

Professor Anil Kumar Singh



A former Professor of Chemistry in the Highest Academic Grade Scale at the Indian Institute of Technology Bombay, Professor Anil Kumar Singh earned PhD (1978) from IIT Kanpur under the supervision of Prof. Durga Nath Dhar. After three post-doctoral stints: i) Florida State University, Tallahassee, USA (with Prof. Jack Saltiel), ii) University of Hawaii at Manoa USA (with Prof. Robert S. H. Liu), and iii) Columbia University in the city of New York, USA (with Prof. Koji Nakanishi), Prof. Singh returned to India in June 1982 and joined the University of Roorkee as a Lecturer in Chemistry against a permanent post. 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 worked as a visiting scientist with Prof. Camille Sandorfy at the Département de Chimie, Université de Montréal, Canada. He also worked briefly with Prof. Janos H. Fendler at Syracuse University (New York, USA). He superannuated from IIT Bombay in April 2017. Subsequently he was reemployed by IIT Bombay as HAG Professor, and served there till June 30, 2017.

At IIT Bombay, besides performing his primary duties of teaching and research, Prof Singh worked in several other senior positions such as the Head, Department of Chemistry, Dean of Academic Programs, Convener of Post-Graduate Academic Performance Evaluation Committee, Chairman of IIT-JEE, Founder Convener of IIT Gandhinagar Cell at IIT Bombay for setting up of IIT at Gandhinagar, and in a few other academic and administrative positions). He has significantly contributed in drawing-up and developing academic policies and programs of education and research as well as expansion of collaborations of IIT Bombay both in India and abroad.

He has also been associated in multiple capacities with several other national and international educational institutions, R&D organizations, government bodies, prestigious science academies and societies, and policy-making entities to drive organizational excellence. He has held the position of Director, CSIR-Regional Research Laboratory, Jorhat (Present-day North-East Institute of Science & Technology, Jorhat), and Vice-Chancellor of two major universities- the Bundelkhand University, Jhansi and the University of Allahabad (a central university at Prayagraj). He has also shouldered the responsibility of Independent Director of the Rashtriya Chemicals and Fertilizers Ltd. Mumbai (a public sector undertaking of the Ministry of Chemicals and Fertilizers, Government of India). He has been an Adjunct Professor and Visiting Fellow at the Institute of Chemical Technology, Mumbai- a Deemed to be University & Elite Status-Centre of Excellence, Govt of Maharashtra, Hon. Visiting Professor at BK Birla College (Autonomous, University of Mumbai), and at the S. P. University, Vallabhvidya Nagar (Gujarat). He has been associated in multiple capacities with a few other higher educational institutions and S&T organizations.

He has been a member of the: 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) Advisory Board member, Bhagwan Mahavir University, Surat, x) AICTE-Margdarshak for Thakur College of Engineering & Technology, Mumbai; Chetana's Ramprasad Khandelwal Institute of Management & Research, Mumbai, and United College of Engineering, Thane; xi) Governing Council of Atomic Energy Education Society, x) Senate

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

He has 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, Boards of UPSC-PT and UP-PSC, 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 to higher Technical/Management educational institutions, etc.

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).

Prof. Singh has 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 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 has scholastically contributed to the advancement of chemical and allied science as 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.

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 the 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 the: i) advancement of the molecular understanding of the structure and mechanism of function of 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) transformative biomolecular and light-mediated sustainable chemical approaches toward design and development of novel molecules and specialty chemicals, iv) photochemistry of organic compounds in organized assemblies, v) photocatalytic routes to novel heterocyclic systems, vi) design and development of fluorescent molecular probes, caged compounds, smart phototriggers and photoswitches for biomolecular caging and other chemical and biological applications, vitamin E-based radioprotectants, vitamin-A analogues as anticancer compounds, organic nanoparticles (ONPs) and fluorescent ONPs of low molecular weight organic compounds for optoelectronic and medical applications, etc.

He has undertaken and successfully completed a number of sponsored R&D projects, academic and industrial consultancy assignments. Besides IIT Bombay, his academic and research endeavors have been supported by various funding agencies like the 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 accomplishments are recognized by awards and honors. He is an elected Fellow of the National Academy of Sciences India, Indian Academy of Sciences, Maharashtra Academy of Sciences, Institution of Chemists, and Indian Chemical Society. He has also been Fellow of the Royal Society of Chemistry (UK). The National Academy of Sciences, India has conferred on him Prof. N. R. Dhar Memorial Lecture Award-2022. The Indian Chemical Society (Kolkata) honored him by conferring Prof. P. K. Bose and Prof. J. N. Mukherjee Memorial Awards. He is also a recipient of Prof. T. R. Sheshadri Memorial Award (Delhi University), 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 'Gold Medal' (2018) of the Society for Promotion of Education and Science for his significant contributions in the field of education and science. The Higher Education Forum (HEF) Pune has conferred on Prof. Singh the HEF Award (2019) for Outstanding Contribution to the Research Endeavors in Science. The Indian Society of Chemists and Biologists (Lucknow) has conferred on him the 'Award for Excellence in Chemical Sciences – 2009'. Prof. Singh is Life Member of many scientific societies and organizations. He has served as President of the Indian Society of Radiation and Photochemical Sciences, and the Executive Board Member (National Representative) of Asia & Oceania Society for Photobiology, Japan.

Singh has widely travelled and delivered a 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. With teaching/ research/ administrative career spanning over more than four decades, Prof. Singh embodies a wealth of expertise and experience in chemical and allied sciences education and research, and in academic policy formulation and administration. He maintains moral values and ethical practices of the highest order. His expertise and experience together with his extraordinary attributes to inspire and influence others with whom he interacts and relates can be leveraged effectively and efficiently to promote and advance the objects of institutions and organizations he is associated with.

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