



**A) Educational Qualifications**

Degree	Year of Passing	University/Institute
Ph.D.	1992	M.D. University, Rohtak
M. Phil.	1985	Kurukshetra University Kurukshetra
M.Sc.	1984	M.D. University, Rohtak

**B) Career Profile**

Designation	Institution served	Duration	
		From	To
Lecturer in Chemistry	University college(M.D.U)	1989	1998
Lecturer(Selection Grade)	-do-	1998	2008
Associate Professor	ChemistryDepartment, M.D.University,Rohtak	May,2008	continue

**C) Research Advisory**

No. of Students supervised	Ph.D	M.Phil
		2

**D) Projects Undertaken**

Title of the Project	Duration	Funding Agency	Status	
			Completed	In progress
Rare- Earth Complexes as light Emitting materials	2010-11	Dr. Radha Krishnan Foundation Fund	In Progress	

## E) Publications

### Books

Authored : Chemistry Lab Manual for Engineers

### Research Papers: **Research Papers Published**

1. Amperometric determination of Ga(III), In(III), Tl(I) and Pb(II) with thiomalic acid  
O.P. Agrawal and **Vinod Bala**,  
J. Electrochem. Soc. India, 37-3(1988)289.
2. Amperometric determination of some Ln(III) with thiomalic acid  
O. P. Agrawal, S. P. Khatkar, **V.B. Khatkar** and K.K. Verma.  
Transactions of the SAEST, Vol. 26. No. 2-3 (1991)201.
3. Amperometric determination of Tl(III), As(V), Sb(III), Se(IV) and Te(IV) with thiomalic acid.  
O. P. Agrawal, S. P. Khatkar, **V.B. Khatkar** and K.K. Verma,  
J. Electrochem. Soc. India, 41-1 (1992) 77.
4. Amperometric determination of Fe(II), Co(II), Ni(II) and Cu(II) with 2-Mercaptopropanoic acid.  
S. P. Khatkar, O. P. Agrawal, **V. B. Khatkar** and Satya Pal Yadav,  
J. Electrochem. Soc. India, Vol. 43-4(1994) 249.
5. Amperometric determination of Metal Ions with Thio-acids. V(V) and Mo(VI) with 2-Mercaptopropanoic acid.  
S.P. Khatkar, O. P. Agrawal, **Vinod Bala** and Sunita Dahiya,  
J. Electrochem. Soc. India, Vol. 47-1 (1998) 78.
6. Amperometric trace determination of V(V) and Cr(VI) with Ethanethioic acid.  
S.P. Khatkar, **Vinod Bala** and Promila  
Asian J. Chem. Vol. 12, No. 2 (2000) 600.
7. Amperometric trace determination of Cr(VI) with 2-Mercaptopropanoic acid without any Chemical Interaction.  
S.P. Khatkar, **Vinod Bala** and Mrs. Sunita Dahiya  
J. Electrochem. Society, Vol. No. 49-3 (2000) 118.
8. Ethanethioic acid as a reagent for trace determination of Zn(II), Cd(II) and Hg(II).  
S.P. Khatkar, Dayawati, Promila and **Vinod Bala**,  
Asian J. Chem., Vol.16(2004) 549.
9. Amperometric determination of Mn(II), Mn(VII), Co(II) and Ni(II) with ethanethioic acid.  
S.P. Khatkar, Dayawati, Promila, **Vinod Bala**,  
Transactions of the SAEST, 39 (2004)124.
10. Preparation and luminescence properties of Eu(TNB)<sub>3</sub>phen complex incorporated in a silica matrix.  
S.P. Khatkar\*, Sang-Do Han, Jo-Yong Park, Rajesh Kumar, Y.Liang, **V.B. Taxak**,  
Bulletin of Electrochemistry, Vol. 21(2005) 123.
11. New amperometric method for the trace determination of Ga(III), In(III) and Tl(I).  
S.P. Khatkar, **Vinod Bala**, Ms. Dayawati,  
Transactions of the SAEST, 40 (2005)124.
12. Combustion synthesis and luminescent properties of Eu<sup>3+</sup> - doped LnAlO<sub>3</sub> (Ln=Y and Gd) phosphors.  
Sang Do Han, S.P. Khatkar, **V.B. Taxak**, Dinesh Kumar, Jo-Yong Park,  
Materials Science & Engineering B, 127(2006) 272.

13. Synthesis, luminescence and effect of heat treatment on the properties of Dy<sup>3+</sup>-doped YVO<sub>4</sub> phosphor,  
SangDoHan, S.P.Khatkar, **V.B.Taxak**, Gaytri Sharma, Dinesh Kumar,  
Materials Science & Engineering B, 129(2006)126.
14. Combustion Synthesis and Luminescent properties of MIn<sub>2</sub>O<sub>4</sub>:xTb (M=Ca and Sr) Phosphors.  
S.P.Khatkar, **V.B.Taxak**, SangDo Han, Jo-Yong Park, Dinesh Kumar,  
Materials Chemistry and Physics, 98(2006)528.
15. Synthesis and luminescent properties of CaIn<sub>2</sub>O<sub>4</sub>:xTb nanocrystals.  
S.P.Khatkar, Sang Do Han, **V.B. Taxak**, Gaytri Sharma, Dinesh Kumar  
Current Applied Physics, 6S1 (2006) e192.
16. Luminescent properties of ZnS:Eu<sup>2+</sup> nanocrystals. Gaytri Sharma, Sang Do Han,  
S.P Khatkar, **V.B Taxak**, Young Woo Rhee  
Electrochemical Society Trans., Vol. 1 (34) (2006)7.
17. Synthesis by combustion method and photoluminescence of SrZnO<sub>2</sub>  
nanophosphors.  
S.P. Khatkar, Sang Do Han, C.H.Han, **V.B.Taxak**, G.Sharma, D.Kumar  
J. Korean Physical Society, 48(2006)1355.
18. Eu<sup>3+</sup> activated LnVO<sub>4</sub> (Ln = Y and Gd) phosphors: synthesis and optical properties.  
S.P. Khatkar, Sang Do Han, **V.B. Taxak**, Jo-Young Park, Dinesh Kumar  
Bulletin of Electrochemistry, 22-3(2006)97.
19. The influence of sintering temperature on particle size/shape and photoluminescence  
characteristics of CaIn<sub>2</sub>O<sub>4</sub>: xTb synthesized by combustion process.  
Sang Do Han, S.P. Khatkar, **V.B. Taxak**, Gaytri Sharma, Dinesh Kumar  
Optical Materials, 29-11(2007)1362.
20. Preparation and photoluminescence characteristics of Eu<sup>3+</sup> -doped MgAl<sub>1.8</sub>Y<sub>0.2-x</sub>O<sub>4</sub>  
nanocrystals.  
S.P. Khatkar, S.D. Han, **V.B. Taxak**, Dinesh Kumar, Rajesh Kumar,  
J. Luminescence, 126-2(2007)597.
21. Characterization and luminescent properties of YPO<sub>4</sub>:Eu<sup>3+</sup> nanocrystals prepared by  
combustion method.  
Gaytri Sharma, Sang Do Han, S.P Khatkar, **V.B Taxak**, Young Woo Rhee,  
Electrochemical Society Trans. Vol. 2 -20(2007)59.
22. Preparation and photoluminescent properties of new europium complexes with  
2'-Hydroxy-3-(p-methoxyphenyl) propiophenone.  
Rajesh Kumar, J.K.Makrandi, **V.B.Taxak**, S.P.Khatkar.  
Electrochemical Society Transaction, 6-27(2008) 25.
23. Tartaric acid assisted sol gel synthesis of Y<sub>2</sub>O<sub>3</sub>:Eu<sup>3+</sup> nanoparticles.  
**V.B. Taxak**, S.P.Khatkar, Sang-Do Han, Rajesh Kumar, Mukesh Kumar  
Journal of Alloys and Compounds, 469(2009)224.
24. Synthesis and characterization of luminescent Eu(HMAP)<sub>3</sub>·2H<sub>2</sub>O and  
Tb(HMAP)<sub>3</sub>·2H<sub>2</sub>O complexes.  
**V.B. Taxak**, Rajesh Kumar, J.K.Makrandi, S.P.Khatkar.  
Displays, 30 (2009)170.
25. Luminescent properties of europium and terbium complexes with 2'-hydroxy-  
4',6'-dimethoxyacetophenone.  
**V.B. Taxak**, Rajesh Kumar, J.K. Makrandi, S.P.Khatkar  
Displays, 31 (2010)116.

26. Preparation and luminescence properties of Tb<sup>3+</sup> doped ZrO<sub>2</sub> and BaZrO<sub>3</sub> Phosphors.  
B. Marí, K.C. Singh, M. Sahal, S.P.Khatkar, **V.B. Taxak**, M. Kumar  
J. Luminescence, **130** (2010) 2128.
27. Combustion Synthesis and Photoluminescence Characteristics of Y<sub>1-x</sub>CaAl<sub>3</sub>O<sub>7</sub>:xEu<sup>3+</sup> Nanoparticles  
**V.B. Taxak**, S.P.Khatkar, Mukesh Kumar, Sang-Do Han  
Electrochemical Society Trans. **28-3**(2010)155.
28. Tartaric Acid Assisted Sol-Gel Synthesis and Photoluminescence Characteristics of SrY<sub>2(1-x)</sub>O<sub>4</sub> : xTb Nanoparticles  
**V.B. Taxak** , S.P.Khatkar ,Mukesh Kumar, Sang-Do Han  
Electrochemical Society Trans.,**28-3**(2010)161.
29. Characterization and photoluminescence properties of some MLn<sub>2(1-x)</sub>O<sub>4</sub>:2xEu<sup>3+</sup> or 2xTb<sup>3+</sup> systems (M=Ba or Sr, Ln=Gd or La).  
B. Marí, K.C. Singh, M. Sahal, S.P.Khatkar, **V.B. Taxak**, M. Kumar  
J. Luminescence,133(2011)587.
30. Thioglycolic acid as an amperometric reagent for trace determination of Mn(II), Mn(VII), Cr(III) and Cr(VI).  
**V.B.Taxak** , Rekha Devi , Dayawati , S. P. Khatkar  
Bulletin of Electrochemistry, In Press

### Participation in conferences/seminars

#### International/National Conference attended:

1.	Need based refresher course in Chemistry, Academic Staff College, K.U. Kurukshetra	Dec.27, 1993-Jan.15, 1994
2.	U. G. C. Sponsored Refresher Course, M. D. University, Rohtak	Dec.9 – Dec. 29, 1995
3.	National workshop on Solid State Nuclear, Track Detectors ( NTSI ) Chem.Deptt. , M. D.University, Rohtak	Oct.8 - Oct.10, 1996
4.	U. G. C. Sponsored Refresher Course , M. D. University, Rohtak	Dec.10 – Dec.30, 1998
5.	National Seminar on analytical Methods in Industries and Lab. Chemistry Deptt., M.D.University,Rohtak	Mar. 9- Mar.10,1999
6.	Refresher course for college and university lecturers Academic Staff College, H.P.U. Shimla	Nov.8-Nov.27, 1999
7.	National Seminar on Teacher Accountability and teacher Organisations in collaboration with U.G.C. & NCTE. C.R. College of Education, Rohtak	Mar.24 –Mar.25, 2000
8.	Workshop for in-service teachers on ENVIRONMENT sponsored by deptt. Of Environment & Forests, New Delhi Department of Bioscience M.D.University, Rohtak	Apr.24 –Apr. 27, 2000
9.	International Seminar on Analytical Techniques in Monitoring the Environment, Sri Venkateswara University, TIRUPTI	Dec.18 –Dec.20, 2000

10.	The 2 <sup>nd</sup> International Meeting On Information Display, Daegu, South Korea	Aug.21- Aug.23, 2002
11.	International Sensor Conference 2002 , Jeon Nam University Gwangju, South Korea	Nov.1- Nov.2 , 2002
12.	Korean Institute of Electrical & Electronic Materials Engineers (KIEEME) Annual Autumn Conference Dan Kook University Seoul, South Korea	Nov.7- Nov.9, 2002
13.	State Conference on Information & Communication Technology, (ICT) in Teacher Education, C.R.College of Education, Rohtak	Nov. 8, 2003
14.	Biological Science- A Current Perspective; Pt.N.R.S. Govt. , College , Rohtak (Haryana)	Mar.12- Mar.13, 2008
15.	Refresher Course in Chemistry, Department of Chemistry , Pt. N.R.S. Govt.College , Rohtak (Haryana)	May 5- May 25, 2008
16.	National Conference on Photonics and Material science, Guru Jambeshwer University Hissar	Oct.24- Oct.25 , 2008
17.	Symposium on Trends in Translational Medicine PGIMS, Pandit Bhagwat Dayal University of Health Sciences, Rohtak	January, 9, 2009
18.	One Day India-Japan Seminar on "Nanomaterials For Diagnostics , And Therapeutics" Department of Biochemistry, M.D.University,Rohtak	October,30, 2010
19.	Presented research paper in National seminar/workshop "Applications Of Nanomaterials for Environment and Technology Development" KIIT Group of Colleges,Sohna Road, Gurgaon(Haryana).	Feb.11-Feb.12, 2011
20.	International conference on Supramolecular Chemistry and Nanomaterials (ICSN 2011), Mumbai University, Mumbai	Feb.14-Feb.16, 2011
21.	One Day workshop on "Material Science" Physics Dept. M.D. University, Rohtak	March, 25 <sup>th</sup> , 2011
22.	Two Day workshop on "Application of SPSS Software in Research Institute of Hotel & Tourism Management,M.D.University,Rohtak..	. April 19-20, 2011

### Assignments outside M. D. University, Rohtak

i. India

ii. Abroad:

- 1 South- Korea : 2002-03 "Visiting Scientist" under Brain Pool program. Worked on **Phosphorescent materials** at Korea Institute of Energy Research for **one year**.

2. Singapore Oct., 2009 Visited Jeol Asia for SEM training. Visited Singapore National University
3. USA Oct., 2010 Presented Research Papers in ECS Meeting in Las Vegas,USA.
4. USA Oct., 2010 Visited University of Louisville Kentucky

**Other contributions:**

1. Accompanied and participated as Teacher Incharge(F) in various educational tours of students ( Delhi, Rajasthan , Punjab, Himachal Pardesh, U.P. etc. ).
2. Accompanied and participated as Teacher Incharge(F) in Explore India Prog. of D.S.W. Office to Leh Ladakh 2006.