

# **CURRICULUM VITAE**

**Dr. Nilashis Nandi**  
**Professor**

**Kalyani University**  
**Kalyani**

## Nilashis Nandi

**Date of Birth** : 01.01.1965  
**Age** : 44 years  
**Place of Birth** : Cooch Behar, West Bengal, India  
**Citizenship** : Indian  
**Present position** : Professor  
**Address** : Chemistry Department  
Kalyani University  
Kalyani, Nadia, West Bengal  
PIN: 741235, India.  
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**Residential address** : B-8/63 Kalyani  
Kalyani, Nadia, W.B., 741235.

### **Educational background:**

1. B.Sc. (Honors): 1983, North Bengal University, W.B., India, subject: Chemistry, first class (ranked first position).
2. M.Sc.: 1985(delayed examination), North Bengal University, W.B., India, subject: Chemistry (Specialization: Physical Chemistry), first class.
3. Ph.D.: 1992, Visva Bharati University, W.B., India, subject: Chemistry, Thesis title: "Application of Scaled Particle Theory to the problem of micellization of ionic and non-ionic surfactants".

### **Professional background:**

1. Postdoctoral fellow: 9/1993 - 5/1997, Solid state and structural chemistry unit, Indian Institute of Science, Bangalore, India.
2. JSPS Postdoctoral fellow: 6/1997 - 6/1999, Chemistry department, Nagoya University, Nagoya, Japan.
3. Alexander von Humboldt Postdoctoral fellow: 10/1999 - 12/2000: Max Planck Institute fur Kolloid -und Grenzflächenforschung, Golm, Potsdam, Germany.
4. Lecturer: 1/2001 - 11/2003, Chemistry group, Birla Institute of Technology and Science, Pilani, India.

5. Assistant Professor: 12/2003 – 12/2007, Chemistry group, Birla Institute of Technology and Science, Pilani, India.
6. Professor: 1/2008 – till date, Chemistry Department, Kalyani University, Kalyani, Nadia, W.B.

### **Awards, scholarships, fellowships:**

1. National merit scholarship: throughout the educational career.
2. Medal: For first position in B.Sc. Hons
3. Jawaharlal Nehru prize: For first position in B.Sc. Hons.
4. Fellowship: NET (UGC) qualified for research fellowship and lecturership.
5. JSPS Postdoctoral fellowship: 6/1997 – 6/1999
6. Alexander von Humboldt Postdoctoral fellow: 10/1999 – 12/2000
7. Cited in different *Whos Who series*.

### **Projects ongoing:**

1. Project entitled: Computational studies of the amino acylation reaction in the active site of aminoacyl-tRNA synthetase and peptide bond formation in the peptidyl transferase center in ribosome, Duration: 36 months. Sponsor: Department of Science and Technology, India.
2. Instrument grant for workstation and software, Duration: No specific deadline. Sponsor: Alexander von Humboldt Foundation, Germany

### **Project completed:**

1. Project entitled: Theoretical study of chiral discrimination and chiral recognition phenomena in amphiphilic and peptide systems, Duration: 36 months. Sponsor: Department of Science and Technology, India (Excellent grade).
2. Project entitled: Theoretical study of chirality driven morphology and recognition phenomena in biomimetic monolayers, Duration: 36 months. Sponsor: Council of Scientific and Industrial Research, India.

### **Ph.D guided:**

1. Submitted: One student, the student has published 14 papers (including 1 book chapter) and awarded best presentation award in two National conferences.
2. Under guidance: Two students

## **Lectures in conferences/ symposiums/ seminars:**

1. Lecture, S.N. Bose center for basic sciences, Kolkata, 2010 (Topic: Steps of protein synthesis in active sites: chirality and fidelity)
2. Lecture, Chemistry in the 21<sup>st</sup> Century: Challenges and Opportunities, University of Kalyani, May 28-29, 2010 (Topic: Chirality at Nanodimension).
3. Lecture, University of Kalyani, 2010 (Topic: ).
4. Lecture, Discussion Meeting on Theoretical Chemistry (TCS-2009), Bangalore, India, 18-22, 2009 (Topic: Influence of Molecular Chirality on Reactions in Biological Nanospace).
5. Lecture, 17th International Conference “Surfactants in Solution” (SIS 2008), Berlin, Germany, 17 – 22, 8. 2008 (Topic: Chirality in biological nanospace)
6. Lecture, 17th International Conference “Surfactants in Solution” (SIS 2008) Berlin, Germany, 17 – 22, 8. 2008 (Topic: Chirality and intermolecular interaction in Langmuir monolayers)
7. Lecture, National System on Soft Matter, Bose Institute, September 18-19, 2008 (Topic: Molecular Understanding of Interaction and Chirality in Soft Systems: From Biomimetics to Biosystems).
8. Lecture, 6<sup>th</sup> Chemical Research Society of India (Kolkata Chapter) Symposium, North Bengal University, North Bengal, 2<sup>nd</sup> July, 2008 (Topic: Chirality in biological nanospace)
9. Lecture, International Conference on Soft Systems (ICSS 2008), Jadavpur University, Kolkata, 13-15 Feb 2008 (Topic: Theoretical Perspective of Molecular Interactions in Amphiphilic Assemblies).
10. Lecture, Interface division seminar, Max Planck Institute for Colloid and Interface Science, Golm, Potsdam, Germany, 2007 (Topic: Chirality in biomimetic systems).
11. Lecture, National Conference on designing the molecular worlds through chemistry, Benaras Hindu University, Benaras, 2006.
12. Lecture, Conference: National Conference on Surfactant, Emulsion and Biocolloids, M.U., Imphal, 2005.
13. Lecture, Theoretical Chemistry Symposium, BARC, Mumbai, 2004.
14. Lecture, International conference on progress in disperse systems, Calcutta University, India, 2002.
15. Lecture, Biophysics departmental seminar, University of Leipzig, Germany, 2000.
16. Lecture, 61<sup>st</sup> Okazaki international conference on Liquid dynamics studied by time resolved vibrational spectroscopy, Japan, 1998.

## **Research interests:**

**General area:** Biophysical Chemistry (computational).

**Subtopics:** Influence of molecular chirality in reactions in biological nanosized space, Ribosomal peptide synthesis, Biomolecular chirality, Biomimetic monolayers and bilayers,

Molecular recognition, Dynamics of water in protein and other biological solutions, Solvation dynamics, Dielectric relaxation of water, Micellar and other amphiphilic systems.

### **Research achievements:**

1. Molecular understanding of chiral discrimination in ribosomal peptide synthesis.
2. Molecular theory of chirality induced structure formation in monolayers, bilayers and nucleic acid mimetic systems
3. Molecular theory of chiral discrimination in monolayers and amino acids
4. Molecular theory of orientation dependent chiral discrimination
5. Molecular theory of dipolar interaction in monolayer
6. Molecular theory of recognition of chiral odorant by lipid
7. Molecular theory of dielectric relaxation of protein solutions and amino acids.
8. Molecular theory of bimodal dynamics of water near biological solutions like protein and DNA
9. Molecular theory of dynamics of water in restricted environments.

### **Member/Fellow of professional societies:**

1. Indian Society for the Surface Science and Technology
2. Indian Biophysical Society
3. Indian Chemical Society

### **International visits:**

Visited Japan, 1998-1999

Visited Germany, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008

## Publication summary:

Book chapters	:	2	
Reviews/Accounts/Opinions	:	4	
Published lecture note	:	1	(B.I.T.S. Pilani)
Journal publications:	:	50	
Citation	:	867	as on 12 June 2007 as per 2006 ISI citation index)

## Publication list:

1. Chirality in Biological Nanospaces: Reactions in Active Sites (Monograph)  
Nilashis Nandi  
Taylor and Francis (in press).
2. Nanoaggregate Shapes at the Air/Water Interface  
D. Vollhardt, N. Nandi, S. Dutta Banik  
Physical Chemistry Chemical Physics (Perspective article)  
(in press)
3. Cross sectional area increase at phase transition on compression: an unexpected phenomenon observed in an amide monolayer, G. Brezesinskii, C. Stefaniu, D. Nandy, S. Dutta Banik, N. Nandi and D. Vollhardt, *J. Phys. Chem. C*. 2010, 114, 15695-15702.
4. Aminoacylation Reaction in the Histidyl-tRNA Synthetase: Fidelity Mechanism of the Activation Step  
S. Dutta Banik and N. Nandi  
*J. Phys. Chem. B* 2010, 114, 2301–2311
5. Orientation and Distance Dependent Chiral Discrimination in the First Step of the Aminoacylation Reaction: Integrated Molecular Orbital and Semi-empirical method (ONIOM) Based Calculation  
S. Dutta Banik, N. Nandi (Invited article for honorary issue of Prof. H. Kuhn)  
*Colloids and Surfaces B: Biointerfaces* 2009, 74, 468-476.
6. N.Nandi and S. Dutta Banik  
Molecular Understanding of the Influence of Chirality and Interaction in Soft Systems: From Biomimetics to Biosystems, A Retrospection  
*J. Surface Sci. Technol.*, 2009, 25, 1-18.
7. N. Nandi  
Chiral Discrimination in the Confined Environment of Biological Nanospace: Reactions and Interactions involving Amino Acids and Peptides  
*International Reviews in Physical Chemistry*  
2009, 28, 111-167.

8. N.Nandi, K. Thirumoorthy, D. Vollhardt  
Chirality and Dipolar interaction in Membrane Mimetic Amphiphilic Molecules".  
In book entitled "*Structure and Dynamics in Membranous Interfaces*", Edited by K. Nag, John Wiley, N.J. USA 2008, 191-225.
9. N.Nandi, K. Thirumoorthy, D. Vollhardt  
Chiral discrimination in Stearoyl Amine Glycerol Monolayers.  
*Langmuir*, 2008, 24, 9489-9494.
10. K. Thirumoorthy, N.Nandi  
The role of chirality of the sugar ring in the ribosomal peptide synthesis  
*J. Phys. Chem. B*. 2008, 112, 9187-9195.
11. K. Thirumoorthy, K. Soni, N.Nandi,  
The molecular recognition of dipeptide by oligoglycyl head group of amphiphile: A quantum chemical study"  
*J. NanoScience and Nanotechnology* with special focus on Advanced material for nanoscience and nanotechnology (invited article), 2008, 8, 1-13.
12. N.Nandi, D. Vollhardt  
Chirality and Recognition in Amphiphilic assemblies  
*Curr. Opinion Coll. Surf.* (invited article) 2008, 13, 40-46.
13. K. Thirumoorthy, K. Soni, T. Arun, N.Nandi,  
Chiral Discrimination in biomimetic systems: Phenyl Alanine  
*J. Chem. Sci.* 2007, 119, 517-523.
14. K. Thirumoorthy, N.Nandi  
Homochiral Preference in Peptide Synthesis in Ribosome: The Role of U2620, Amino and Peptidyl Terminals  
*J. Phys. Chem. B*. 2007, 111, 9999-10004.
15. K. Thirumoorthy, N.Nandi, D. Vollhardt  
The Role of Dipolar Interaction in the Mesoscopic Domains of Phospholipid Monolayers: Dipalmitoyl phosphatidyl choline and Dipalmitoyl phosphatidyl ethanolamine  
*Langmuir*. 2007, 23, 6991-6996.
16. K. Thirumoorthy, N. Nandi  
Water Catalyzed Peptide Bond Formation in *L*-Alanine Dipeptide: The Role of Weak Hydrogen Bonding  
*J. Mol. Struc. (Theo Chem)*, 2007, 818, 107-118.
17. N. Nandi, D. Vollhardt

- Molecular Interactions in Amphiphilic Assemblies: Theoretical Perspective (Invited review)  
*Acc. Chem. Res.* 2007, 40, 351-360.
18. K. Thirumoorthy, N. Nandi  
Ab-Initio Study of the Chiral Discrimination in Alanine  
*Current Science*, 2007, 92, 75-80.
19. K. Thirumoorthy, N. Nandi, D. Vollhardt, O. N. Oliveira, Jr.  
Semiempirical Quantum Mechanical Calculations of Dipolar Interaction between Dipyridamole and Dipalmitoyl Phosphatidyl Choline in Langmuir Monolayers  
*Langmuir*, 2006, 22, 5398-5402
20. N. Nandi, D. Vollhardt  
Chirality and molecular recognition in biomimetic organized films  
Book chapter in book entitled "*Bottoms up nanofabrication: Supramolecules, self assemblies and organized films*", editor K. Ariga, H.S.Nalwa, American Scientific Publishers (invited chapter) 2006, Chapter 5, 1-29.
21. K. Thirumoorthy, N.Nandi, D. Vollhardt  
Prediction of the Handedness of the Domains of Monolayers of D-N-Palmitoyl Aspartic Acid: Integrated Molecular Orbital and Molecular Mechanics Based Calculation  
Invited article; special issue  
*Coll. Surf. A*, 2006, 282-283, 222-226.
22. K. Thirumoorthy, N. Nandi  
Comparison of the Intermolecular Energy Surfaces of Amino Acids: Orientation-Dependent Chiral Discrimination  
*J. Phys. Chem. B.*, 2006, 110, 8840 – 8849.
23. K. Thirumoorthy, N.Nandi  
Correlation between the molecular chirality of the sugar ring on the mesoscopic aggregate morphology in RNA and DNA mimetic systems  
*Chem. Phys. Lett.* 2005, 414, 336-340.
24. N. Nandi  
Study of chiral recognition of model peptides and odorants: Carvone and camphor  
Article highlighted in the issue  
*Current Science*, 2005, 88, 1929-1937.
25. K. Thirumoorthy, N.Nandi, D. Vollhardt  
Role of Electrostatic Interactions for the Domain Shapes of Langmuir Monolayers of Monoglycerol Amphiphiles  
*J. Phys. Chem. B.* 2005, 109, 10820-10829
26. N. Nandi

- Role of Secondary Level Chiral Structure in the Process of Molecular Recognition of Ligand: Study of Model Helical Peptide,  
*J. Phys. Chem. B.* 2004, 108, 789-797.
27. N. Nandi, D. Vollhardt and G. Brezesinski  
Chiral Discrimination Effects in Langmuir Monolayers of 1-O-Hexadecyl Glycerol  
*J. Phys. Chem. B.* 2004, 108, 327-335.
28. N. Nandi  
Molecular Study of Heterochiral Preference in Biomimetic Monolayers  
Research communication  
*Current Science*, 2004, 87, 1581-1584.
29. N. Nandi, D. Vollhardt, R. Rudert  
Atomistic Calculation of the Pair Potential of Chiral Amino Acid Amphiphile in Langmuir Monolayer  
*Coll. Surf. A*, 2004, 250, 279-287.
30. N. Nandi, D. Vollhardt  
Anomalous temperature dependence of domain shapes in Langmuir Monolayer: Role of dipolar repulsion  
Letter to the editor  
*J. Phys. Chem. B*, 2004, 108, 18793-18795.
31. N. Nandi, D. Vollhardt  
The effect of molecular chirality on the morphology of biomimetic monolayer  
Review Article  
*Chem. Rev.* 2003, 103, 4033-4076.
32. N. Nandi, D. Vollhardt  
Correlation between the microscopic and mesoscopic chirality in Langmuir monolayers  
Review Article  
*Thin Solid Films*. 2003, 433, 12-21.
33. N. Nandi  
Molecular origin of the recognition of chiral odorant by chiral lipid: Interaction of dipalmitoyl phosphatidyl choline and carvone,  
Letter to the editor  
*J. Phys. Chem. A.* 2003 107, 4588-4591.
34. N. Nandi, D. Vollhardt  
Chiral discrimination effects in Langmuir Monolayers: Monolayers of Palmitoyl Acid, N-Stearoyl Serine Methyl Ester and N-Tetradecyl  $\gamma,\delta$ -dihydroxypentanoic Acid Amide  
*J. Phys. Chem. B.* 2003, 107, 3464-3475.

35. (a) N. Nandi, D.Vollhardt  
Molecular origin of chiral interaction in chiral biomimetic systems: dipalmitoyl phosphatidyl choline Langmuir monolayer,  
*J. Phys. Chem. B.* 2002, 106, 10144-10149.
- (b) N. Nandi, D.Vollhardt  
Molecular origin of chiral interaction in chiral biomimetic systems: dipalmitoyl phosphatidyl choline Langmuir monolayer (Addition and correction)  
*J. Phys. Chem. B.* 2003, 107, 1932.
36. N. Nandi, R.K.Roy, Anupriya, S. Upadhaya, D.Vollhardt  
Chiral interaction in enantiomeric and racemic dipalmitoyl phosphatidyl choline Langmuir monolayer,  
*J. Surf. Sci.Tech.* 2002, 18, 51.
37. N. Nandi, D.Vollhardt  
Prediction of the handedness of the chiral domains of amphiphilic monolayers: monolayer of amino acid amphiphiles.  
*Coll. Surf. A*, 2002, 198-200, 207-221.
38. N. Nandi and B. Bagchi  
Reply to the comment by S.Boresh and O. Steinhauser on the letter by N.Nandi and B.Bagchi entitled “anomalous dielectric relaxation in aqueous protein solution”  
*J. Phys. Chem.* 2001, 105, 5509 - 5510.
39. D. Vollhardt and N. Nandi  
Effect of chirality on the morphology of biomimetic systems  
*Ann. Rep. Max Planck Inst. Coll. Interface Sci.* Interface division, Max Planck Gesellschaft, 2001,16.
40. N. Nandi, D.Vollhardt  
Microscopic study of chiral interactions in Langmuir Monolayer: Monolayers of N-Palmitoyl Aspartic Acid and N-Stearoyl Serine Methyl Ester  
*Coll. Surf. A.* 2000, 183-185, 67-83.
41. N. Nandi, K. Bhattacharya, B. Bagchi  
Dielectric relaxation and solvation dynamics of complex chemical and biological systems. (Review)  
*Chem. Rev.* 2000, 100, 2013-2045.
42. N.Nandi, B. Bagchi  
Anomalous Dielectric Relaxation of Aqueous Protein Solutions (Letter to the Editor),  
*J. Phys. Chem. A*, 1998, 102, 8217 - 8221.
43. N. Nandi

- Solubilization of n-alkane solubilizates - Part II: solubilization in ionic surfactants  
*Ind. J. Chem. A*, 1998, 37, 114-117.
44. N.Nandi, B. Bagchi  
Dielectric relaxation of biological water.  
*J. Phys. Chem. B*. 1997,101, 10954 - 10961.
45. N.Nandi, B. Bagchi  
Prediction of the senses of helical amphiphilic assemblies from effective intermolecular potential; studies on chiral monolayers and bilayers.  
*J. Phys. Chem. B*. 1997, 101, 1343 - 1351.
46. R.Biswas, N.Nandi, B. Bagchi  
Solvation dynamics in monohydroxy alcohols; Agreement between theory and different experiments.  
*J. Phys. Chem. B*. 1997,101, 2968 - 2979.
47. N. Nandi  
Solubilization of n-decane into n-decyl polyoxyethylene surfactants: a cavity forming free energy based model.  
*Ind. J. Chem. A*, 1996, 35, 625 - 628.
48. N.Nandi, B. Bagchi  
Ultrafast solvation dynamics of an ion in the gamma cyclodextrin cavity; the role of restricted environment.  
*J. Phys. Chem.* 1996, 100,13914 - 13919.
49. N.Nandi, B. Bagchi  
Molecular origin of the intrinsic bending force for the helical morphology observed in chiral amphiphilic assemblies: concentration and size dependence  
*J. Am. Chem. Soc.* 1996, 118, 11208 - 11216.
50. N.Nandi, B. Bagchi  
Microscopic origin of the chirality driven morphologies of the amphiphilic monolayers and bilayers.  
*Ind. J. Chem. A*. 1996, 35, 536 - 545.
51. N. Nandi  
Application of Scaled Particle Theory to Alkyl Aryl surfactants.  
*J. Mol. Struc. (THEO CHEM)* 1995, 332, 301 - 311.
52. N.Nandi, B. Bagchi  
Ultrafast solvation dynamics of an ion in a restricted environment.  
*Ind. J. Chem. A*, 1995, 34, 845 - 849.
53. N. Nandi, S. Roy, B. Bagchi

- Ultrafast solvation dynamics in water: Isotope effects and comparison with experimental results.  
*J. Chem. Phys.* 1995, 102, 1390 - 1397.
54. N. Nandi, S. Roy, B. Bagchi  
Ionic and dipolar solvation dynamics in water.  
*Proc. Ind. Acad. Sci.* 1994, 106, 1297 - 1306.
55. N. Nandi, I.N. Basumalick  
Application of Scaled Particle Theory to the problem of micellization II. Cationic and nonionic surfactants  
*J. Phys. Chem.* 1993, 97, 3900 - 3903.
56. N. Nandi, I.N. Basumalick  
Prediction of partition coefficient by Scaled Particle Theory,  
*Z. Phys. Chem. (neue folge)*, 1991, 173, 179 - 189.
57. N. Nandi, I.N. Basumalick  
Application of Scaled Particle Theory to the problem of micellization.  
*J. Phys. Chem.*, 1990, 94, 2537 - 2540.

### **Professional activities:**

1. Coordinator, UGC-Special assistance program, Chemistry Department, University of Kalyani, 2009-till date.
2. Member, Executive committee, Indian Society for Surface Science and Technology, Jadavpur, Kolkata, 2008.
3. Member: Senate subcommittee for research and consultancy, B.I.T.S., Pilani, 2003-2005, 2007- 12/2007
4. Member: Faculty recruitment committee, chemistry group, B.I.T.S., Pilani, 2003-2007
5. Member, Intensive teaching workshop team, B.I.T.S., Pilani, 2004.
6. Resource person: Refresher courses for employees of Hindustan zinc Limited, 2003, 2005, BITSAT exam resource person, B.I.T.S. Pilani.
7. Registration advisor, B.I.T.S. Pilani. 2003-2007.
8. Nucleus member: Student Welfare Division, B.I.T.S.-Pilani, August, 2002-12/2007
9. Member, Scholarship committee, B.I.T.S. Pilani , 2002-12/2007.

### **Organizing activities:**

1. Convener, National Seminar on Current Trends in Chemistry III, University of Kalyani, March 4, 2010. University of Kalyani.
2. Convener: National Seminar on Current Trends in Chemistry III, University of Kalyani, March 4, 2009.
3. Organizing faculty member: National Seminar on Current Trends in Chemistry II, University of Kalyani, March 4, 2009.
4. Organizing faculty member: National Seminar on Current Trends in Chemistry I, University of Kalyani, January 08, 2008.
5. Convener: 13<sup>th</sup> National Conference on Surfactants, Emulsions & Biocolloids with Special Focus on Biomimetic Systems (NATCOSEB XIII-BIMS), B.I.T.S. Pilani, 22-24 February, 2007. (Sponsored by UGC, CSIR, DST, DBT, BRNS); Total participants over 80 from India and Germany.
6. Organizing faculty member: National Symposium on Challenges in Drug Discovery Research: Networking Opportunities between Academia & Industries, BITS Pilani, April 7-8, 2006.

### **Technical reviewer; Research manuscripts:**

1. Journal of American chemical society, American Chemical Society
2. Journal of Physical Chemistry, American Chemical Society
3. Chirality, Wiley Interscience
4. Journal of Society for Surface Science and Technology, Indian Society for Surface Science and Technology

### **Technical reviewer; Research proposal:**

Reviewed research grant application submitted to Israel Science Foundation, Israel.

## Teaching Activities:

(Total 6 courses developed)

### Courses developed:

1. Biophysical Chemistry: Compulsory disciplinary course, Chemistry, B.I.T.S., Pilani
2. Biophysics: Compulsory disciplinary course, Biological Science, B.I.T.S., Pilani.
3. Computational Chemistry: Compulsory disciplinary course, Chemistry, B.I.T.S., Pilani.
4. Colloid and surface chemistry: elective course, Chemistry, B.I.T.S., Pilani.
5. Advanced biophysical chemistry: course for Ph.D students, Chemistry, B.I.T.S., Pilani.
6. Advanced computational chemistry: course for Ph.D students, Chemistry, B.I.T.S., Pilani.

### Courses taught:

(Total students taught in multisection courses over thousand)

<u>Academic year</u>	<u>Course no.</u>	<u>Course</u>	<u>Number of students</u>
1. 2000-01	CHEMC142	CHEMISTRY II	68
2. 2001-02	BIOC331	BIOPHYSICS	40*
3. 2001-02	CHEMC141	CHEMISTRY I	68
4. 2001-02	TA C211	MEASUREMENT TECH.	37
5. 2001-02	CHEMC341	BIOPHYSICAL CHEM	15*
6. 2001-02	CHEMC351	COMPUTATIONAL CHEM	9*
7. 2001-02	CHEMC142	CHEMISTRY II	62
8. 2002-03	BIOC331	BIOPHYSICS	39*
9. 2002-03	CHEMC141	CHEMISTRY I	60
10. 2002-03	TA C211	MEASUREMENT TECH.	40
11. 2002-03	CHEMC341	BIOPHYSICAL CHEM	20*
12. 2003-04	BIOC331	BIOPHYSICS	47*
13. 2003-04	CHEMC141	CHEMISTRY I	42*
14. 2003-04	CHEMC212	COLLOID SURF. CHEM	2
15. 2003-04	CHEMC341	BIOPHYSICAL CHEM	9*
16. 2003-04	CHEMC142	CHEMISTRY II	40
17. 2004-05	BIOC331	BIOPHYSICS	47*
18. 2004-05	CHEMC141	CHEMISTRY I	66+65=131
19. 2004-05		ADV. COMPUT CHEM	1(Ph.D.)
20. 2004-05	CHEMC341	BIOPHYSICAL CHEM	9*
21. 2004-05	CHEMC142	CHEMISTRY II	63
22. 2005-06	BIOC331	BIOPHYSICS	52*
23. 2005-06	CHEMC141	CHEMISTRY I	39
24. 2005-06		ADV. COMPUT CHEM	1(Ph.D.)
25. 2005-06	CHEMC341	BIOPHYSICAL CHEM	8*
26. 2005-06	CHEMC142	CHEMISTRY II	42+33=75

27. 2006-07	BIOC331	BIOPHYSICS	52*
28. 2006-07	CHEMC141*	CHEMISTRY I	37*
29. 2006-07		ADV. COMPUT CHEM	1(Ph.D.)
30. 2006-07	CHEMC341	BIOPHYSICAL CHEM	8*
31. 2006-07	CHEMC142	CHEMISTRY II	39+41=80
32. 2008	NONEQUILIBRIUM	STATISTICAL MECH	50
33. 2008	LIQUID STATE THEORY		7
34. 2008	LIQUID STATE THEORY		11
35. 2009	STATISTICAL MECHANICS		50

\* Delivered Lecture for all students (in multisection cases, students are approx 750)

### **Instructor In charge:**

(Total students lectured as students of combined sections: 768)

1. Chemistry: Undergraduate course, Chemistry, B.I.T.S., Pilani., 2002, first semester, 750 students, 19 Sections, 8 instructors;
2. Chemistry: Undergraduate course, Chemistry, B.I.T.S., Pilani., 2006, first semester, 768 students, 19 Sections, 8 instructors
3. Biophysics, 2001-2006, 1 section each semester
4. Biophysical chemistry, 2001-2006, 1 section each semester

### **First-degree thesis and other projects supervised**

(Total = 22 students)

	<u>Year</u>	<u>Course</u>	<u>Type</u>
1.	2001	CHEM C491	Special project
2.	2002		First degree thesis
3.	2002	BITSC323	Study oriented
4.	2002	CHEMC491	Special project
5.	2002	CHEMC491	Special project
6.	2003	BITSC323	Study oriented
7.	2003	CHEMC491	Special project
8.	2003	BITSC323	Study oriented
9.	2004		First degree thesis
10.	2005		First degree thesis
11.	2005	BITSC331	Computational
12.	2005	BITSC331	Computational
13.	2006	BITSC323	Study oriented
14.	2006	BITSC323	Study oriented
15.	2006	BITSC331	Computational
16.	2006	BITSC331	Computational
17.	2007	BITSC331	Computational
18.	2007	BIOC491	Special project
19.	2007	BITSC331	Computational
20.	2007	BITSC323	Study oriented

21. 2007 BITSC323 Study oriented
- 22 2009 M.Sc. Microbiology Computational
23. 2010 D.O.D.L. Study oriented project on environmental management.