and by Industry (ICI India Ltd.).

Prof. Singh has been a mentor to a large number of graduate and undergraduate students, who now occupy responsible positions in academia and industry in India and abroad. His scholarly achievements also include: i) authorship of more than hundred articles based on original research in refereed national and international journals, ii) a number of scholarly articles in /bulletins/special periodicals of repute, iii) patent, iv) authorship of text book chapters, monograph, e-Books, editorials, book-preface, etc., v) large number of abstracts articles in international and national conferences/symposia/workshops, etc. He has organized several international/national conferences and short courses. He has recently also edited two special volumes of CSIR-NISCAIR's Indian Journal of Chemistry-Section B, devoted to "Light-induced chemistry of organic- and bio-molecules".

Prof. Singh's contributions and achievements are recognized by awards and honours. He is an elected Fellow of National Academy of Sciences India, Indian Academy of Sciences, Maharashtra Academy of Sciences, Institution of Chemists, and Indian Chemical Society. He has also been a Fellow of the Royal Society of Chemistry (UK). He is Life Member of many scientific societies and organizations. He is also the recipient of: Indian Chemical Society's Prof. P.K. Bose and Prof. J.N. Mukherjee Memorial Awards, Prof. T.R. Sheshadri Memorial Award (University of Delhi), Prof. R.C. Paul Memorial Lecture Award (Punjab University), Prof. R.D. Desai Memorial Lecture Award (BKM Science College, South Gujarat University). He has also been conferred with the 'Award for Excellence in Chemical Sciences – 2009' by the Indian Society of Chemists and Biologists, and 'Gold Medal' (2018) of the Society for Promotion of Education and Science for his significant contributions in the field of education and science. Recently, the Higher Education Forum (HEF) Pune conferred on Prof. Singh the HEF Award (2019) for Outstanding Contribution to the Research Endeavours in Science.

Prof. Singh is widely travelled and delivered large number of invited/ plenary/ keynote/ distinguished speaker talks in prestigious gatherings of academicians and scientists in conferences, in teaching and research centers of higher learning in India and abroad.

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