Dr. Sarvpreet Kaur

Associate Professor

TEACHING EXPERIENCE: (Appx. 16 yrs)

1. Nine Years (As assistant Prof.) , April,2006-till date, Govt. College for Girls, Chandigarh

2.Three Months (as Guest Lecturer) (Aug 1996 to 3rd Nov.1996), Panjab Engineering College, Chandigarh.

3. Six years (As RA and SRA) at Department of Physics, Panjab University, Chandigarh w.e.f. March2000-April2006

4 Six Months Teaching In School (Post Graduate Lecturer) July 1993-Jan1994

RESEARCH EXPERIENCE: Twenty one Years including Ph.D (1994 to 2015)

RESEARCH PUBLICATIONS:

1. Dissociation energy of diatomic molecules, Sarvpreet Kaur and C.G. Mahajan *Pramana J. Phys*. **50**, 397 (1998).

2. Wei Hua's–four Parameter Potential: Comments and Computation of Molecular Constants α_e and $\omega_e x_e$, Sarvpreet Kaur and C.G. Mahajan *Pramana J. Phys.***52**, 409 (1999).
3. Some new four-parameter potentials and their use in the study of vibrational thermodynamical quantities of diatomic molecules. Sarvpreet Kaur and C.G. Mahajan *Pramana J. Phys.***52**, 459 (1999).
4. Numerical solution of four-parameter potentials. Sarvpreet Kaur and C.G. Mahajan *J. Quant. Spectrosc. & Radiative Trans.***69**, 111 (2001).
5. Rejoinder: Authors reply to the comments made by Suresh Chandra on their paper entitled "Dissociation energy of diatomic molecules" Sarvpreet Kaur and C.G. Mahajan *Pramana J. Phys.***57**, 837 (2001).

6. Universal relationship between spectroscopic constants, Sarvpreet Kaur and C.G. Mahajan *Pramana*. **59**, 479 (2002).
7. Rejoinder to comments of paper ' Universal …..Constants', Pramana, J. of Physics, May 2004.
8. Infrared spectroscopic studies of free-base tetraphenylporphine and its dication. G.S.S.saini, Sandeep Sharma, **Sarvpreet Kaur** and C.G.Mahajan; Spectrochimica Acta Part A Molecular and Biomolecular Spectroscopy 11/2005; 61(13-14):3070-6.
9. Spectroscopic studies of rhodamine 6G dispersed in polymethylcynoacrylate, G.S.S.Saini, Srvpreet kaur, S.K. Tripahi, C.G. Mahajan. Spectrochemica Acta A 61(2005) 653-658
10. Rhodamine 6G interaction with solvents studied by vibrational spectroscopy and density functional theoryG.S.S. Saini · Amit Sharma · Sarvpreet Kaur · K.S. Bindra · Vasant Sathe · S.K. Tripathi · C.G. Mhahajan · Journal of Molecular Structure 08/2009; 931(10 – 19).
11. Fourier transform infrared spectral study of N,N-dimethylformamide-water-Rhodamine 6G Mixture; A. SHARMA, S. KAUR, C. G. MAHAJAN, S. K. TRIPATHI and G. S. S. SAINI*, Molecular PhysicsVol. 105, No.1, 2007, Pg 117-123
12. Fourier-transform infrared spectroscopic studies of dithia tetraphenylporphine.Sandeep Mishra · Sarvpreet Kaur · S. K. Tripathi · C. G. Mahajan · G. S. S. Saini · Journal of Chemical Sciences 07/2006; 118(4):361-369.
13. Resonance Raman and electronic absorption study of free-base tetraphenylporphine diacid dispersed in polymethylcyanoacrylate. **G.S.S. Saini**, A. Sharma, S. Singh, J.M. Abbas, S.K. Tripathi, S. Kaur, C.G. Mahajan, H.H. Thanga and A.L. Verma, *J. Raman Spectrosc.* **38** (2007) 1561-1569.
14. Zinc Pthalocynanine thin films and chemical analyte interactions studies by density functional theory and Vibrational technique, J. Phys Condensed Matter, 21 (2009)
15. Effect of pyridine on Zinc thylocyanine studied by density functional theory calculations and infrared absorption, Vibrational Spectroscopy. Vibrational Spectroscopy 56 (2011) 60–65.
16. Vibrational spectroscopic and density functional theory studies ofchloranil–imidazole interaction, Vibrational spectroscopy; 5(2011) 56(1); 66-73.
17. Effects of chemical analytes on zinc tetraphenylporphine thin films studied by vibrational spectroscopy and density functional theory; Vibrational Spectroscopy 61 (2012) 188– 198.
18. Solvation of Coumarin6 studied by vibrational spectroscopy and density functional theoryRandhir Singh · Vasant Sathe · Amit Sharma · Sarvpreet Kaur · G.S.S. Saini. Journal of Molecular Structure, 1106(2016) 170-180. ·
19. Structure and vibrations of glutathione studied by vibrational spectroscopy and density functional theoryGurpreet Singh · Sukh Dev Dogra · Sarvpreet Kaur · S K Tripathi · Satya Prakash · Bimal Rai · G S S Saini ·Spectrochimica Acta Part A Molecular and Biomolecular Spectroscopy 05/2015; 149:505-515.
20. Vibrational Study of Melatonin and its Radioprotective Activity towards Hydroxyl Radical. Gurpreet Singh · Sarvpreet Kaur · G. S. S. Saini · 12/2011; 1393:295-296.

Papers Presented in National/ International Conferences and Symposium.

1. An investigation of molecular constants…published in laser symposium on Laser and Molecular spectroscopy, Gorakhpur Feb 26-28,1998.

2. Dissociaion Energy of diatomic Molecules. Laser Symposium on Laser and Molecular spectroscopy. Gorakhpur Feb 26-28,1998.
3. Franck Condon factors of Rydberg states of S_2 molecule. **Sarvpreet Kaur** ,2nd International Conference on "Current Development in Atomic, Molecular and Optical Physics with applications" March 21-23,2006, Delhi University.
4. Fourier Transform Infrared Spectroscopic Study of N,N/-Dimethylforamide-Rhodamine6G Mixture in the presence of water impurities , Amit Sharma, Sarvpreet kaur, C.G. Mahajan, S.K. tripathi and G.S.S.Saini, Ist Chandigarh Science Congrss, March 16-17, 2007.
5. Normal Coordinate analysis of coumarine 6 and effect of solvens on is infrared spectra. A. Sharma, S. Kaur, S. K. Tripathi and G.S.S.Saini, Department of Physics, P.U., Chd. CHASCON 26-28 Feb, 2009.
6. Alcohol sensing by Zinc pthloyanine probed by raman, infrared techniques and densiy functional theory. S. Singh, S.Kaur, S.K. ripahi, G.S.S.Saini, Department of Physics, P.U., Chd. CHASCON 26-28 Feb, 2009.
7. Vibraional study of coumarine 6. Sarvpreet Kaur, Ami Sharma, Vasan Sahe, S.K. Tripathi and G.S.S.Saini. NLS-08, LASTEC, Delhi, Jan 7-10, 2009.
8. Laser Raman Studies of Rh6G trapped in Acrylate Polymer, DAE Symposium Proceedings, Dec 22-24, 2003
9. Vibrational Study of Melatonin and its radioprotective Activity towards Hydroxyl Radical, AIP Conf. Proc.1393(2011) 295-296.
10. Solvation of coumarine 500 studied by vibrational spectroscopy and DFT; International conference on advances in condensed and nano materials., department of Physics, P.U., Chandigarh. 22,23-26 Feb, 2011.

AWARDS & DISTINCTIONS

1. Young Scientist Award under Fast Track Scheme of DST, New Delhi, A project on lasing dyes was sanctioned (Cost Rs 6, 12,000).

2. Senior Research associate (Pool Scientist) CSIR, 2005-2006

3.Research Associate fellowship by CSIR,(open), 2003-2005.

4. Senior Research Fellowship of CSIR, New Delhi(open).1999

5. 2nd in Univ in M.Sc.(Physics)

6. 2nd in Univ. in B.Sc(Non-Medical)