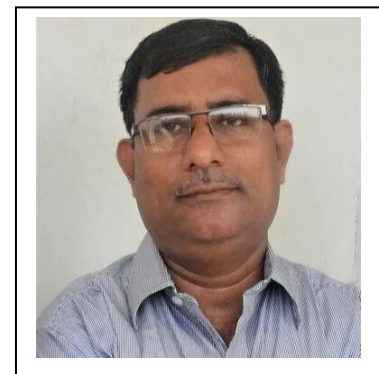


Faculty Profile



1. Name: Dr. Kalyan Kumar Rana
2. Date of Birth: 11.11.1971
3. Designation: Associate Professor
4. Date of Joining: 01.03.2003
5. Name of The Department: Department of Chemistry

6. Address

- Permanent Address: Qtrs. No. C-5, HIT Campus, Haldia Institute of Technology, Haldia, Purba Medinipur, 721657, WB
- Corresponding Address: Qtrs. No. C-5, HIT Campus, Haldia Institute of Technology, Haldia, Purba Medinipur, 721657, WB

Contact No.: 9474491392

E-mail ID: kalyankrana@yahoo.co.in

WEB Page, if any: N/A

7. Educational Qualifications (Graduation onwards):

Examination	Name of the University/Institution	Year of Passing	Subject
BSc	Vidyasagar University	1994	Chemistry (Hons.)
MSc	Vidyasagar University	1996	Chemistry (Spl. In Organic Chemistry)

8. Research Degree(s):

Degree	Name of the Degree Awarding Institution	Date of Award	Title
PhD	Jadavpur University (Research Fellow at IACS, Jadavpur, Kolkata-32)	24.07.2002	Synthesis of Bio-active Natural Products and Related Compounds
Post-Doctoral Research Associate at North Dakota State University, Fargo, North Dakota, USA, 2001-2002.			

9. Teaching Experience (in Years): 18+ Yrs.
10. Specialization/Expertise/Teaching Area: Organic Chemistry
11. Course/Subject Taught: Organic in Chemistry Honours Course, Chemistry in GE and General Courses
12. Present Research Activities: N/A
13. Major/Minor Project(s) Undertaken/Completed (During last 5 years): N/A
14. Publications and Others:

A] Books Published:

1. Dr. KK Rana, Undergraduate Chemistry Practical Courses, Publisher: Bhasa-o-Sahitya, 2011, ISBN:978-81-8438-054-2.
2. Dr. KK Rana and Dr. S Rana, Chemistry Practical for Engineering Courses, Publisher: Bhasa-o-Sahitya, 2015, ISBN:978-81-8438-078-X.
3. Proceedings of the Golden Jubilee (1965-2015) Celebration of Gushkara Mahavidyalaya, Edited Volume, Editors: Taraknath Dutta and Dr. Kalyan Kumar Rana (Aug., 2015), ISBN: 978-93-5235-350-7
4. Proceedings of the UGC Sponsored National Seminar on "Recent Developments in Green Chemistry", Edited Volume, Editors: Dr. Kalyan Kumar Rana and Dr. Bholanath Sarkar (Aug., 2015), ISBN: 978-93-5235-543-3
5. Book Chapter "Pollution from Mining and Related Activities", in Quad Scientific Reporter, 2015, Edited by Dr. A Pal and Dr. CR Ghosh, ISBN: 978-81-925784-4-6, Pub: Sri Ramkrishna Sarada Vidyamahapitha, Kamarpukur, Hooghly.

B] Research Papers in International/National Journals:

1. 'A Mild and Efficient Method for the Deoxygenation of α,β -Epoxyketones to Enones.' KK Rana and SC Roy; *J. Ind. Chem. Soc.*, **1999**, 76, 545.
2. 'A Short and Stereoselective Total Synthesis of (\pm)-Sesamin by Radical Cyclisation of an Epoxide Using a Transition Metal Radical Source.' KK Rana, C Guin and SC Roy; *Tetrahedron Lett.*, **2000**, 41, 48, 9337.
3. 'Ceric Ammonium Nitrate Mediated Selective Bromoalkoxylation of Activated Cinnamyl Compounds Using Lithium Bromide.' KK Rana, C Guin and SC Roy; *Synlett*, **2001**, 2, 226.
4. 'Synthesis of Spirocyclic Ethers by Radical Cyclisation of Epoxides Using a Transition Metal Radical Source.' KK Rana, C Guin and SC Roy; *Ind. J. Chem.*, **2001**, 40B, 925. (Dedicated to Prof. UR Ghatak on the occasion of his 70th Birth Anniversary)
5. 'Short and Stereoselective Total Synthesis of (\pm)-Dihydrosesamin and (\pm)-Acuminatin Methyl Ether by Radical Cyclisation of Epoxides Using a Transition Metal Radical Source.' KK Rana, C Guin and SC Roy; *Synlett*, **2001**, 8, 1249.
6. 'An Efficient Chemo- and Regioselective Oxidative Nuclear Bromination of Activated Aromatic Compounds Using Lithium Bromide and Ceric Ammonium Nitrate.' SC Roy, C Guin, KK Rana and G Maiti; *Tetrahedron Lett.*, **2001**, 42, 6941.
7. 'Stereoselective Synthesis of Trisubstituted Tetrahydrofurans by Radical Cyclisation Reaction Using a Hypophosphite Salt. Application to the Total Synthesis of (\pm)-Dihydrosesamin.' SC Roy, C Guin, KK Rana and G Maiti; *Tetrahedron*, **2002**, 58, 2435.
8. 'Short and Stereoselective Total Synthesis of Furano Lignans (\pm)-Dihydrosesamin, (\pm)-Lariciresinol Dimethyl Ether, (\pm)-Acuminatin Methyl Ether, (\pm)-Sanshodiol Methyl Ether, (\pm)-Lariciresinol, (\pm)-Acuminatin, (\pm)-Lariciresinol Monomethyl Ether and Furofuran Lignans (\pm)-Sesamin, (\pm)-Eudesmin, (\pm)-Piperitol Methyl Ether, (\pm)-Pinoresinol, (\pm)-Piperitol, (\pm)-Pinoresinol Monomethyl Ether by Radical Cyclisation of Epoxides Using a Transition Metal Radical Source' SC Roy, KK Rana and C Guin, *J. Org. Chem.*, **2002**, 67, 10, 3242.
9. 'A Novel and Efficient Ceric Ammonium Nitrate Catalysed Oxidative Nuclear Chlorination of Activated Aromatic Compounds by Acetyl Chloride.' SC Roy, KK Rana, C Guin and B Banerjee, *Synlett*, **2003**, 2, 221.

10. 'A Mild and Efficient Method for the Protection of Carbonyl Compounds as Oxathiolanes, Dithiolanes and Dithianes Catalyzed by Molybdenylacetylacetonate.' KK Rana, C Guin, S Jana and SC Roy, *Tetrahedron Lett.*, **2003**, 44, 8597.

11. 'Ceric Ammonium Nitrate Catalyzed Mild and Efficient α -Chlorination of Ketones by Acetyl Chloride.' SC Roy, KK Rana, C Guin and B Banerjee, *ARKIVOK*, **2003**, (ix), 34. (Dedicated to Prof. Asima Chatterjee on the occasion of her 85th Birth Anniversary.)

12. 'Mild and Efficient Molecular Iodine Catalyzed Protection of Carbonyl Compounds as Oxathiolane Derivatives.' KK Rana, C Guin, B Banerjee and SC Roy, *J. Ind. Chem. Soc.*, **2003**, 80, 1005. (Dedicated to Prof. SM Mukherjee.)

13. 'A review on Indian Women Scientists', K.K. Rana and S. Rana, *Communique* (ISSN: 0973-8584), **2014**, March, 8(1), 93-98.

14. 'Review on Medicinal Usefulness of *Vitex negundo* Linn.' S. Rana and K.K. Rana, *Open Access Library Journal* (ISSN: 1234-1010), **2014**, 1(3), 1-13. <http://dx.doi.org/10.4236/oalib.1100508>

15. 'Review on Present Status and Future of Herbal Medicine', K.K. Rana and S. Rana, *The Beats of Natural Sciences* (ISSN: 2348-7615), **2014(June)**, 1(2), 1-8.

16. 'Fundamentals, Representative Applications and Future Perspectives of Green Chemistry: A Short Review' K.K. Rana and S. Rana, *Open Access Library Journal* (ISSN: 1234-1010) **2014**, 1(5), 1-16. <http://dx.doi.org/10.4236/oalib.1100748>

17. 'Microwave Reactors: A Brief Review on Its Fundamental Aspects and Applications' K.K. Rana and S. Rana, *Open Access Library Journal* (ISSN: 1234-1010) **2014**, 1(6), 1-20, <http://dx.doi.org/10.4236/oalib.1100686>

C| Conference Papers:

a) International Conference:

1. KK Rana, 'Present Status and Future of Herbal Medicine', First Convention of Society for Ethnopharmacology, **29th and 30th November, 2014**, Jointly Organized by SFE-India and School of Natural Product Studies, Jadavpur University, Jadavpur, Kolkata-32.

2. KK Rana, 'Studies on Betulinic Acid – A Naturally Occurring Novel DNA Topoisomerase Targeted Anti-tumor Compound', International Seminar on Recent Advances in Molecules and Materials (RA2M-2018), **2nd and 3rd August, 2018**, Jointly Organized by School of Applied Science and Humanities, Haldia Institute of Technology, Haldia and The Indian Chemical Society, Kolkata-09.

3. KK Rana, 'An Unfamiliar Allylic Hydroxylation of Epoxy Betulinic Acid Derivatives', International Seminar on Advancements in Chemical Sciences: Issues and Challenges, **4th and 5th February, 2020**, Organized by Bidhan Chandra College, Asansol, Paschim Bardhaman.

4. KK Rana, 'A Short Review on Mining Activities Considering Sustainability and National Growth', International Webinar on Recent Advances in Chemistry and Material Sciences (RACMS-2020), **2nd, 3rd, 8th, 15th, 22nd and 29th August, 2020**, Organized by The Indian Chemical Society in Collaboration with American Chemical Society.

b) National Conference:

1. KK Rana, '**Microwave Irradiation: Basics and Applications in Organic Reactions**', National Seminar on Chemistry and its Interface with other Scientific Disciplines, **12th December, 2014**, Organized by Sitananda College, Nandigram in collaboration with Royal Society of Chemistry (Eastern India Section).

2. KK Rana, '**Scope of Nanotechnology in Agriculture**', national Seminar on Nanoscience and Nanotechnology (NSNN-2015), **9th and 10th October, 2015**, Organized by Department of Applied Science, Haldia Institute of Technology, Haldia.

3. KK Rana, '**Opportunities and Challenges in Drug Discovery from Medicinal Plants**', UGC Sponsored National Seminar on Recent Development in Bio-Active Molecules (RDBAM-2016), **4th and 5th August, 2016**, Jointly Organized by Haldia Govt. College and Vivekananda Mission Mahavidyalaya, Chaitanyapur.

4. S Rana, KK Rana, '**Medicinal Usefulness of *Swertia chirata* Buch-Ham**', National Seminar on Recent Advances on Multifunctional Materials (RA2M-2017), **3rd and 4th February, 2017**, Organized by School of Applied Science and Humanities, Haldia Institute of Technology, Haldia.

D] Conference / Symposium Attended

International

Sl. No.	Name of Seminar/ Symposia	Organized by	Venue	Date	Financially Supported by
1	First Convention of Society for Ethnopharmacology (SFE-India)	SFE-India and School of Natural Product Studies, Jadavpur University, Jadavpur, Kolkata-32.	Jadavpur University	29 th and 30 th November, 2014	SFE-India and JU
2	'Recent Advances in Molecules and Materials (RA2M-2018)'	School of Applied Science and Humanities, Haldia Institute of Technology, Haldia and The Indian Chemical Society, Kolkata-09.	Haldia Institute of Technology, Haldia	2 nd and 3 rd August, 2018	HIT, Haldia and ICS, Kolkata
3	'Advancements in Chemical Sciences: Issues and Challenges'.	Bidhan Chandra College, Asansol, Paschim Bardhaman.	Bidhan Chandra College, Asansol	4 th and 5 th February, 2020	B C College, Asansol
4	'Recent Advances in Chemistry and Material Sciences (RACMS-2020)'	The Indian Chemical Society in Collaboration with American Chemical Society.	Webinar	2 nd , 3 rd , 8 th , 15 th , 22 nd and 29 th August, 2020	---

National

Sl. No.	Name of Seminar/ Symposia	Organized by	Venue	Date	Financially Supported by
1	'Chemistry and its Interface with other Scientific Disciplines'	Sitananda College, Nandigram in collaboration with Royal Society of Chemistry (Eastern India Section).	Sitananda College, Nandigram	12th December, 2014	Sitananda College and Royal Society of Chemistry (Eastern India Section)
2	National Seminar on Nanoscience and Nanotechnology (NSNN-2015)	Department of Applied Science, Haldia Institute of Technology, Haldia.	HIT, Haldia	9th and 10th October, 2015	HIT, Haldia
3	'Recent Development in Bio-Active Molecules (RDBAM-2016)'	Haldia Govt. College and Vivekananda Mission Mahavidyalaya, Chaitanyapur	Haldia Govt. College, Haldia	4 th and 5 th August, 2016	UGC
4	'Recent Advances on Multifunctional Materials (RA2M-2017)'	School of Applied Science and Humanities, Haldia Institute of Technology, Haldia	HIT, Haldia	3rd and 4th February, 2017	HIT, Haldia

E] Invited Lecture Delivered in Seminars/Webinar: (Title, Name of Seminar, Organizer, Date and Venue): N/A

F] Orientation Programme/Refresher Course/Short Term Courses Completed:

1. Orientation Programme, UGC-Academic Staff College, The University of Burdwan, 21.12.2005—17.01.2006.
2. Summer School on 'Corrosion Fundamentals, Testing and Prevention', MHRD/AICTE under Staff Dev. Programme, Dept. of Chemistry, NIT, Durgapur, 14.07.2008 – 27.07.2008
3. Refresher Course on 'Environmental Science', UGC-Academic Staff College, The University of Burdwan, 23.12.2008—12.01.2009.
4. Winter School on 'Waste Management, Effluent Treatment and Recycling.' MHRD/AICTE under Staff Dev. Programme, Dept. of Chemistry, NIT, Durgapur, 19.01.2009—31.01.2009
5. Refresher Course on 'Environmental Science', UGC-Academic Staff College, The University of Burdwan, 15.10.2011—04.11.2011.
6. Refresher Course on 'History of Science and Technology', UGC-Academic Staff College, The University of Burdwan, 30.01.2015—19.02.2015.
7. Short Term Course on 'Students' Counselling and Guidance', UGC-Academic Staff College, The University of Burdwan, 24.12.2014—30.12.2014.
8. National Workshop on 'PYTHON for Scientific Computing', Jointly Organized by Haldia Institute of Technology, Haldia and Indian Institute of Technology, Bombay, 07.07.2010—08.07.2010.
9. 'Prabodh' Certificate Course in Hindi (Distance Mode), Degree Offered by Ministry of Home Affairs, Govt. of India, Department of Official Language, Hindi Teaching Scheme, New Delhi, (Roll. No. 1184), October, 2009—November, 2010.
10. National Workshop on 'SCILAB', Jointly Organized by Haldia Institute of Technology, Haldia and FOSSEE – Project of Indian Institute of Technology, Bombay, 27.12.2010—29.12.2010.
11. Retraining of College Teachers on 'Development of Scientific Awareness', under UGC Sponsored University with Potential for Excellence Scheme, Jadavpur University, Kolkata-32, 10.03.2006—11.03.2006.
12. Retraining of College Teachers on 'Placement Network Management', under UGC Sponsored University with Potential for Excellence Scheme, Jadavpur University, Kolkata-32, on 21.03.2006.
13. Retraining of College Teachers on 'Science Education and Development of Scientific Bent of Mind', under UGC Sponsored University with Potential for Excellence Scheme, Jadavpur University, Kolkata-32, on 05.01.2007.
14. Retraining of College Teachers on 'Scope of Research in Science and Engineering', under UGC Sponsored University with Potential for Excellence Scheme, Jadavpur University, Kolkata-32, on 16.01.2007.
15. Retraining of College Teachers on 'Computer Aided Teaching', under UGC Sponsored University with Potential for Excellence Scheme, Jadavpur University, Kolkata-32, on 19.01.2007.
16. Retraining of College Teachers on 'Reorientation of an Existing Subject', under UGC Sponsored University with Potential for Excellence Scheme, Jadavpur University, Kolkata-32, on 05.02.2007.

G] Articles Published in Magazines:

- 1) 'মাদক' -- কল্যাণ কুমার রানা; প্রবাহ, গুসকরা মহাবিদ্যালয়ের শিক্ষক সমিতির দ্বিভাষিক পত্রিকা, ১ম বর্ষ, ১ম সংখ্যা, ২০০৭, পৃষ্ঠা ১৮-২০।
- 2) 'বাংলার বিবেক আচার্য প্রফুল্লচন্দ্র' -- কল্যাণ কুমার রানা; দ্বাদশ বর্ধমান উৎসব স্মরণিকা ১৪১৭, বর্ধমান পৌরসভা, ২০১১, পৃষ্ঠা ৯৭-১০৮।
- 3) 'সুবর্ণলিতিকা' -- কল্যাণ কুমার রানা; সুবর্ণজয়ন্তী স্মরণিকা, গুসকরা মহাবিদ্যালয়, বর্ধমান ২০১৫, পৃষ্ঠা ১৭-১৯।

15. Topics Usually Taught and Availability of Corresponding Study Materials:

Sl. No.	Course Name	Semester	Topic Name
1	CHEMISTRY (HONS.)	SEM-I	CC-1: Stereochemistry I: Bonding geometries of carbon compounds and representation of molecules; Concept of chirality and symmetry; Relative and absolute configuration; Optical activity of chiral compounds
2		SEM-II	CC-4: Stereochemistry II: Chirality arising out of stereoaxis; Concept of prostereoisomerism; Conformation
3		SEM-III	CC-7: Organic Chemistry-III: Carbonyl and Related Compounds: Addition to C=O; Exploitation of acidity of α -H of C=O SEC-1: Pharmaceutical Chemistry: Fermentation
4		SEM-IV	CC-10: Organic Spectroscopy: UV Spectroscopy; IR Spectroscopy
5		SEM-V	CC-12: Organic Chemistry – V: Cyclic Stereochemistry- Alicyclic compounds; Pericyclic Reactions- Electrocyclic Reactions; Cycloaddition Reactions; Sigmatropic Reactions.
6		SEM-VI	DSE-3: Green Chemistry
7	CHEMISTRY (GE)	SEM-I	GE-1: Stereochemistry
8		SEM-II	GE-2: Physical Chemistry-I: Kinetic Theory of Gases and Real gases; Liquids; Solids; Chemical Kinetics
9		SEM-III	
10		SEM-IV	GE-4: Solutions, Phase Equilibria, Conductance, Electrochemistry & Analytical and Environmental Chemistry
11	CHEMISTRY (GEN)	SEM-I	DSC-1A (CC-1): Organic Chemistry-1
12		SEM-II	DSC-1B (CC-2): Physical Chemistry-1- Chemical Energetic; Organic Chemistry-2: Ethers (aliphatic and aromatic); Aldehydes and Ketones (aliphatic and aromatic)
13		SEM-III	DSC1C (CC-3): Physical Chemistry-2: Solutions, Phase equilibrium, Conductance, Electrochemistry SEC-1: Basic Analytical Chemistry: Chromatography; Ion Exchange Chromatography
14		SEM-IV	DSC-1D (CC-4): Physical Chemistry-3: Kinetic Theory of Gases; Liquids; Solids; Chemical Kinetics. SEC-2: Analytical Clinical Biochemistry: Basic understanding of the structures, properties and functions of carbohydrates, lipids and proteins; Biochemistry of disease: A diagnostic approach by blood/ urine analysis.
15		SEM-V	DSE1: Chemistry of 3d metals; Organometallic Compounds; Bio-inorganic Chemistry and Applications of UV, IR Spectroscopy SEC-3: Pharmaceutical Chemistry--Drugs & Pharmaceuticals; Fermentation.
16		SEM-VI	SEC-4: Pesticide Chemistry

16. Awards and Recognitions:

Obtained Silver Medal from Vidyasagar University as stood Second in 1996 MSc (Chemistry) Batch.

17. Membership of Reputed Bodies/Organization:

- Life Member: Indian Association for the Cultivation of Science, Jadavpur, Kolkata-32 [Mem. No. 3687/17-4-97].
- Life Member: Indian Chemical Society, 92 APC Road, Kolkata-9 [Mem. No. 5811].

- Life Member: The Indian Science Congress Association, 14, Dr. Biresh Guha Street, Kolkata-17 [Mem. No. L21169].
- Life Member: Indian Science News Association, 92, APC Roy Road, Kolkata-9 [Mem. No. LM 805].
- Life Member: Udbodhan, 1, Udbodhan Lane, Baghbazar, Kolkata- 3 [Mem. No. LK-312P]

18. Significant Information, if any: N/A