CURRICULUM VITAE

Name : **Dr. DATTA MADAMWAR**

Designation : Scientific Advisor

Address : P. D. Patel Institute of Applied Sciences,
Charotar University of Science and Technology
CHARUSAT Campus, Changa 388 421,
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Date of Birth : April 1, 1955

Nationality : Indian

Academic Qualifications:

M.Sc. in Microbiology, Nagpur University, Nagpur

Ph.D., Birla Institute of Technology and Science, Pilani

Professional Experience:

- Scientific Advisor, Charotar University of Science and Technology, Changa
- UGC BSR Faculty Fellow, Post Graduate Department of Biosciences, Sardar Patel University, Vallabh Vidyanagar from June 15, 2017 to June 14, 2020
- Dean, Faculty of Science, Sardar Patel University, Vallabh Vidyanagar from Dec. 5, 2014 to March 31, 2017.
- Head, Post Graduate Department of Biosciences, Sardar Patel University, Vallabh Vidyanagar from March 18, 2002 to March 17, 2007.
- Professor at Department of Biosciences, Sardar Patel University, Vallabh Vidyanagar from June 30, 1998 to June 14, 2017
- Reader (Associate Professor) at Department of Biosciences, Sardar Patel University, Vallabh Vidyanagar from Sept. 20, 1986 to June 29, 1998
- Lecturer at Birla Institute of Technology & Science, Pilani from Aug. 10, 1978 to Sept. 16, 1986.

Awards / Honors Received / Visits Abroad:

- Received several awards for research mainly Biotechnology Associateships and Visiting Scientist under European Commission.
- Visited Germany, U.K, Austria, Switzerland, France, Finland, Greece, China, Japan, Malaysia, Singapore, Dubai, Brazil and U. S. A. under different visiting fellowships.
- Recipient of DBT sponsored project under **Center of Excellence and Innovation in Biotechnology** on "Molecular & Omics Technologies"
- Nominated by Government of India as one of the expert members of a team for bilateral collaboration on Bioresources and Environmental Biotechnology to visit Helsinki, Finland during May 4-5, 2007 through Department of Biotechnology, New Delhi.
- Recipient of Visiting Professorship at Swiss Federal Institute of Technology of Lausanne, EPFL-ENAC-SGC, Lausanne, Switzerland during Dec. 1- 31, 2009.
- Recipient of Visiting Professorship at University of Blaise Pascal, Clermont-Ferrand, France during June 1-30, 2016.
- Recipient of coveted honor of BHU Centennial Award of Biotech Research Society of India for the year 2016
- Recipient of coveted honor Sardar Vallabhbhai Patel Rashtriya Krushi Jeevan Gaurav Puraskar – 2019 under the auspices of 4th ANAJ India Meet 2019 by Honorable Governor of Gujarat on 7th Sept 2019.
- Visited Miyazaki University, Miyazaki, Japan on invitation under SAKURA SCIENCE EXCHANGE Program (Sakura Science Plan) as Coordinator by Japan Science and Technology from Dec.16 – 22. 2019.

Membership/Honorary Position Held:

- Member of American Association of Microbiologists, U.S.A.
- President, Biotech Research Society of India, BRSI, 2015-2017

- Life Member of Association of Microbiologists of India
- Life Member of Society of Biological Chemists (India)
- Life Member of Biotech Research Society of India
- Life Member of International Bioprocessing Association
- Life Member of Association of Biotechnology and Pharmacy

Awards / Special Attainments

- Member of Expert Committee under Fast Track Scheme in the are of Life Sciences of young scientist (2004-2007)
- Member of Biotechnology Council of Government of Gujarat till 2017 from inception.
- Member of Programme Advisory Committee (PAC) of Department of Science & Technology, New Delhi for International Cooperation in the area of Life Sciences
- Expert Member of Advisory Committee of UGC-SAP Programme of Department of Microbiology & Biotechnology Centre, M. S. University of Baroda, Baroda, Department of Microbiology, Kakatiya University, Warangal and Department of Microbiology, Shivaji University, Kholapur, Department of Biosciences, Veer Narmad South Gujarat University, Surat.
- Member of Task Force Committee of DBT in the area of Environmental Biotechnology (2007-2017), Apex Committee for North Eastern Region Biotechnology Programmes (2014-2017).
- Member of Council and Technical Board of Gujarat State Biotechnology Mission till 2017 from the inception.
- Fellow of Gujarat Science Academy
- Fellow of International Bioprocessing Association
- Fellow of Biotech Research Society of India
- Fellow of Association of Microbiologists of India
- Fellow of Association of Biotechnology and Pharmacy.
- Editorial Board Member of Bioresource Technology (Elsevier) (2010-2017), Frontiers in Bioengineering and Biotechnology, Current Biotechnology (Bentham) and many national journals. Guest Editor of Special Issue

BIOCATALYSIS of Bioresource Technology, Elsevier, Guest Editor of Special Resaerch Topic of Frontiers in Microbiology and Frontiers in Bioengineering and Biotechnology.

- Editor of Algal Green Chemistry : Recent Progress in Biotechnology published by Elsevier, 2017
- Recipient of coveted honor of "**Life Time Achievement Award**" of Biotech Research Society of India (BRSI) for the year 2019.
- Recipient of coveted honor of "**Life Time Microbiology Devotion Award**" of Microbiologists Society, India

Research Specialization:

Professor Datta Madamwar currently Scientific Advisor, Charotar University of Science and Technology, Changa, Gujarat, India and former UGC BSR Faculty Fellow at Post Graduate Department of Biosciences, Sardar Patel University, Vallabh Vidyanagar, Gujarat, India, got his Ph.D from BITS, Pilani. He is a former Professor and Head, Department of Bioscience and former Dean, Faculty of Science. He has a vast research experience as a postdoctoral fellow at TIFR, Mumbai, Universistat Frankfurt, Germany, Universitstat Konstanz, Germany, and also served at BITS, Pilani. Professor Madamwar is a Microbial Biotechnologist with diverse research interest. His current main focus is on Non-aqueous Enzymology, Industrial Liquid Waste Management and Cyanobacterial Phybiliproteins. He has done significant contribution in developing different types of bioreactors for the treatment of industrial waste water. His major work involves molecular phylogenetic approach to determine both cultivable and uncultivable bacterial diversity and preparation of metagenomic library. Dr. Madamwar has provided a concept for the enzyme catalysis in apolar organic solvents without the loss of enzyme activity. He has reported various novel, efficient and rapid methods of purification of phycobiliproteins. The phycoerythrin has been purified to the highest purity level 5:70 ever achieved so far. This has laid to crystallization and structure determination of α-subunit of phycoerythrin. He has reported more than dozen structures of various phycobiliproteins. He is a recipient of coveted honor of "**Life Time Achievement Award**" of Biotech Research Society of India (BRSI) for the year 2019 and recipient of

European Commission Visiting Scientist Fellowship, Fellow of International Bioprocessing Association, Fellow of Biotech Research Society of India, Fellow of Association of Microbiologists of India, Fellow of Association of Biotechnology and Pharmacy and Gujarat Science Academy and member of several academic bodies. Dr. Madamwar is a member of several task force and advisory committees of the National funding agencies like DBT, DST, GSBTM. He is also a member of editorial board of several national and international journals such as Bioresource Technology, Elsevier. Professor Madamwar has more than 270 research publications in highly reputed international journals several book chapters and one provisional American Patent to his credit. He is a well traveled researcher with his research visits and gave invited talks in several countries including Germany, UK, Austria, Switzerland, France, USA, Malaysia, Singapore, Brazil, China, Dubai, Finland, Japan and many others.

Publications:

1. **Total Publications** - **277**
   Review articles - 20
   Research papers - 257

2. Book - One (Edited)

3. Paper Presentation - >100

No. of Ph. D. students guided: 52 (completed)

No. of Post-Doctral Students: 03

1. **Citation Index** as per Google Scholar Citation: **12,500**, **h-index 63**, **i10 index 200**

Patents

Richard Gross, Vishal Shah. Frantisek Nerud, Datta Madamwar. Sophorolipids as enzyme inducers, US Patent Filed 2007.

RESEARCH PROJECTS UNDERTAKEN

(All projects handled independently)

	Title of Project	Funding Agency	Duration From -To	No. of Scientists	Amount In Rs.
COMPLETED					
1	Energy Recovery from Water Hyacinth Using Biphasic Biogas Technology	DNES New Delhi	Mar. `88 to Jun. `91	Two JRF/SRF One Tech. Asst.	6,47,044/-
2	Glucose-Oxidase System	Gluco-Chem Industry, Baroda	Nov. `87 to Oct. `89	One JRF	10,000/- per annum
3	Activation and Stabilization of Enzymes Entrapped into Reversed Micelles of Surfactants on Organic Solvents	UGC New Delhi	Aug. `90 to Jul. `93	One JRF One Tech. Asst.	74,608/-
4	Photo-hydrogen Production Through Coupled System Containing Bacteriorhodopsin and other Pigments	CSIR New Delhi	Jul. `90 to Jun. `94	One JRF/SRF/RA	3,79,805/-
5	Biotechnology of Biomethanation of Salty Cheese Whey	GEDA Baroda	Apr. `94 to Mar. `96	Two JRF/ Tech. Asst.	2,30,000/-
6	Investigation into the Micellar Process for Enzymatic Reaction and Protein Recovery	DBT New Delhi	Nov. `96 to Mar. `00	One JRF	15,45,200/-
7	Development and Formulation of Microbial Ecosystem for Efficient and Faster Biodegradation of---- Neem Hulls	NTGCFL Anand	Aug. `97 to Aug. `99	One JRF	1,33,100/-
8	Integrated Use of Solar Energy and Waste Water for Biological Hydrogen Production	UGC New Delhi	Jul. '97 to Jun. '02	Two JRF	7,23,632/-
9	Biodegradation of Textile and Dyestuff Industrial Effluent	DBT New Delhi	Aug. '99 To Aug. '02	Two JRF, One SRF	30,44,000/-
10.	Development of Immobilization System of Lipase for Transformation of Non Traditional Oil	CSMCRI	Jan. '02 To Dec. 02	One JRF	1,00,000/-
11.	Strengthening of Food Biotechnology	DBT New Delhi	Apr. '98 To Mar. '03	Collaboration with Home Sciences Department	49,00,000/-
12	An Integrated Approach for Photo-Evolution of Hydrogen & Transformation of Textile Dyes Present in Waste Water by Cyanobacteria	UGC New Delhi	Apr. 02 To Mar '05	One Project Fellow	6,37,000/-
13.	Microbial Process for Treatment of Common Industrial Effluents: A CETP Concept	DBT New Delhi	April 03 to March 06	Two JRF & one Project Assistant	26,72,000/-

14.	Bioremediation and Decolorization of Distillery Spent Wash.	DBT New Delhi	Mar 04 to Apr 07	One JRF and One Laboratory Assistant.	16,19,000/-
15.	Preparation and Characterization of Immobilized Lipase for Flavor Production in Water Restricted Microenvironment	GSBTM	May2005 to Mar 2008	One JRF	8, 03,375/-
16.	Production, Purification, Characterization, Structure Determination and Application of Phycobiliproteins from Cyanobacteria.	DBT New Delhi	Aug 2006 to Oct. 2008	One JRF	29,19,600/-
17.	**"**Impact of Industrial Pollution on microbial Diversity in Region around Narmada estuary of Gujarat"	DST New Delhi	Aug 2005 to Jan 2009	One JRF	23,64,000/-
18.	Isolation, Identification and Characterization of Genes for Azo Dye Degradation: An Approach towards Construction of Efficient Bioremediation Strain	DBT New Delhi	Oct 2006 To Mar 2010	Two JRF & one Project Assistant	64,05,000/-
19.	Biotechnological process for synthesis of food esters in organic solvents using microemulsion based organogel entrapped lipases	UGC New Delhi	April 2008 to March 2011	One Project Fellow	11,66,300/-
20.	Metagenome analysis for metabolic pathways present in activated biomass at common effluent treatment plant (CETP)	DBT New Delhi	Jan. 2010 to May 2013	One JRF and One Project Assistant	61,32,000/-
21.	Molecular assessment of bacterial community structure of long term polluted sea coast near Alang ship breaking yard and exploitation of the bacterial wealth for PAH bioremediation	DST New Delhi	Sept.2010 to August 2013	One JRF	26,95,000/-
22.	Application of periodic discontinuous batch operation to enhance treatment efficiency of dye containing waste-water	DBT New Delhi	October 2010 to Sept. 2013	Two JRF	51,02,000/-
23.	Folding and stability of naturally truncated photosynthetic pigment, C-phycoerythrin from cyanobacteria *Phormidium tenue*	DST New Delhi	August 2012 to July 2015	One PF	3,60,000/-
24.	Molecular and '-omics' technologies to gauge microbial communities and bioremediation of xenobiotic contaminated sites.	DBT New Delhi	Sept. 2010 to Sept. 2016	One RA Three JRF One PA One FA	3,36,57,000/-
25.	Molecular assessment of bacterial community structures of long term oil contaminated soil and screening of lipase producers for lipase production and their application in ester synthesis in organic solvents	UGC New Delhi	April 2013 to March 2016	One PF	13,55,800/-

26.	Mapping of Research outcome and development of compendium in the area remediation of dye/dye intermediates and textile industrial waste.	DBT New Delhi	Nov. 2015 to May 2017	One RA One PA	12,37,599/-
27	Ecological perspective of Rann of Kachchh: Studies on Physio-chemical and community structure of Soil	DBT, New Delhi	Aug. 2014 to March 2018	One JRF One PA	85,79,843/-
28	Prospecting microalgae and cyanobacteria for high value pigments	DBT, New Delhi	Sept. 2017 to Aug. 2020	One JRF One PA	56,62,200/-

ONGOING PROJECTS:					
	Title of Project	**Funding Agency**	**Duration From –To**	**No. of Scientists**	**Amount In Rs.**
1.	GIS-based mapping of microbial diversity across the Ganges for ecosystem services	National Mission for Clean Ganga (NMCG), Ministry of Jal Shakti	Oct. 2019 to Oct. 2012	One RA One PF	Rs. 39,90,00/-

LIST OF Ph. D. STUDENTS

ALL STUDENTS HAVE BEEN GUIDED INDEPENDENTLY

Sr. No.	Name	Title	Year	University
1	Seema Patel	Some studies on gluconic acid production by fermentation and immobilized enzyme system	1991	S. P. University V. V. Nagar
2	Nikki Jain	Studies on characterization of bacteriorhodopsin and other pigments using liquid membrane bilayers and their exploitation towards hydrogen production	1991	S. P. University V. V. Nagar
3	Vikram Patel	Some Studies on biomethanation of water hyacinth-cattle dung	1991	S. P. University V. V. Nagar
4	Anami Patel	Some studies on optimization of energy recovery from water hyacinth-cattle dung using biogas technology	1992	S. P. University V. V. Nagar
5	Sangeeta Patel	Some Studies on biophysical characterization of *Halobacterium halobium* and its exploitation towards hydrogen production along with cyanobacteria	1993	S. P. University V. V. Nagar
6	Manik Desai	Energy recovery from cheese whey and poultry waste	1994	S. P. University V. V. Nagar
7	Pratisha Dave	Optimization of process parameters for Ca-gluconate production using free and immobilized microbes and enzymes	1995	S. P. University V. V. Nagar
8	S. Subramani	Enzyme catalysis in organic solvents using reverse micelles - with special reference to arginase and invertase	1995	S. P. University V. V. Nagar
9	Chirag Patel	Some studies on biotechnology of biomethanation for energy recovery from cheese whey	1997	S. P. University V. V. Nagar
10	Akshaya Gupte	Bioconversion of lignocellulosic waste by co-cultivation of *Aspergillus ellipticus* and *Aspergillus fumigatus* under solid state fermentation	1997	S. P. University V. V. Nagar
11	Priti Patel	Some studies on energy recovery from cheese whey using anaerobic biotechnology	1997	S. P. University V. V. Nagar
12	Rajvit Bagai	Biotechnological and biophysical aspects of *Halobacterium halobium* along with cyanobacteria toward photo-evolution of hydrogen : Some studies	1997	S. P. University V. V. Nagar
13	Claudia Shah	Reverse micellar system as a tool to study enzyme catalysed reactions in organic solvents: Study with reference to few hydrolytic enzymes	1998	S.P. University V.V. Nagar
14	Hardik Patel	Biotechnological aspects of biomethanation of acidic wastewater of petrochemical Industry	2001	S. P. University V. V. Nagar
15	Krishnakant Soni	Biocatalysis in non-conventional media : Studies with special reference to acid phosphatase and lipase	2001	S. P. University V. V. Nagar

16	Vishal Shah	Exploitation of cyanobacteria for photohydrogen production and wastewater treatment	2001	S. P. University V. V. Nagar
17	Pradeep Verma	White rot fungi mediated integrated approach for lignocellulosic waste decomposition and textile dye decolorization	2002	S. P. University V. V. Nagar
18	Nikhil Bhatt	Biodegradation of textile & dyestuffs industrial waste water.	2002	S. P. University V. V. Nagar
19	Haresh Keharia	Bioremediation of dyes in textile and dyestuff industrial wastewaters: Basic and applied aspects	2003	S. P. University V. V. Nagar
20	Amita Shah	Xylanase production by *Asperigillus foetidus* under solid-state fermentation and its biotechnological applications	2003	S. P. University V. V. Nagar
21	Amit Thakar	Some studies on engineering and applications of esterase.	2004	S. P. University V. V. Nagar
22	Amit Parikh	Cyanobacterial biotechnology for exopolysaccharide production and textile dye decolorization	2005	S. P. University V. V. Nagar
23	Sini Mathew	Microbial decolorization and degradation of textile dyes: Studies with reference to azo dyes	2005	S. P. University V. V. Nagar
24	Urvashi Thacker	Chromate reductase from environmental isolates : purification, characterization and identification of gene	2006	S. P. University V. V. Nagar
25	Safia Moosvi	Biotechnological approach for bioremediation of effluents containing textile dyes	2006	S. P. University V. V. Nagar
26	Rachna Dave	Biotechnological exploitation of lipase : Production, characterization and applications	2007	S. P. University V. V. Nagar
27	Sarayu Mohana	Studies of biotechnological treatment of distillery spent wash and its use in xylanase production	2008	S. P. University V. V. Nagar
28	Badrish Soni	Cynobacterial phycobiliprotieins : Production , purification, crystallization, structure determination and application	2008 **As Co-guide**	S. P. University V. V. Nagar
29	Chirayu Desai	Molecular analysis of bacterial community structures to assess ecological impact of chromium pollution and utility of indigenous bacteria for environmental restoration. .	2008	S. P. University V. V. Nagar
30	Bhavik Acharya	Biotechnological approaches for the treatment of Distillery Spent Wash	2010	S. P. University V. V. Nagar
31	Hilor Pathak	Assessment of bacterial community structure of estuarine ecosystem using molecular phylogenetic approach and exploitation of bacterial repertoire for bioremediation of aromatic hydrocarbons	2010	S. P. University V. V. Nagar
32	Vrushali Dandavate	Microbial Lipases: Biotechnological Aspects of Non-aqueous Enzymology	2009	S. P. University V. V. Nagar
33	El-Tayib Hassan	Study of lipolytic bacteria: Isolation, media optimization, characterization, application and phylogenetic analysis	2010	S. P. University V. V. Nagar
34	Asha Parmar	Cynobacterial Phycobiliproteins : A comprehensive study on their purification, Characterization, structure and applications for biotechnological prospects	2011	S. P. University V.V. Nagar
35	Varun Shah	Taxononic profiling and metagenome analysis of microbial community inhabiting a site contaminated by industrial discharges	2012	S. P. University V.V. Nagar
36	Niraj Kumar Singh	Cyanobacterial phycobilisomes: A study with reference to optimization, purification and structural characterization of phycocyanin and influence of environmental stress on phycobiliproteins	2013	S. P. University V.V. Nagar
37	Tripti Raghavandra	Study of microemulsion based organogels and multiwalled carbon nanotubes as potential supports for	2013 **As**	S. P. University V.V. Nagar

		lipase immobilization and application in non-aqueous catalysis	**Co-guide**	
38	Vilas Patel	Taxonomic profiling of bacterial community structure from marine ecosystem of Alang-Sosiya ship breaking yard, Gujarat and exploitation of the bacterial wealth for PAH bioremediation	2014	S. P. University V.V. Nagar
39	Kunal Jain	Assessing functional diversity and microbial community structure of anthropogenic perturbed environment: Exploring metagenomic and bioremediation approaches	**Co-guide 2015**	S. P. University V.V. Nagar
40	Sananda Chattaraj	Metagenome analysis to assess performance of activated sludge treatment plant and to improve treatment process at CETP	2015	S. P. University V.V. Nagar
41	Binal Shah	Bacterial remediation of textile dye containing effluent: Evaluation of community structure, dynamics and metabolic pathway	2016	S. P. University V.V. Nagar
42	Sagar Vaidya	Molecular analysis of culturable bacteria of long term polluted Amlakhadi canal, Ankleshwar, Gujarat and application of enriched consortia for degradation of polycyclic aromatic hydrocarbons(PAHs)	2017	S. P. University V.V. Nagar
43	Vrutika Patel	Study of microbial diversity inhabiting long term oil contaminated soil and immobilization of lipase on nanoparticles: a tool for biocatalytic synthesis of various fragrance and flavor compounds	2016	S. P. University V.V. Nagar
44	Ravi Sonani	A structure based functional analysis of cyanobacterial light harvesting proteins and their prospective therapeutic applications	2017	S. P. University V.V. Nagar
45	Avinash Narayan	Molecular assessment of microbial community structure and functional attributes in saline ecosystem of Rann of Kuchchh	**Co-guide** 2017	S. P. University V.V. Nagar
46	Jenny Johnson	Understanding the microbial responses to anthropogenic stress through 'omics' approaches	2018	S. P. University V.V. Nagar
47	Shivani Amin	Integrating metagenomics and bioremediation approaches to understand microbial response at sites contaminated with xenobiotics compounds	**2019**	S. P. University V.V. Nagar
48	Neelam Devpura	Metagenome profiling and functional abundance of bacterial community residing at industrially contaminate site	**2020**	S. P. University V.V. Nagar
49	Prachi Singh	Omics analysis of microbial life in hypersaline desert: Study of different metabolic pathways	**2021**	S. P. University V.V. Nagar
50	Avani Patel	Analysis of microbial diversity and functional abilities of native community in environment contaminated through ship breaking activities and *in situ* bioremediation for developing feasible remediation approach	**2021**	S. P. University V.V. Nagar
51	Hiral Patel	Assessing algal biodiversity in the gulf of Kutch for mining of therapeutically important biomolecules	**Co-guide 2021**	S. P. University V.V. Nagar
52	Stuti Patel	Structural characterization and biomedical applications of Cyanobacterial phycobiliproteins		S. P. University V.V. Nagar

LIST OF PUBLICATIONS

1.Srivastava R. C., **Madamwar D. B**., Bhise S. B., Tandon A., and Sharma R. K., (1984). A new observation on *Halobacterium halobium:* Light induced volume flow through the whole organisms. *Experientia* **40**, 773-775. (Now it is called Cellular and Molecular Life Sciences) (I.F. – 9.261).

2. Srivastava R. C., Tandon A., Bhise S. B., and **Madamwar D. B.** (1985). Photo-osmosis through liquid membrane bilayer: generated by cytochrome-C. *Indian J. of Chemistry* **24(A)**, 918-922. (I.F - 0.491).

3. **Madamwar D. B**., and Mithal B. M., (1985). Adsorbents in anaerobic digestion of cattle-dung. *Indian Journal of Microbiology* **25(1&2),** 57-58. (I.F – 1.490).

4. **Madamwar D. B**., and Mithal B. M., (1986). Effect of pectin on anaerobic digestion of cattle-dung. *Biotechnology and Bioengineering.* **28 (4)**, 624-626. (I.F - 4.002).

5. **Madamwar D. B**., and Mithal B. M., (1987). Effect of Surfactants on anaerobic digestion of cattle dung. *Indian Journal Microbiology* **27**, 81-84. (I.F - 1.490)..

6. Srivastava R. C., **Madamwar D. B**. and Singh V., (1987). Equation for the growth of *Halobacterium halobium*. *Indian Journal of Experimental Biology*, **25**, 497-498. (I.F- 0.789).

7. Srivastava R. C., **Madamwar D. B**. and Vyas V. V., (1987). Activation of enzymes by reverse micelles. *Biotechnology and Bioengineering*, **29**, 901-902. (I.F - 4.002).

8. **Madamwar D. B**., Bhatt J. P., Ray R. M. and Srivastava R. C., (1988). Activation and stabilization of invertase entrapped into reversed micelles of sodium lauryl sulfate and sodium tauroglycocholate in organic solvents. *Enzymes and Microbial Technology*, **10**, 302-305. (I.F – 3.409).

9. **Madamwar D. B**., Patel S. and Parikh H., (1989). Solid state fermentation for cellulases and β-glucosidase production by *Aspergillus niger*. *Journal of Fermentation and Bioengineering (Now it is called J. Biosciences and Bioengineering)*, **67(6)**, 424-426. (I.F - 2.366).

10. **Madamwar D. B**., Patel A. R. and Patel V., (1990). Effect of temperature and retention time on methane recovery from water hyacinth-cattle dung. *Journal of Fermentation and Bioengineering (Now it is called J. Biosciences and Bioengineering)*, **70(5)**, 340-342. (I.F - 2.366).

11. **Madamwar D. B**., Patel V. and Patel A. R., (1990) Effect of agricultural and other wastes on anaerobic digestion of water hyacinth-cattle dung. *Journal of Fermentation and Bioengineering (Now it is called J. Biosciences and Bioengineering)*, **70(5)**, 343-344. (I.F - 2.366).

12. **Madamwar D. B**., Patel V. and Patel A. R., (1990) Biological pretreatment of water hyacinth for improved biogas production. In Twelfth Symposium on Biotechnology for Fuels and Chemicals, *Gatlinburg, Tennesse*, U.S.A. May 7-11.

13. **Madamwar D. B**., Patel A. R. and Patel V., (1991). Effect of various surfactants on anaerobic digestion of water hyacinth-cattle dung. *Bioresource Technology*, **37 (2),** 157-160. (I.F – 9.644).

14. **Madamwar D. B**., Patel S. and Jain N. (1991) Activation and stabilization of *Aspergillus niger* glucose oxidase entrapped into reversed micelles of surfactants in organic solvents. *Indian J. Microbiology*, **31 (1)**, (1991) 77-82. (I.F – 1.490).

15. Patel K. D., **Madamwar D. B**. and Patel M. M., (1991). Magnetic, spectral, thermal, electrical and antimicrobial properties of some new polymeric chelates. *J. Polymer Materials*, **8**, 127-131. (I.F - 0.320).

16. Patel K. D., **Madamwar D. B**. and Patel M. M. (1991). Magnetic, spectral and thermal properties of some new coordination polymers. *J. Indian Chem. Soc*., **68**, 521-523. (I.F - 0.233).

17. **Madamwar D.**, Jain N. and Patel S. (1991). Activation and stabilization of enzymes by reversed micelles. In Book: *Recent Advances in Fungi and Biotechnology*, (Ed.) H. C. Dube, Today & Tomorrow's Printers and Publishers, India, 75-82.

18. **Madamwar D.**, Patel V. and Patel A., (1991). Surfactants and adsorbents in anaerobic digestion of water hyacinth-cattle dung. In Thirteenth Symposium on Biotechnology for *Fuels and Chemicals*, May 6-10, Colorado Springs.

19. **Madamwar D. B.**, Patel V. and Patel A. R. (1992). Effect of adsorbents on anaerobic digestion of water hyacinth-cattle dung. *Bioresource Technology*, **40(2)**, 179-181. (I.F – 9.664).

20. **Madamwar D.** and Patel S. (1992). Formation of cellulases by co-culturing of *Trichoderma reesei* and *Aspergillus niger on* cellulosic waste. *World J. Microbiology and Biotechnology* **8**, 183-186. (I.F – 3.240).

21. **Madamwar D. B**. and Jain N., (1992). Photo-osmosis through liquid membrane bilayers generated by mixture of bacteriorhodopsin and cyanocobalamin. *Journal of Colloid and Int. Sci*., **153**, 152 – 156. (I.F – 8.128).

22. **Madamwar D**., Patel V and Patel A., (1992). Effect of mixture of surfactants and adsorbents on anaerobic digestion of water hyacinth-cattle dung. *Applied Biochemistry and Biotechnology*, **36**, 163 - 169. (I.F - 2.777).

23. Patel K. D., **Madamwar D. B.** and Patel M. M., (1992). Magnetic, spectral, thermal, electrical and antimicrobial properties of some new coordination polymers. *J. Indian Council of Chemistry*. **8(1),** 27 - 32. (I.F.-0.233)

24. Patel V. and **Madamwar D**., (1992). Two phase anaerobic fermentation of water hyacinth-cattle dung. *Fresenius Environmental Bulletin*, Switzerland. **1** (Supplementum), S86-S92. (I.F - 0.553)

25. Patel V., and **Madamwar D**., (1993). Biological and thermochemical pretreatments of water hyancith for improved biogas production In: Cellulosics - Pulp, Fibre and Environmental Aspect (Eds.) J. F. Kennedy, G. O. Phillips, and P. A. Williams, Ellis Horwood Series in *Polymer Science and Technology,* Ellis Horwood Limited, U.K. pp. 365-370.

26. Patel S., Jain N. and **Madamwar D**., (1993). Production of α-Amylase from *Halobacterium halobium*. *World Journal of Microbiology and Biotechnology*, **9,** 25 - 28. (I.F. – 3.240).

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