

## **Curriculum Vitae of Dr. Bijoy Krishna Dolui**

**Name** : Bijoy Krishna Dolui  
**Date of Birth** : June 12, 1970  
**Sex** : Male  
**Nationality** : Indian  
**Category** : Scheduled Caste  
**Marital Status** : Married  
**Present Position** : Professor; Dept. of Chemistry, Visva-Bharati  
**Date of Joining in Visva-Bharati** : **03.05.2021**  
**Address** : Department of Chemistry  
Siksha- Bhavana, Visva-Bharati,  
Santiniketan; Birbhum; PIN-731235  
West Bengal, India  
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### **Education:**

1. **B.Sc. (Honours):** 1992, Vidyasagar University; Subject: Chemistry; **First Class (60.25%)**.
2. **M.Sc.:** 1994, Vidyasagar University; Subject: Chemistry (Specialization: Inorganic Chemistry); **First Class (62.5%)**.
3. **Ph.D.(Highest Qualification):** 2005, Jadavpur University; Subject: Chemistry, Thesis Title: *“Ion-solvent Interaction in Isodielectric solvent mixtures of Protic Ethylene Glycol and Dipolar Aprotic N,N-Dimethyl Formamide”*

### **Fellowships:**

1. GATE Qualified; 1995
2. NET (CSIR-JRF) Qualified; 1996

### **Employment Details:**

1. Lecturer in Chemistry: 27.05.2000 – 02.05.2001, Raiganj Govt. Polytechnic College; Govt. of West Bengal; Uttar Dinajpur; West Bengal, India; 03.05.2001– 03.07.2005; Department of Chemistry; Visva-Bharati, Santiniketan.
2. Senior Lecturer: 04.07.2005 – 26.05.2009, Department of Chemistry, Visva-Bharati, Santiniketan.
3. Reader: 27.05.2009 – 26.05.2012, Department of Chemistry, Visva-Bharati, Santiniketan..
4. Associate Professor: From 27.05.2012 - 26.05.2015, Department of Chemistry, Visva-Bharati, Santiniketan.
5. Professor: From 27.05.2015, Department of Chemistry, Visva-Bharati, Santiniketan.

### **Teaching Experience:**

1. Post Graduate Level: 20 years.
2. Undergraduate Level: 21 years

### **Courses Taught:**

1. **Ph.D. Level (Course Work):** Organo-metallic Chemistry (Carbenes and carbynes)
2. **Post Graduate Level:** Organo-metallic Chemistry (Alkenes, alkynes, allyls, butadienes, cyclo pentadienes, arenes, cycloheptatrienes, COT; Carbenes and carbynes-Metal complexes); Photochemistry (General and Inorganic); Environmental Chemistry; Practical classes.
3. **Undergraduate Level:** VBT and MOT of chemical bonding; Periodic properties; Chemistry of S and P block elements; Atomic structure; Practical classes; For **Five Years Integrated Science and research Course:** Developed concepts of M O T.

## **Research Fields: Solution chemistry of Biomolecules**

### **Student Projects Supervised**

***Post Graduate Level: 28***

#### ***Ph.D. Students Supervised:***

1. *Sanjay Roy, Awarded in 2014; Thesis Title: “Transfer Energetics of a series of Homologous  $\alpha$ -amino acids in some aquo-organic Binary Solvent mixtures”*
2. *Kalachand Mahali , Awarded in 2014, Thesis Title: “Transfer Energetics of a series of Homologous  $\alpha$ -amino acids in binary mixtures of some non-aqueous Solvent systems”*
3. *Samiran Mondal (N R G Fellow), Awarded in 2019;Thesis Title: “Evaluation and correlation of solubility and solvation energetics of some biomolecules in aquo-ionic binary solvent mixtures”*
4. *Srabani Ghosh (VB-Non-NET, RET Qualified Fellow), Awarded in 2020; Thesis Title: “Transfer energetics of some DNA and RNA bases in binary aquo organic solvent mixtures”*

#### ***Ph.D. Students under Supervision:***

1. *Soumen Saha (NET Qualified)*
2. *Md. Golam Hossain (NET Qualified)*
3. *Sumana Mete (VB-Non-NET, RET Qualified Fellow)*
4. *Dushila Subha (NET Qualified)*
5. *Debajyoti Halder (VB-Non-NET, RET Qualified Fellow)*

### **Student Placement**

*Dr. Kalachand Mahali is an Assistant professor in chemistry of the university of Kalyani, W.B. India.*

*Dr. Sanjay Roy is an Associate professor in chemistry of Netaji Subhas Open University, Kalyani, Nadia, W.B. India.*

*Dr. Samiran Mondal is undergoing Post-Ph.D research works.*

*Dr. Srabani Ghosh is an assistant Teacher in Chemistry in an H.S., School.*

### ***Training courses attended:***

*One orientation and two refresher courses had been completed, besides these one Short term programme on “Disaster Management”, of one week duration , from March 09-16, 2013; UGC Academic Staff College, The Burdwan University, W. B.; India, has been attended*

### **Participation in Seminars:**

1. Science Academies’ Education Programmes, Lecturer Workshop on ‘Recent Developments in Chemistry, organized by Indian National Science Academy, New Delhi, held in the Dept. of Chemistry, Visva-Bharati, on and from 29.11.2012 to 01.12.2012.
2. 50<sup>th</sup> Annual Convention of Chemists 2013 held at the Dept. of Chemistry and Centre for Advanced Studies in Chemistry, Punjab University, Chandigarh

during December 04.07.2013.

3. All India Science Conference of Breakthrough Science Society held in Bangalore on 17-19 October, 2014.
4. Science Academies' Education Programmes, Lecturer Workshop on 'Recent Trends in Chemistry, organized by Indian National Science Academy, New Delhi, held in the Dept. of Chemistry, Visva-Bharati, on and from 13.03.2015 to 14.03.2015.
5. National Conference on "Integrating Science with Society", organized by Breakthrough Science Society, held in Jadavpur University on and from 15-16 December, 2018.

#### **Lectures Delivered:**

1. National Seminar on the development of modern technology: A catalysis for the advancement of science; 22-23<sup>rd</sup> February, 2014; BIET, Suri, Birbhum, W. B.; India; Title: "*Study of solvation process of a series of homologous  $\alpha$ -amino acids in non-aqueous mixtures of protic ethylene glycol and protophilic dipolar aprotic DMSO*".
2. International Conference on Environmental Biology & Ecological Modeling, February 24 – 26, 2014, Dept. of Zoology, Visva-Bharati, Birbhum, W. B.; India; Title: "*Introduction of Ecological imbalance in the aquatic ecosystem due to stratospheric Ozone depletion: A Review*"
3. National Seminar on "Recent Advances in Chemistry", 9<sup>th</sup> March, 2014; Dept. of Chemistry, Visva-Bharati, Santiniketan, Birbhum, W. B.; India; Title: "Solvation mechanism of L-Histidine in aquo-organic Mixtures of protic glycerol at 298.15K"
4. International Conference on Nonlinear dynamics and its application in physical and biological sciences; November 01-03, 2014; Dept. of Physics, Darjeeling Govt. College, Darjeeling-734101, W. B.; India; Title: "*Solvation thermodynamics of a series of homologous  $\alpha$ -amino acids in some aquo-organic binary solvent mixtures*".
5. UGC-sponsored National Conference on Chemistry for better tomorrow-current trends and opportunity, CBT-2014; December 2-3, 2014, Department of Chemistry, Sidhu-Kanhu-Birsha University; Purulia, W. B. India; Title: "*Chemical transfer energetic of a series of homologous  $\alpha$ -amino acids in quasi-aprotic 2-methoxyethanol-water mixtures*".
6. National Symposium on "Chemistry and its interface with other scientific disciplines, 12<sup>th</sup> December, 2014, Department of Chemistry, Sitananda College, Nandigram; W. B. India; Title: "Histidine induced solvation in aqueous mixtures of  $\text{NaNO}_3$ ".

7. National Conference on Modern Chemistry, An interdisciplinary science; January 19, 2015; Department of Chemistry, Nistarini College; Purulia, W. B. India; Title: "*Solvation thermodynamics of DL-Norvaline in aqueous NaCl and KCl solutions*".
8. International Conference on 'Innovative application of chemistry in pharmacology and technology'; February 6-8, 2015; P G Dept. of Chemistry, Berrhampur University, Odisha, India; Title: "*Solubility and thermodynamics of salvation characteristics of the interactions of DL-Alanine and DL-Serine in aqueous NaCl and KCl solutions*".
9. National Seminar on multifunctional polymer materials; POLY-2015; February 14-15, 2015; Prof. Sukumar Maity Polymer award Foundation in collaboration with Dept. of Chemistry, Visva-Bharati, Birbhum, W. B.; India; Title: "*Solubility and thermodynamics of solvation of DL-Serine in aqueous NaCl and KCl solutions*".
10. National Seminar on "Advanced Spectroscopy, theoretical chemistry, synthesis, reactivity and structural evaluation" on February 19-21, 2015; Dept. of Chemistry, Burdwan University, W. B.; India; Title: "*Solvation thermodynamics of DL-Alanine and DL-Valine in aqueous NaCl and KCl solutions*".
11. UGC-SAP Sponsored National Symposium on Recent Advances in Chemistry Research, Organized by the Dept. of Chemistry, Visva-Bharati on 04 March, 2016.

#### **Membership of Professional and Science Societies:**

1. Indian Association for the Cultivation of Science (Life Member).
- 2.. Breakthrough Science Society (Life Member).

#### **Reviewing Activities:**

1. Reviewer, *Journal of Chemical and Engineering Data* (ACS)
2. Reviewer, *Journal of Industrial Chemistry*(ACS)
3. Reviewer, *Journal of Molecular Liquids*(Elsevier)
4. Reviewer, *Journal of Solution Chemistry*(Springer)
5. Reviewer, *Asian Journal of Chemistry*
6. Reviewer, *R S C Advances*
7. Reviewer, *Journal of Biophysical Chemistry*
8. Reviewer, *Indian Journal of Chemistry*

9. Reviewer, *Journal of the Indian Chemical Society*
10. Reviewer, *Journal of Chinese Chemical Society*

**Appreciation:**

1. Certificate of Appreciation for Valuable Contribution and Dedicated Service in the Peer Review of Manuscripts Submitted to the *American Chemical Society* and Elsevier Journals.

**Present Areas of Research Interests:**

1. Solvation behavior of nucleobases in aquo-ionic and aquo-nonionic binary solvent mixtures.
2. Solvation thermodynamics of amino acids and peptides in aquo-ionic and aquo-nonionic binary solvent mixtures.

**Research Projects:** I have not handled any major or minor research projects but availed partial research grant time to time from our university. The assistance from UGC-SAP, department and contingency of R G N F fellow and non-NET fellow have been helping to run our semi-experimental and semi-theoretical research works.

**Research Publications**

<b>Published papers: Total</b>	<b>50</b>
Papers in International Journals:	<b>44</b>
Papers in National Journals:	<b>06</b>
 Paper Communicated:	 <b>04</b>
Paper to be Communicated:	<b>15</b>

**Publications:**

**List of Publications:**

1. "Synthesis and spectral characterization of lead(II), silver(I), palladium(II) and dioxouranium(VI) azoimidazole complexes". P Chottopadhyay, **B K Dolui** and C Sinha\* Indian Journal of Chemistry, 36A, 1997, 429-432, <http://nopr.niscair.res.in/handle/123456789/40831>
2. "Single-ion transfer Gibbs energies in binary mixtures of isodielectric protic ethylene glycol and dipolar aprotic N, N-dimethyl formamide". **B K Dolui**, S K Bhattacharya and K K Kundu\*; Indian Journal of Chemistry, 45A, 2006, 2607-2614, <http://nopr.niscair.res.in/handle/123456789/17997>
3. "Autoprotolysis constants of ethylene glycol in isodielectric mixtures of ethylene glycol and N, N-dimethyl formamide at 298.15K and the related Gibbs energies of transfer". **B K Dolui**, S K Bhattacharya and K K Kundu\*; Indian Journal of Chemistry, 46A, 2007, 1081-1089, <http://nopr.niscair.res.in/handle/123456789/1218>
4. "Solvent effect on Deprotonation Equilibria of Acids of Various Charge Types in Non-aqueous Isodielectric Mixtures of Protic Ethylene glycol and Dipolar Aprotic N, N-dimethyl formamide at 298.15K". . **B K Dolui**, S K Bhattacharya and K K Kundu\*; Journal of Solution Chemistry, 37(7), 2008, 987-1003, [DOI 10.1007/s10953-008-9281-3](https://doi.org/10.1007/s10953-008-9281-3)
5. "Single-ion transfer entropies in binary mixtures of isodielectric protic ethylene glycol and dipolar aprotic N, N-dimethyl formamide vis-à-vis 3D structuredness of aqueous co-solvents". **B K Dolui**, S K Bhattacharya and K K Kundu\*; Indian Journal of Chemistry, 48A, 2009, 504-511, <http://nopr.niscair.res.in/handle/123456789/3904>
6. "Thermodynamic Studies of Solvation of a Series of Homologous  $\alpha$ -Amino Acids in Aqueous Mixtures of Protic Ethylene Glycol at 298.15K"; S. Roy, K. Mahali & **B. K. Dolui**\*, Biochemistry, An Indian Journal, 3(2), 2009, 63-68, <https://www.tsijournals.com/articles/thermodynamic-studies-of-solvation-of-a-series-of-homologous-amino-acids-in-aqueous-mixtures-of-protic-ethylene-glycol-a.pdf>
7. "Transfer Entropies of solvation of a Series of Homologous  $\alpha$ -Amino Acids in Aqueous Mixtures of Protic Ethylene Glycol"; S. Roy, K. Mahali & **B. K. Dolui**\*, Biochemistry, An Indian Journal, 4(2), 2010, 71-76, <https://www.tsijournals.com/articles/transfer-entropies-of-solvation-of-a-series-of-homologous-amino-acids-in-aqueous-mixtures-of-protic-ethylene-glycol.pdf>
8. "Thermodynamic solvation of a Series of Homologous  $\alpha$ -Amino Acids in Non-aqueous Mixture of Ethylene Glycol and N, N-Dimethyl formamide"; K. Mahali, S. Roy & **B. K. Dolui**\*, Journal of Biophysical Chemistry, Vol-2, No-3, 2011, 185-193, [doi:10.4236/jboc.2011.23022](https://doi.org/10.4236/jboc.2011.23022)
9. "Solvation Thermodynamics of a Series of Homologous  $\alpha$ - Amino Acids in Non-aqueous Binary Mixtures of Protic Ethylene Glycol and Dipolar Aprotic



- Acetonitrile”; K. Mahali, S. Roy, **B . K. Dolui\***. Journal of Solution Chemistry, 42, , **2013**, 1096-1110, [DOI 10.1007/s10953-013-0005-y](https://doi.org/10.1007/s10953-013-0005-y)
10. “Thermodynamic Solvation of  $\alpha$ -Amino Butyric Acid in Aqueous Mixture of Dipolar Aprotic *N, N*- Dimethyl formamide”; S. Roy, K. Mahali, S. Akhter, & **B . K. Dolui\***.; Asian Journal of Chemistry, 25(12), **2013**, 6661-6665, [http://www.asianjournalofchemistry.co.in/User/ViewFreeArticle.aspx?ArticleID=25\\_13\\_39](http://www.asianjournalofchemistry.co.in/User/ViewFreeArticle.aspx?ArticleID=25_13_39)
  11. “Thermodynamic Interactions Due to Transfer of Amino Acids, Glycine and DL-Alanine in Aqueous Mixture of Cationophilic Dipolar Aprotic *N, N*- dimethyl Formamide; S.Roy, K. Mahali & **B. K. Dolui\***, Asian Journal of Chemistry, 25(14), **2013**, 8037-8042, [http://www.asianjournalofchemistry.co.in/User/ViewFreeArticle.aspx?ArticleID=25\\_15\\_88](http://www.asianjournalofchemistry.co.in/User/ViewFreeArticle.aspx?ArticleID=25_15_88)
  12. “Thermodynamic Solvation of a Series of Homologous  $\alpha$ - Amino Acids in Aqueous Mixtures of 1, 2-dimethoxymethane”; S. Roy, K. Mahali & **B.K. Dolui\***, Journal of Solution Chemistry, 42( 7), **2013**,1472-1487, [DOI 10.1007/s10953-013-0046-2](https://doi.org/10.1007/s10953-013-0046-2)
  13. “Solvation Chemistry of DL-Nor-Valine in Aqueous Mixture of Dipolar aprotic *N, N*- Dimethyl-formamide”, K. Mahali, S. Roy, & **B. K. Dolui\***, Journal of Chinese Chemical Society, 61, 2014, 659-664, <https://onlinelibrary.wiley.com/doi/abs/10.1002/jccs.201300360>
  14. “Solvation mechanism of DL-nor-Valine in aqueous mixtures of protophilic dipolar aprotic Dimethylsulfoxide”, S. Roy, K. Mahali & **B. K. Dolui\***, International journal of Chemical and Pharmaceutical Sciences; 5(1), 2014,11-19, [www.ijcps.com](http://www.ijcps.com)
  15. “Transfer free energies for solvation of amino acid, L-Histidine in aqueous mixtures of Protic Glycerol at 298.15 K”. S. Roy, K. Mahali & **B. K. Dolui\***, International journal of Chemical and Pharmaceutical Research, 3(2), 2014, 470-476, <http://www.pharmaresearchlibrary.com/wp-content/uploads/2014/07/IJCPS2108.pdf>
  16. “Role of Glycine as a ‘3D-structure’ maker in aqueous mixture of protophilic dipolar aprotic Dimethyl Sulphoxide”. S. Roy, K. Mahali & **B. K. Dolui\***. J. Chem. Pharm. Res. Vol. 6(5), 2014, 780-790, <https://www.jocpr.com/articles/role-of-glycine-as-a-3dstructure-maker-in-aqueous-mixture-of-protophilic-dipolar-aprotic-dimethylsulfoxide.pdf>
  17. “Comparative chemical transfer Gibbs free energy related to solvation of amino acid, L-Histidine in aqueous mixtures of *N,N*-Dimethylformamide and Protic Glycerol at 298.15 K”, S. Roy, K. Mahali & **B. K. Dolui\*** International Journal of Chemistry and Pharmaceutical Sciences, 2(7) 2014, 953-960,

- <http://www.pharmaresearchlibrary.com/wp-content/uploads/2014/07/IJCPS2108.pdf>
18. "Thermodynamic Studies Related to the Solvation Chemistry of DL- $\alpha$ -Amino Butyric Acid in Aqueous Solution of Sodium Chloride", S. Roy, K. Mahali, M. Murmu & **B. K. Dolui**\* International Journal of Chemical and Physical Sciences, 3(4), 2014, 29-42, [www.ijcps.org](http://www.ijcps.org)
  19. "Thermodynamics of solvation of DL- $\alpha$ -amino butyric acid in aqueous dimethyl sulfoxide at 298.15 K", S. Roy, K. Mahali, S. Mondal & **B. K. Dolui**\*, Physical Chemistry: An Indian Journal, 9(8), 2014, 273-282, <https://www.tsijournals.com/articles/thermodynamics-of-solvation-of-dlamino-butyric-acid-in-aqueous-dimethyl-sulfoxide-at-29815-k.pdf>
  20. "Thermodynamics of DL-alanine Solvation in Water-dimethylsulfoxide Mixtures at 298.15 K", S. Roy, K. Mahali, S. Mondal, and **B. K. Dolui**\* Russian Journal of Physical Chemistry A, Vol. 89, No. 4, 2015, 654–662. DOI: [10.1134/S00360244150400226](https://doi.org/10.1134/S00360244150400226)
  21. "Physico-Chemical Studies of DL-Alanine in Aqueous Sodium Nitrate Solution", S. Roy, K. Mahali, S. Mondal, R. P. Mondal & **B. K. Dolui**\*; Russian Journal of General Chemistry, 85(1) 2015, 162–167. DOI: [10.1131/S10700363215010284](https://doi.org/10.1131/S10700363215010284)
  22. "Solubility of  $\alpha$ -amino butyric acid in water- $\text{NaNO}_3$  mixture and analysis of related thermodynamic parameters", S. Roy, K. Mahali, S. Pal, S. Mondal, **B. K. Dolui**\*, Analytical Chemistry: An Indian Journal; 15(2), 2015, 65-73. [Trade Science Inc.](http://www.trade-science.com)
  23. "Thermodynamics and Mechanisms of Glycine Solvation in Aqueous NaCl and KCl Solutions at 298.15 K", S. Roy, A. Hossain, K. Mahali, & **B. K. Dolui**\*, Russian Journal of Physical Chemistry A, 89 (11), 2015, 2111-2119. DOI: [10.1134/S0036024415110151](https://doi.org/10.1134/S0036024415110151)
  24. "Solubility and Solvation thermodynamics of a series of homologous  $\alpha$ -amino acids in Nonaqueous binary mixtures of Ethylene glycol and Dimethyl sulfoxide", Kalachand Mahali, Sanjay Roy, and **Bijoy Krishna Dolui**\*, Journal of Chemical Engineering Data, 60, 2015, 1233-1241, DOI: [10.1021/je5007899](https://doi.org/10.1021/je5007899)
  25. "Solubility and Solvation Thermodynamics of DL-nor-valine in aqueous Solutions of NaCl and KCl", Sanjay Roy, Partha Sarathi Guin & **Bijoy Krishna Dolui**\*, Journal of Molecular Liquid, 211, 2015, 294–300 <http://dx.doi.org/10.1016/j.molliq.2015.07.030>
  26. "Solubility and Chemical Thermodynamics of D,L-Alanine and D,L-Serine in Aqueous NaCl and KCl Solution", Sanjay Roy, Aslam Hossain & **Bijoy Krishna Dolui**\* Journal of Chemical Engineering Data, 61, 2016, 132-141, DOI: [10.1021/acs.jced.5b00351](https://doi.org/10.1021/acs.jced.5b00351)
  27. "The chemical stability of L-Isoleucine, L-Threonine, and L-Serine in aqueous solutions of KCl at 298.15 K" Sanjay Roy & **Bijoy Krishna Dolui**\* Russian

- Journal of Physical Chemistry A, 90(6), 2016, 1175-1180, [DOI: 10.1134/S0036024416060224](https://doi.org/10.1134/S0036024416060224)
28. "Thermodynamics of DL- $\alpha$ -Amino butyric acid induced solvation Mechanism in aqueous Potassium Chloride Solution at 298.15-308.15K", S. Mondal , S. Ghosh , A. Hossain , , K. Mahali , S. Roy \* & **B. K. Dolui\***, Russian Journal of Physical Chemistry A; 90(9), 2016, 1798-1805, [DOI: 10.1134/S003602441609020X](https://doi.org/10.1134/S003602441609020X)
  29. "Solubility of DL-Serine and DL-Phenylalanine in aqueous Mixtures of Dimethyl Sulfoxide and solvation thermodynamics" Aslam Hossain, Sanjay Roy, Srabani Ghosh, Samiran Mondal and **Bijoy Krishna Dolui\*** R S C Advances,5, 2015, 69839-69847, [DOI:10.1039/c5ra12403d](https://doi.org/10.1039/c5ra12403d)
  30. "Study of the Solubility and Transfer Thermodynamics of D,L-Phenylalanine in Aqueous Sodium Chloride and D,L-Serine in Aqueous Sodium Nitrate Solutions"; Samiran Mondal, Sanjay Roy, Srabani Ghosh, Kalachand Mahali, **Bijoy Krishna Dolui\***; **Journal of Solution Chemistry**; 45, 2016, 1755-1772, [DOI 10.1007/s10953-016-0527-1](https://doi.org/10.1007/s10953-016-0527-1)
  31. "Amino acid solubility under the influence of NaCl at 298.15K"; Sanjay Roy\*, Partha Sarathi Guin , Kalachand Mahali, **Bijoy Krishna Dolui \*** ; Journal of Molecular Liquids; 218, 2016, 316-318. <http://dx.doi.org/10.1016/j.molliq.2016.02.054>
  32. "Comparative study on solubility of Glycine, DL-alanine, DL-nor-valine and DL-serine in aqueous solutions of NaF and KF at 298.15 K"; Sanjay Roy, Kalachand Mahali, **Bijoy Krishna Dolui \*** , Journal of Molecular Liquids; 219, 2016, 815-819. <http://dx.doi.org/10.1016/j.molliq.2016.03.081>
  33. "Chemical Transfer Energetics of a Series of Homologous  $\alpha$ - Amino Acids in Quasi-aprotic 2-Methoxyethanol-Water Mixtures", S. Roy, K. Mahali, **B. K. Dolui\***; Journal of Solution Chemistry; 45, 2016, 574-590. [DOI 10.1007/s10953-016-0456-z](https://doi.org/10.1007/s10953-016-0456-z)
  34. "Solubility of Glycine and DL-nor-Valine in aqueous solution of NaNO<sub>3</sub> and KNO<sub>3</sub> and measurements of transfer thermodynamics"; Sanjay Roy\*, Partha Sarathi Guin, Samiran Mondal, Srabani Ghosh & **Bijoy Krishna Dolui \*** .Journal of Molecular Liquids; 222, 2016, 313-319. <http://dx.doi.org/10.1016/j.molliq.2016.07.060>
  35. "Role of electrolytes in the solubility of L-Proline and its transfer free energetics"; Sanjay Roy\*, Partha Sarathi Guin, Kalachand Mahali, **Bijoy Krishna Dolui \*** Journal of Molecular Liquids; 223, 2016, 927-933 <http://dx.doi.org/10.1016/j.molliq.2016.09.018>
  36. "Solubility and solute-solvent interactions phenomenon of succinic Acid in Aqueous Ethanol mixtures". Kalachand Mahali, Partha Sarathi Guin, Sanjay Roy\* **Bijoy Krishna Dolui \***; Journal of Molecular Liquids; 229, 2017, 172-177, <http://dx.doi.org/10.1016/j.molliq.2016.09.018>

37. "Effects of Thermodynamics on the Solvation of Amino Acids in the Pure and Binary Mixtures of Solutions: A Review". Aslam Hossain, Sanjay Roy and **Bijoy Krishna Dolui\*** *Journal of Molecular Liquids*, **232**, 2017, 332-350. <http://dx.doi.org/10.1016/j.molliq.2016.12.042>
38. "Study on solubility & transfer gibbs energies of glycine,DL-alanine and DL-valine in aqueous solutions of sodium sulphate solutions at two different temperatures", Sanjay Roy\*, Partha Sarathi Guin , Kalachand Mahali, Aslam Hossain, **Bijoy Krishna Dolui \***.*Journal of Molecular Liquids*; 234, 2017, 124-128, <http://dx.doi.org/10.1016/j.molliq.2017.03.068>
39. "Preliminary review on solvation chemistry in aqueous solvents: Application to amino acids". Sanjoy Roy and **Bijoy krishna Dolui**; *Physical chemistry: An Indian journal*, 11 (2),2017, 1-19, <https://www.tsijournals.com/articles/preliminary-review-on-solvation-chemistry-in-aqueous-solvents-application-to-amino-acids.pdf>
40. "Solvation Thermodynamics of L-Cystine, L-Tyrosine and L-Leucine in Aqueous-Electrolyte Media",Sanjay Roy, Partha Sarathi Guin, Kalachand Mahali and **Bijoy Krishna Dolui\*\***; *Russian Journal of Physical Chemistry A*, 91 (12) 2017, 2397–2403, [DOI:10.1134/S0036024417120236](https://doi.org/10.1134/S0036024417120236)
41. "Solubility and transfer Gibbs free energetics of glycine, DL-alanine, DL-norvaline and DL-serine in aqueous sodium fluoride and potassium fluoride solutions at 298.15 K". Sanjay Roy\*, Partha Sarathi Guin , Kalachand Mahali, **Bijoy Krishna Dolui\***; *Indian Journal Chemistry*, 56A, 2017, 399-406. <http://nopr.niscair.res.in/handle/123456789/41201>
42. "Solvation thermodynamics of DL-Phenylalanine in aqueous NaNO<sub>3</sub> solution at 298.15 K"; S Roy, S Mondal, **B K Dolui\***; *Russian Journal of Physical Chemistry A*; 92, 2018, 734-738, [DOI:10.1134/S003602441804026X](https://doi.org/10.1134/S003602441804026X)
43. "Evaluation and correlation of solubility and solvation energetics of DL-phenylalanine and DL-serine in water and aqueous ethylene glycol solutions"; Srabani Ghosh, Samiran Mondal, Sanjay Roy, Soumen Saha, Dushila Subba and **Bijoy Krishna Dolui\*** ; *Journal of Molecular Liquids*; 249, 2018, 659-665, <https://doi.org/10.1016/j.molliq.2017.11.084>
44. "Correction to "amino acid [solubility](#) under the influence of NaCl at 298.15K"; Sanjay Roy , Partha Sarathi Guin , Kalachand Mahali\* and **Bijoy Krishna Dolui\***; *Journal of Molecular Liquids*; 252, 2018, 144, <https://doi.org/10.1016/j.molliq.2017.12.099>
45. "Studies on solubility and thermodynamics of solute-solvent interactions of some amino acids in aqueous sodium bromide and potassium bromide solutions". Partha Guin, Kalachand Mahali, Bijoy Krishna Dolui and Sanjay Roy; *Journal of Chemical Engineering Data*, 63, 2018, 534-541, [DOI:10.1021/acs.jced.7b00647](https://doi.org/10.1021/acs.jced.7b00647)
46. "Evaluation and Correlation of Solubility and Solvation Thermodynamics of Some DNA and RNA Bases in Aqueous Mixtures of Dipolar Aprotic N,N-Dimethyl Formamide"; Srabani Ghosh, Soumen Saha, Samiran Mondal and B. K.

- Dolui\* Journal of Solution Chemistry; 48, 2019, 248–270, <https://doi.org/10.1007/s10953-019-00855-5>
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  50. “Solvation Thermodynamics of Amino acids with Hydrophobic and Hydrophilic side chains in Aqueous Mixtures of Protic Ethylene Glycol”; Soumen Saha, Srabani Ghosh, Samiran Mondal and Bijoy Krishna Dolui\*; Journal of Solution Chemistry, 49, 2020, 733-762, <https://doi.org/10.1007/s10953-020-00996-5>

### **Paper Communicated**

1. Solvation thermodynamics of Amino acids with hydrophobic and hydrophilic side chains in aqueous mixtures of dipolar aprotic DMSO; **Soumen Saha, Srabani Ghosh, Samiran Mondal, Md. Golam Hossain & Bijoy Krishna Dolui\* (under revision, JOSL)**
2. Evaluation and correlation of solubility and solvation thermodynamics of some Nucleobases in Aqueous mixtures of dipolar aprotic DMSO; **Srabani Ghosh, Soumen Saha & Bijoy Krishna Dolui\* (under revision, Journal of chemical thermodynamics)**
3. Mode of hydrophilic and hydrophobic interactions of DL- Tyrosine, DL-Leucine, DL- Isoleucine and DL-Threonine in aqueous and aqueous dipolar aprotic DMF at 298.15K; **Soumen Saha, Srabani Ghosh, Suman Ghosh, Samiran Mondal & Bijoy Krishna Dolui ( under revision, JML)**
4. Solvation thermodynamics of some Nucleobases in Aqueous mixtures of dipolar aprotic Acetonitrile; **Srabani Ghosh, Soumen Saha & Bijoy Krishna Dolui\* (Journal of Chemical Physics)**

### Paper to be communicated

1. Effects on solubilities and energetics of Cytosine due to  $\text{Na}^+$  and  $\text{K}^+$  ions in NaCl and KCl solutions at 298.15K; **Samiran Mondal, Srabani Ghosh & Bijoy Krishna Dolui\***
2. Effects on solubilities and energetics of Thymine due to  $\text{Na}^+$  and  $\text{K}^+$  ions in NaCl and KCl solutions at 298.15K; **Samiran Mondal, Srabani Ghosh & Bijoy Krishna Dolui\***
3. Transfer energetics of L-Histidine in aqueous aprotic acetonitrile solution at 298.15K.; **Samiran Mondal, Srabani Ghosh, Bapan Samanta & Bijoy Krishna Dolui\***
4. The change of Solubilities and Stability of DL-Alanine due to  $\text{Cl}^-$  ions and  $\text{NO}_3^-$  ions in NaCl and  $\text{NaNO}_3$  solution at 298.15K; **Samiran Mondal, Srabani Ghosh, Sujata Roy, Anuprova Saha, Soumen Saha & Bijoy Krishna Dolui\***
5. Hydrophilic and hydrophobic interactions on L-Proline in aqueous Dipolar Aprotic N, N-dimethyl formamide binary solvent mixtures.; **Samiran Mondal, Srabani Ghosh, Sujata Roy, Anuprova Saha, Soumen Saha & Bijoy Krishna Dolui\***
6. Comparative study on solubility and thermodynamic properties of L-Histidine and DL-Serine in aqueous Ethylene Glycol solution at 298.15K.; **Supriya Halder, Samiran Mondal & Bijoy Krishna Dolui\***
7. Relative stability of Glycine and DL- $\alpha$ -amino butyric acid due to presence of an excess hydrophobic  $-\text{CH}_2-\text{CH}_2-$  group in aqueous Dimethyl Sulphoxide solution at 298.15K; **Samiran Mondal, Srabani Ghosh, Trisnendu Roy, Soumen Saha & Bijoy Krishna Dolui\***
8. Chemical stability of DL-Phenylalanine and DL- $\alpha$ -amino butyric acid in aqueous N,N-dimethyl formamide solvent system at 298.15K.; **Samiran Mondal, Srabani Ghosh, Soumen Saha, Md Golam Hossain<sup>a</sup> & Bijoy Krishna Dolui\***
9. Effects on solubilities and energetics of Adenine due to  $\text{Na}^+$  and  $\text{K}^+$  ions in NaCl and KCl solutions at 298.15K.; **Samiran Mondal, Srabani Ghosh, Soumen Saha & Bijoy Krishna Dolui\***
10. Solvation mechanism of DNA & RNA bases in aqueous mixtures of protophilic Dimethylsulfoxide.; **Srabani Ghosh, Samiran Mondal, Soumen Saha & Bijoy Krishna Dolui\***
11. Comparative solubilities and transfer energies of DL-Phenylalanine in aqueous Aprotic dipolar Acetonitrile and aqueous Dimethylsulphoxide at 298.15K; **Samiran Mondal, Srabani Ghosh, Subhasis Mal & Bijoy Krishna Dolui\***
12. Transfer energetics of L-Tyrosine and L-Histidine in Aqueous dipolar aprotic Acetonitrile Solutions at 298.15K; **Samiran Mondal, Srabani Ghosh, Pratiti Pal & Bijoy Krishna Dolui\***
13. Comparative study on solubilities and transfer energies of DL-Phenylalanine in aqueous Ethylene Glycol and aqueous N, N-dimethylformamide at 298.15K; **Samiran Mondal, Srabani Ghosh, Debajyoti Halder & Bijoy Krishna Dolui\***
14. Comparative study on solubilities and transfer energies of DL-Phenylalanine in aqueous Ethylene Glycol and aqueous N, N-dimethylformamide at 298.15K; **Samiran Mondal, Srabani Ghosh, Debajyoti Halder & Bijoy Krishna Dolui\***
15. Addition to total transfer energetics due to presence of an excess hydrophobic  $[-\text{CH}_2-]$  group on hydrocarbon backbone of DL- $\alpha$ -amino butyric acid. **Samiran Mondal, Srabani Ghosh & Bijoy Krishna Dolui\***