CURRICULAM VITAE

1. Name : **DR. SEKHAR GAIN**
2. Specialisation : Inorganic Chemistry
3. Designation : Assistant professor
4. Date of birth : 11. 01. 1981
5. Institutional Address : Ramakrishna Mission Vidyamandira
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9. Academic and Professional Profile (B. Sc.Onwards)

Sl. No	Degree Name	Name of the Institution	Year and place of Award	Specialisation
(i)	Bachelor of Science (B. Sc.) (Chemistry)	Barasat Govt. College, Kolkata(Under the university of Calcutta)	Year of Award: 2003 Place of Award: Kolkata	
(ii)	Master of Science(M. Sc) (Chemistry)	University College of Science and Technology (C.U)	Year of Award: 2005 Place of Award: Kolkata	Inorganic Chemistry
(iii)	Bachelor of Education (B.ED)	Banipur Govt.College (C.U)	Year of Award: 2006 Place of Award: Kolkata	

(iv)	Doctor of philosophy(Ph. D)	Jadavpur University	Year of Award: 2013 Place of Award: Kolkata	Title of the thesis: Kinetics and mechanism of reaction of metal bound superoxide

10. Employment Experience:

Position and organization	Nature of Job	Period
Assistant teacher in chemistry, Kalupur panchpota high school (H.S), Kalupur, North 24 parganas, West Bengal	Teaching	March 2006 - July 2008
Assistant professor in Chemistry, Ramakrishna Mission Vidyamandira, Belur Math, Howrah	Teaching	July 2008 - August 2010
Assistant professor in Chemistry (WBES) Darjeeling Govt. College, Darjeeling, West Bengal	Teaching	August 2010 – August 2011
Assistant professor in Chemistry, Ramakrishna Mission Vidyamandira, Belur Math, Howrah	Teaching	August 2011 – Onwards

11. List of publications:

(i) Mechanistic studies on oxidation of hydrogen peroxide and hydrazine by a metal-bound superoxide. **S. Gain**, R. Mishra, S. Mukhopadhyay, R. Banerjee. *Inorg. Chim. Acta*., 2011, 373, 311–314.

(ii) Kinetic study of oxidation of nitrite with a mettallo superoxide. **S. Gain**, S. Mukhopadhyay, R. Banerjee, *I. J. C (A).*, 2012, 51A, 949-953.

(iii) Kinetics and mechanism of oxidation of thiourea by a bridging superoxide in the presence of Ellman's reagent. **S. Gain**, R. S. Das, R. Banerjee, S. Mukhopadhyay, journal of coordination chemistry., 2016, 69(14), 2136-2147.

(iv) Methylene blue (a cationic dye) adsorption performance of graphene oxide fabricated Fe-Al bimetal oxide composite from water. S. Haque, **S. Gain**, K. Gupta, U.C. Ghosh, *water quality research journal*., 2019, 54, 58-69.

(v) Oxidation of Azide by a Co^{III}- Bound Superoxide Ligand in Perchloric Acid Medium: A Kinetic and Mechanistic Study. **S. Gain**., *Res. Jr. of. Agril. Sci*., 2020, 11(2), 397-401.

(vi) Oxidation of phenol by bridging superoxide ligand in a binuclear Co^{III} – complex containing heteroleptic ligands: kinetics and mechanistic studies. **S. Gain**, *J. Adv. Sci. Res.*, 2020, 11(2), 130-134.

(vii) Mechanistic Study on Oxidation of Hydroxylamine Monosulfonate (HAMS) by a Metal Bound Bridging Superoxide Ligand in Aqueous Acetate Buffer. **S. Gain**, Res. *Jr. of. Agril. Sci*., 2020, 11(5), 1029-1033.

(viii) Oxidation of hydroxylamine by Co^{III}-bound superoxo complex containing chelating ancillary ligands: A kinetics and mechanistic study. **S. Gain**, *J. Indian. Chem. Soc.*, 2020, 11a, 2137-2143.

(ix) Roll of Ellman's reagent for the oxidation of pyridine N- oxide by a superoxide ligand in a Co^{III} bound complex in aqueous acetate buffer medium: A kinetic and mechanistic studies, S. Gain, *J. Adv. Sci. Res.*, 2021, 12(2), 294-300.

(x) Kinetics and mechanistic studies for oxidation of N-benzylhydroxylamine by a Co^{III}-bound bridging superoxo complex in perchloric acid medium. S. Gain, *I. J. C (A).*, 2021, 60A, 927-931.

12. Seminar / Conference presentation:

Sl. No.	**Title of the paper presented**	**Title of Conference/ Seminar**	**Organized by**	**level**
1.	Mechanistic studies of oxidation of H_2O_2 and NO_2^- by a metal bound superoxide containing heteroleptic ligand by suppressing the catalytic path. Dated: 4th and 5th Feb.2016	Recent trend in functional materials I relation to nanomaterials and nanotechnology(RTFMNN)	Department of Chemistry, St.Paul's Cathedral Mission College, Kolkata in collaboration with Indian chemical society, Kolkata.	National level

2.	Kinetic and mechanistic studies of oxidation of nitrite by a metal bound superoxide containing Ancillary ligand. Date: 28-29 Feb. 2016	23rd West Bengal state science and technology conference, 2016.	Presidency University	National level
3.	Role of Ellman's reagent as radical scavengers in the oxidation of thiourea using a metal bound superoxide containing polydentate ligands; A kinetic and mechanistic studies. Date: 9th and 10th December, 2016	Human Life –Current Aspects	Department of Chemistry and Microbiology, Gurudas College.	National level
4.	Oxidation of hydrazine by [(tetrene) $Co^{III}(O_2)$ Co^{III}(tetrene)]$(ClO_4)_5$: A Kinetic and mechanistic studies. Date: 6th and 7th January, 2017	Chemistry Education and Research in Daily Life.	Department of chemistry Ramakrishna Mission Vidyamandira in collaboration with Jadavpur University.	National level
5.	5, 5 –dithio-bis-(2-nitrobenzoic acid) DTNB reagent as sulfhydryl radical scavenger in the oxidation of thiourea by metal bound superoxide: A Kinetic and mechanistic studies. Date: 12th January 2017	An international symposium on facets of chemistry in biology (FOCB-II).	Department of chemistry St. Xavier's College, kolkata	International level

6.	Chemistry and reaction mechanism for the oxidation of nitrite by $[(tetrene)Co^{III}(O_2)Co^{III}(tetrene)]^{5+}$, a metal bound superoxide in acetate buffer.	ICBS-2020 8^{th} and 9^{th} January, 2020	Department of Chemistry, Surendranath College, kolka	International
7.	Oxidation of thiourea by metal bound superoxide; $[(NH_3)(en)_2Co^{III}(O_2)Co^{III}[(NH_3)(en)_2](ClO_4)_5$; in presence of Ellman's Reagent in aqueous acetate buffer medium: A kinetic and mechanistic studies.	International seminer on current trends in chermistry. 10^{th} January, 2020	Dimond Harbour Women's University in associate with Indian chemical sociaty	International

13. Books Articles:

(i) "Oxidation of phenol by bridging superoxide ligand in Co (III) complex containing polydentate ligands" Recent advances in material science ISBN No: 978-81-928110-9-3, 2016.

14. Sponsored Research Project:

Title of the project	**Sanction date**	**Completion date**	**Project cost**	**Sponsoring organisation**
Reactivity and mechanistic studies in transition metal bound superoxide complexes	**25/02/2015**	**25/02/2017**	**4,10,000.00**	**UGC NEW DELHI, Vide sanction no. PSW - 067/14-15 (ERO)**