**Publications, Books & Patents List**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Published | Accepted | Submitted | In Preparation |
| International Journal publications  | 4 |  |  | **1** |
| International Conference publications | 1 |  |  |  |
| Books | 1 | **1a** | **1b** |  |
| Book Chapters, Review articles | 3 |  |  | **10a** |
| Patents | Nil | **Nil** | **Nil** | **Nil** |

**PUBLICATIONS**

**Refereed**

1. Curvature effects of Nitrogen on graphitic sheets: structure and energetics - J. Mandumpal\*, S.Gemming, G. Seifert, *Chemical Physics Letters* (2007) 447: 115-120, **(as first and corresponding author**) ***cited 16 times***

<http://www.sciencedirect.com/science/article/pii/S0009261407012274>

1. Elucidating the molecular mechanism of solvent cryoprotection in aqueous solution: **J. Mandumpal**, C.A. Kreck, A. Kaczmarcyk, R Mancera, *Cryobiology* (2010) 61: 394, (**as first author**) ***cited 0 times***

 3. Molecular mechanism of solvent cryo protection in aqueous DMSO solutions: **J. Mandumpal**, C.A. Kreck, R.Mancera *Physical Chemistry Chemical Physics* (2011) 13, 3839-3842 (**as first author**) ***cited 13 times***

 <http://pubs.rsc.org/en/content/articlelanding/2011/cp/c0cp02326d>

1. Effect of Methylation in glass transition temperatures in aqueous formamide solutions: C.A. Kreck, **J.Mandumpal**, R.Mancera *Chemical Physics Letters (2011) 501, 273-277,* ***cited 8 times***

<http://www.sciencedirect.com/science/article/pii/S0009261410014727>

 5. Book: “The Molecular mechanism of solvent Cryo protection” (July 2012) – (upon invitation by the Publisher) A 265 page single author book published by ***LAP Lambert Academic Publishing, Germany*** ISBN 978-3-659-18104-7, **(as sole author)** ***cited 0 times***

 <http://www.amazon.com/The-Molecular-Mechanism-Solvent-Cryoprotection/dp/3659181048>

Non refereed

1. Solvent Cryoprotection in DMSO solution (paper presentation): November 5th 2009 in prestigious MARK LIVERIS seminar, Perth*.*

 Book Chapters

1. *Introduction to cryopreservation methods***: J.Mandumpal***,* ***pp19-79****, in Molecular Mechanism of solvent cryoprotection*
2. Physical Properties of Aqueous DMSO & Acetone solutions in freezing temperatures: J.Mandumpal, pp96-128, in *Molecular Mechanism of Solvent Cryoprotection*

 3. Low Temperature effects in aqueous methanol and ethanol solutions: J.Mandumpal, pp 129-160 in *Molecular Mechanism of Solvent Cryoprotection*

In preparation

1. *Book* Simulations on Water: computer experiments on the most anomalous liquid on earth:  *Jestin Mandumpal,* ***a single author*** *300 page e-Book to be published by Bentham Science Publications in 2013/2014 (Upon invitation by the Publisher) - the proposal has been accepted by the publishers*
2. *Educational Text Book* Quantum Chemistry, from a learners perspective*:* ***Jestin Mandumpal****,* ***a single author*** *text book covering historical, experimental, mathematical & physical aspects of Theoretical Chemistry; planning to publish in 2014/2015*

*3. FEARCF based coarse grain formalism for simulating macromolecules –* R. Gamildien*, J. Mandumpal, K. J. Naidoo. (Work in progress)*

LECTURES

1. Lecture series in Physical & Theoretical Chemistry: Elementary Quantum Chemistry, Part One <https://www.youtube.com/watch?v=I4KDDQGAWpo&feature=youtu.be>

*In preparation*

1. Elementary Quantum Chemistry, Part Two – Atomic Structure
2. Elementary Quantum Chemistry, Part Three – Quantum Chemistry of Molecules
3. Elementary Quantum Chemistry, Part Four – Hartree Calculations
4. Group Theory and Chemistry
5. Fundamentals of Thermodynamics & Statistical Mechanics
6. Introduction to Spectroscopy
7. Mathematical physics for chemists – part One: Vector calculus
8. Mathematical Physics for Chemists – Part Two: Matrix theory
9. Mathematical Physics for Chemists – Part Three: Calculus

 **CONFERENCE PRESENTATIO NS**

 **NOV 2002** DFTB analysis on Nitrogenated Graphites

Poster: Tag der Fullerene, Max Planck Institute for Solids, Dresden, Germany

 **JAN 2005** Curvature effects of Nitrogen on graphitic sheets, Density Functional

 Theory calculations

 Talk: *School of Chemical Sciences, Kottayam, India*

 **AUG 2007** Glass transition temperatures in solution

 Poster Curtin University, Perth, Australia

 **JUL 2009** Molecular mechanism of solvent protectant solutions

 Poster: Bio Molecular Modelling Retreat at Gold coast Australia

  **SEP 2009** Molecular mechanism of solvent cryo protection (25mts)

 Talk**:**  WABRI symposium *Curtin University Perth.*

 **OCT 2012** Computational approaches to Protein folding

Poster: Frontiers in Scientific Computing, Capetown, South Africa

*In addition to the national and international conference presentations outlined above, I have given regular presentations in Departmental, College, and inter-Departmental settings.*

Notes:

1. Simulations on Water: computer experiments on the most anomalous liquid on earth:  *Jestin Mandumpal, a single author 300 page e-Book to be published by Bentham Science Publications in 2013/2014 (Upon invitation by the Publisher) - the proposal has been accepted by the publishers*

*The ten chapters, each consists of 15000 approximately, are:*

1. Water –center of life
2. *Computer simulation – an overview*
3. *Water models*
4. *Theoretical treatments on water*
5. *Computer Experiments on normal water*
6. *Computer Simulations on super cooled water*
7. *Supercritical water*
8. *Experiments employed for studies on water*
9. *Water anomalies*
10. *Ice*

b. Recently envisaged book titled “Quantum Chemistry, from a learner’s perspective”-A single author text book covering historical, experimental, physical & mathematical aspects of Theoretical Chemistry, planning to publish in 2014.