

## DR. Mahendra Sahebrao Borse

### Associate Professor

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1. Department : Chemistry
2. Qualification : M.Sc., Ph.D.
3. Designation : Associate Professor
4. Date of Appointment : 11-12-2010
5. Mob. No. : 09923297811
6. Orientation/Refresher /FDP/STC/Moocs Courses /Train the Teacher etc.

Sr.no.	Name of the Course	Duration	HRDC/Place
1	Orientation Course	04/03/2013 to 31/03/2013	ASC, Ahemdabad, Gujarat University
2	Refresher Course	10/10/2014 to 02/11/2014	ASC New Delhi, Jamia, Millia Central University, New Delhi
3	Refresher Course	01/12/2017 to 21/12/2017	ASC, Goa University, Goa
4	Two Week FDP [MOOC'S: 2.0] [Online]	18/05/2020 to 03/06/2020	Teaching Learning Center, Ramanujan College, University of Delhi.
5	One Week FDP [Online]	02/06/2020 to 07/06/2020	Vinayakrao Patil Mahavidyalaya, Vijapur, Aurangabad [UGC Scheme-STRIED Component-I]
6	One week FDP [Online]	08/06/2020 to 14/06/2020	Teaching Learning Center, Ramanujan College, University of Delhi.
7	One week FDP [Online]	01/07/2020 to 06/07/2020	Online Teaching, Learning and Evaluation Swami Ramanand Teerth Marathwada University, Nanded
8	One week FDP [Online]	11/11/2021 To 17/11/2021	Guru Angad Dev Teaching Learning Centre, A Centre of Ministry of Education under PMMMNMTT
9	One week FDP [Online]	02/05/2022 To 07/05/2022	Amar Sewa Mandals, Kamla Nehru Mahavidhyalaya, Nagpur.

## 7. Research Details:

	Title	Subject	Name of the University	Year of Award
Ph. D	“Physicochemical Properties of Bis-Cationic Surfactant in Aqueous Solution	Chemistry	The M. S. University of Baroda, Vadodara.	2007
Propotional Training Course	Completed <u>Basic XRPD training</u>	Instrumentation	PANalytical, Almelo, Netherlands	2008

## 8. Research Projects:

Sr. no.	Title	University /UGC	Year of Completion	Sanctioned Amount
1.	To study the role of different types of counter-ions on aggregation behavior of cationic surfactants in aqueous solution	UGC	2016	70,000/-
2.	Solution properties of novel cationic hydroxylated gemini surfactant in presence of alcohols and electrolytes in aqueous mixed system	VCRMS	2019	1,00,000/-

## 9. Research Guide: Yes

Year : 2017

1	No. of Student working under	03
2	No. of Student got Awarded	00

10. Memberships:

Sr. No.	Name of the Body/University	Member Since and to
1	Alumni Association of Chemistry Department, The M.S. University of Baroda, Gujarat, India	Since 2002
2	Association of Chemistry Teachers KBCNMU Jalgaon, Maharashtra, India	Since-2012

11. On University, District, Tehsil Bodies:

12. Book Publications:

Sr. No.	Title of the Book	Year of Publication	ISBN no.
1	Industrial Chemistry for T.Y.B.Sc CH-355	2017	9388706854
2	Industrial Chemistry for T.Y.B.Sc., [CH-355]	<i>Nirali Prakshan 2019</i>	978938940617-7
3	Industrial Chemistry,for T.Y.B.Sc., [CH-365]	<i>Nirali Prakshan 2019</i>	978938870685-8
4	Industrial Chemistry,for T.Y.B.Sc.,[CH-504]	Nirali Prakshan 2020	978939043724-5
5	Analytical Techniques,for T.Y.B.Sc., [CH-605]	<i>Vrinda Publications 2021(First Edition)</i>	978938883478-0
6	Physical and Inorganic Chemistry for F.Y.B.Sc. [CH-101]	<i>Vrinda &amp; Kumud joint Venture Publications 2022(First Edition)</i>	978939386737-7
	Chemistry Practical Handbook,for F.Y.B.Sc. [CH-103]	<i>Vrinda &amp; Kumud joint Venture Publications 2022(First Edition)</i>	978939386729-2

13. No of conference/seminar/workshop attended:

1	No. of Seminar/Conference Attended	International	03
		National	25
		State level	10
2	No. of workshop Attended		08

14. Research Paper Publication: **Citation :441 and Research Interest Score :252.4, h index: 10 [1 Mar.2023]**

**Number of publication : 28**

**[ORCID ID: [bhttps://orcid.org/0000-0001-7311-113X](https://orcid.org/0000-0001-7311-113X)]**

Sr. no.	Title of the paper	Name of the Journal	Month and Year of Publication	ISSN no.	Impact Factor & Citation	UGC CARE List no.	Level National/International
1	Small Angle Neutron Scattering and Viscosity Studies of Micelle Solution of Bis-cationic Surfactants Containing Methyl, Hydroxyethyl Quaternary Ammonium Head Groups.	Mahendra Borse, Vikas Sharma, V. K. Aswal, N. K. Pokhriyal, J.V. Joshi, P. S. Goyal, Surekha Devi, <b>Phy. Chem. Chem. Phys.</b> , 6, 3508-3514. DOI: 0.1039/b402767c Pub.: Royal Society of chemistry	<b>2004</b>	EISSN: 1874-4907; ISSN:1463 6-9076,	4.49 CI=28	7542	International
2	Dependence of aggregation behaviors and physicochemical properties of bis-cationic surfactant on the polarity of surfactant head group.	Mahendra Borse, Surekha Devi, <b>Colloids and Surface A.</b> , , 245, 1-8. DOI:10.1016/j.colsurfa.2004.06019 Pub.: Elsevier	<b>2004</b>	EISSN: 1874-4359; ISSN:0927-7757,	2.49 CI=21	2066	International
3	Synthesis characterization and SANS studies of novel alkanediyl □,□-bis(alkyl mono methylethanol ammonium bromide) cationic dimeric surfactants.	Vikas Sharma, Mahendra Borse, V. K. Aswal, N. K. Pokhriyal, J.V. Joshi, P. S. Goyal, Surekha Devi, <b>J. of Colloids and Interface Sci.</b> , 277, 450-455. DOI:10.1016/j.jcis.2004.04.032	<b>2004</b>	EISSN: 1095-7103; ISSN:0021-9797	3.37 CI=42	4943	International
4	Effect of Head Group Polarity and Spacer Chain Length on the Aggregation Properties of Gemini Surfactants in an Aquatic Environment.	Mahendra Borse, Vikas Sharma, V. K. Aswal, N. K. Pokhriyal, J.V. Joshi, P. S. Goyal, Surekha Devi, <b>J. of Colloids Interface Sci.</b> , 284, 282-288 DOI:10.1016/j.jcis.2004.10.008	<b>2005</b>	EISSN: 1095-7103; ISSN:0021-9797	3.37 CI=84	4943	International
5	Oil solubilisation capacity, liquid crystalline properties and anti-bacterial activity of alkanolamines based novel cationic surfactants .	Vikas Sharma, Mahendra Borse, Keyur Dave, Jayashree Pohnerkar Ashish Prajapati and Surekha Devi, <b>J. of Dispersion Sci. and Tech.</b> , 26,	<b>2005</b>	EISSN; 1532-2351; ISSN:0193-2691	0.80 CI=24	5031	International

		421, DOI:10.1081/DIS-200054563. Pub.: Taylor & Francis					
6	New hydroxylated cationic Gemini surfactant as effective corrosion inhibition for mild steel in Hydrochloric acid medium.	Vikas Sharma, Mahendra Borse, Surekha Devi, <b>Tenside Surf. Det.</b> , 42, 3. DOI: Pub.: Carl Hanser Verlag	<b>2005</b>	EISSN: 0932-3414; ISSN:0932-3414,	0.74 CI=24	8725	International
7	Aggregation properties of mixed surfactant system of butane-1,4-bis(dodecyl hydroxyethyl methyl ammonium bromide) and its monomeric counter part.	Mahendra Borse, Vikas Sharma, V. K. Aswal, J.V. Joshi, P. S. Goyal, Surekha Devi, <b>Colloids and Surface A:</b> , 287, 163 DOI:10.1016/j.colsurfa.2006.03-049	<b>2006</b>	EISSN: 1874-4359; ISSN:0927-7757	2.49 CI=10	2066	International
8	Importance of head group polarity in controlling aggregation properties of cationic gemini surfactants	Mahendra Borse, Surekha Devi, <b>Advances in Colloid &amp; Interface Science</b> , ,123,387-399. DOI:10.1016/j.colsurfa.2004.06019	<b>2006</b>	EISSN: 1873-3727; ISSN:0001-8686,	9.42 CI=76	278	International
9	Effect of bivalent malate on aggregation behavior of butane-1,4-bis(dodecyl hydroxyethylmethyl ammonium bromide) surfactant.	Mahendra Borse, V.K. Aswal,P. S. Goyal, Surekha Devi, <b>Colloids and Surface A:</b> , 305,10. DOI:10.1016/j.colsurfa.2007.04.034	<b>2007</b>	EISSN: 1874-4359; ISSN:0927-7757	2.49 CI=2	2066	International
10	Effect of tuned head polarity of cetyl trimethyl ammonium bromide on their physicochemical properties.	Tryambakrao J. Patil and Mahendra S. Borse, <b>Tenside surfactant and Detergent</b> , ,51(3),267-273, DOI: Pub.: Carl Hanser Verlag	<b>2014</b>	EISSN: 0932-3414; ISSN:0932-3414	0.74 CI=3	8725	International
11	Role of aromatic bi-valent counterion on physicochemical properties of cetylhydroxyethyl dimethyl ammonium bromide surfactants.	Tryambakrao J. Patil and Mahendra S. Borse, <b>Journal of advanced in science and technology</b> ,14(2),59-65. Pub.: NMU jalgaon	<b>2014</b>	ISSN: 0971-9563	CI=0		National
12	Oil solubilization and aggregation behavior of CTAB surfactant and its derivatives by SANS.	Mahendra S. Borse, Tryambakrao J. Patil, <b>Chemical science transaction</b> , 3(4)1326-1333. DOI:10.7598/cst2014.868	<b>2014</b>	ISSN:2278-3318.	0.61 CI=3		National

		Pub.: e-journals.in					
13	Cloud point and thermodynamic properties of non-ionic surfactant Triton-x-100 in presence of various and inorganic salts.,	Anil D. Kakuste, Mahendra S. Borse, and G. H. Sonawane, <b>Journal of Chemical and Pharmaceutical Research</b> , 7(5),1193-1198,	<b>2015</b>	ISSN:0975-7384.	0.75 CI=0		National
14	Effect of Polyacrylic acid and polyacrylamide on clouding behavior of Triton-x-100in aqueous medium.	Anil D. Kakuste, Mahendra S. Borse, and G.H. Sonawane, <b>Tenside surfactant and Detergent</b> , 52(1),62-66, Pub.: Carl Hanser Verlag	<b>2015</b>	EISSN:0932-3414; ISSN:0932-3414	0.74 CI=1	8725	International
15	Influence of malate counterion on phyhsicochemical properties of butanediyl-1,4-bis(hexadecyl hyhydroxyethyl methyl ammonium bromide) surfactant	Mahendra S. Borse, Dilip S. Patil and Anil D. Kakuste, <b>European Journal of Pharmaceutical and Medical Research</b> , (11),41b 8-422,	<b>2016</b>	ISSN:2394-3211.	SJIF 3.62 CI=0		National
16	Polyacrylic acid and polyacrylamide as cloud point modifier for Brij-30 in alcoholic aqueous solution	Anil D. Kakuste, Mahendra S. Borse, and G. H. Sonawane, <b>Journal of Dispersion Science and Technology</b> , 38, (3) 334–338, <a href="https://doi.org/10.1080/01932691.2016.1165115">doi.org/10.1080/01932691.2016.1165115</a> , Pub.: Taylor & Francis	<b>2017</b>	EISSN: 1532-2351; ISSN:0193-2691,	0.80 CI=3	5031	International
17	Comparative effect of cationic gemini surfactant and its monomeric counterpart on the conformational stability and activity of lysozyme	Taruna Sharma, Neeraj Dohare, Mahendra S.Borse, and Rajan Patela, <b>RSC Advances</b> ,7,pp-16763. DOI: 10.1039/c7ra00172j. Pub.: Royal Society of chemistry	<b>2017</b>	EISSN:2046-2069; ISSN: 2046-2069,	3.89 CI=51		International
18	Effect of cationic gemini surfactant and its monomeric counterpart on the conformational stability and esterase activity of human serum albumin	Mehraj ud din Parray, Mahendra S. Borse, Rajan Patel, <b>Journal of Molecular Liquid</b> ,260,65-77. Doi.org/10.1016/j.molliq.2018.03.070, Pub.: Elsevier	<b>2018</b>	EISSN: 1873-3166; ISSN:0167-7322	3.65 CI=43	5515	International

19	Role of surfactant as adjuvant in agriculture and agrochemical formulation.	Mahendra S. Borse, <b>Journal of Research and Development</b> , vol.08,issue 03,164-169.	<b>2018</b>	ISSN: 2230-9578	Cos- mos: 4.27 CI=0	64768	National
20	Comparative effect of cationic gemini surfactant and its monomeric counterpart on the conformational stability of phospholipase A2	Mehraj ud din Parray, Mahendra S. Borse, Rajan Patel, <b>Journal of Molecular Structure</b> , 1175, 49-55, Doi.org/10.1016/j.molstruc.2018.07.078Pub.: Elsevier	<b>2019</b>	EISSN: 18728014; ISSN:0022 2860	2.12 CI=26	5522	International
21	Viscosity, Density and Ultrasonic velocity studies f Binary liquid solution of alcohols in nitrobenzene	Sandeep R. patil , Mahendra S. Borse and Mahendra Sonwanne, <b>Journal of Research and Development</b> , vol. 8, issue 03,2018, 105-109.	<b>2018</b>	ISSN: 2230-9578	Cos- mos: 4.27 CI=0	64768	National
22	Density, Viscosity and Ultrasonic Velocity of Brij-35 In Presence of Water Soluble Polymers	Anil D. Kakuste, Mahendra S. Borse, and G.H. Sonawane, <b>Journal of Research and Development</b> Doi:10.37398/JSR.2021.650725, The Banaras Hindu University	<b>2021</b>	ISSN :04479483I SSN No. 04479483		64768	National
23	Thermo acoustic studies of mixed surfactants (Brij-97 + DTAB) system in presence of various additives.	Pooja P. Patil, Kiran D.Patil, Gunavant. H. Sonawane, Mahendra S. Borse, <b>Journal of Scientific Research</b> , , 65,7,115-119, Doi:10.37398/JSR.2021.650707, Publisher: The Banaras Hindu University.	<b>2021</b>	ISSN: 04479483,		UGC care list group:D.	National
24	Study of Thymyl Ethers as a Plant Growth Regulator	Jagdish Patil, Mahendra S. Borse, <b>Journal of Scientific Research</b> , 65,7,103-105,. Doi:10.37398/JSR.2021.650722,	<b>2021</b>	ISSN No. 04479483,		UGC care list group:D.	National
25	Study of Molecular Interaction of 2-(Dimethylamino)Ethanol With Some Higher Alcohols at 298.15K.	Sanjay J. Bhadane and Mahendra S. Borse, <b>Journal of Scientific Research</b> , 65,7,124-128,	<b>2021</b>	ISSN No. 0447-9483		UGC care list group:D.	National

		Doi:10.37398/JSR.2021.650727,					
26	Influence of n-Alcohols on Aqueous DTAB Micelles Studied by Ultrasonic Analysis	Kiran D. Patil, Gunavant. H. Sonawane, Mahendra S. Borse, <b>Tenside surfactants Detergents</b> , 59(1)60-69, <a href="https://doi.org/10.1515/tsd-2021-2387">https://doi.org/10.1515/tsd-2021-2387</a> Pub.: Carl Hanser Verlag	<b>2022</b>	EISSN:0932-3414; ISSN:2195-8564,		8725	International
27	Influence of Alcohols on the Lower Consolute Behavior and Thermodynamic Approach of Triton X-114 Aqueous Two-Phase systems ,	Mahendra S. Borse, Bhashkar K. Nikam, <b>Journal of the Indian Chemical Society</b> ,99,100572, <a href="https://doi.org/10.1016/j.jics.2022.100572">https://doi.org/10.1016/j.jics.2022.100572</a>	<b>2022</b>	ISSN:194522	IF = 0.284	11061	International
28	Fostering the Research Culture Via National Education Policy of India	RESEARCH JOURNEY' <b>International E- Research Journal National Education Policy -2020</b> , Issue – 312 (A) :120- 125,	<b>2023</b>	, E-ISSN : 2348-7143,	IF = 6.625		National
29	Tuning Of Coacervate Phase Behavior Of Polyoxyethylene (4) Lauryl Ether In Aqueous Alcoholic Solution: Investigation Of Thermodynamics	Mahendra S. Borse, Bhashkar K. Nikam, <b>European Journal of Advanced Chemistry Research</b> , Accepted.	<b>2023</b>	ISSN 2684-4478,			International
30	Micellization of Dodecyl tri methyl ammonium bromide by the influence of Poly acrylic acid in aqueous medium	<u>Kiran D. Patil</u> , Gunvant H. Sonawane, Mahendra S. Borse*, <b>Journal of Scientific Research</b> , Accepted.	<b>2023</b>	ISSN: 2070-0237 (Print); 2070-0245 (Online)			National

#### 14. Awards and Recognitions: