Curriculum Vitae

Prof. (Dr.) Sanjay Shamrao Chavan

M. Sc., Ph. D. PDF (ANU), Australia
BOYSCAST (India) & **ENDEAVOUR** (Australia) Fellow
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1. Academic details

B. Sc.	Shivaji University, Kolhapur, India	1988
M. Sc.	Shivaji University, Kolhapur, India	1990
Ph. D.	Shivaji University, Kolhapur, India	2002

2. Academic position held:

01/01/2010 to present	Professor	Shivaji University, Kolhapur
26/07/2003 to 31/12/2009	Reader/Associate Professor	Shivaji University, Kolhapur
26/07/1998 to 25/07/2003	Sr. Lecturer	K. B. P. College, Islampur
01/08/1991 to 25/07/1998	Lecturer	K. B. P. College, Islampur

3. Awards/ Honours Received:

- **'Teacher Fellowship'** of University Grants Commission, India under FDP- 1999
- '**Young Scientist Award**' of 'Indian Council of Chemists' in XXI National Conference, R.D. University, Jabalpur (M.P.), India.–2002.
- **Indian National Science Academy** (**INSA**), **Govt. of India** Visiting Fellow-2005 at Inorganic and Physical Chemistry Department, Indian Institute of Science (**IISc**), Bangalore.
- **'BOYSCAST Fellowship-2007' Department of Science and Technology (DST), Govt. of India** to carry the postdoctoral research at Research School of Chemistry, Australian National University, **Canberra** ACT 0200, **Australia.**
- **Endeavour Research Fellowship Award-2011** by **Government of Australia** to carry the research program at Research School of Chemistry, Australian National University, **Canberra** ACT 0200, **Australia.**
- **Endeavour Award Lapel Pin of High achiever-2011** by **Government of Australia** for making international linkages with Australian Scientific group.
- Referee of the Research Journals-Indian J. Chemistry (**CSIR**, India); Inorganic Chemistry Communications, Journal of Molecular structure, 'Spectrochimica Acta A', Synthetic metals **(Elsevier Science)**; J. Physical Chem. (**JACS**).

4. **Research specialization**: Functional Coordination Chemistry, Coordination-Organometallic Hybrid Materials, Catalysis, Nonlinear optics

5. **Countries Visited:** **Australia** (1 Mar. 2007- 28 Feb. 2008 & 1 Mar. 2011- 25 Aug. 2011) **New Zealand, Spain**

6. **Number of Research Students guided**:

Ph. D.: Awarded: **5**; Working: **6**

JRF: 2, SRF (CSIR): 2

7. **Research Project Supervised:**

i) National project:

- 'Synthesis and characterization of some biologically active (bio-active) thiazolylazo derivatives and their metal complexes'–**Completed**-Funded (**INR 50, 000/00**) by University Grants Commission (**UGC**), New Delhi (India).
- **'**Synthesis of metal complexes and physico-chemical studies of interaction of metal ions with some bioactive molecules'–**Completed**-Funded (**INR 85, 000/00**) by University Grants Commission (**UGC**), New Delhi (India).
- 'Synthesis of Coordination-organometallic hybrid complexes for nonlinear optics'-**Completed**-Funded (**INR 17,67,000/00**) by Department of Science and Technology (**DST**), Govt. of India
- 'Design, Synthesis and luminescence studies of Novel Hybrid complexes composed of Coordination and Organometallic Sites'- **Ongoing-(INR 37, 91, 200/00**), Science and Engineering Research Board (**SERB**), Govt. of India

ii) International Collaborative project:

- The collaborative research project 'Hybrid Organometallic–Coordination complex materials for Nonlinear Optics' with Australian National University (ANU), **Australia**, Raman Research Institute, **Bangalore**, University of **Hyderabad** and **IIT**, **Madras -Ongoing-** under Australia-India Strategic Research Fund (**AISRF**)-joint program of **Australia** and **Indian Govt.** Funded (**INR 58,50,680.00/00**) by Department of Science and Technology (**DST**), Govt. of India.

8. **Research Collaborations:**

- Prof. Mark Humphrey, Prof. Robert Stranger, Dr. Marie Cifuentes, Dr. Simon Pitre, Research School of Chemistry, Australian National University, Canberra ACT 0200, **Australia**.
- Dr. Reji Philip, Department of Light and Matter Physics, Raman Research Institute, Bangalore, **India**
- Prof. D. Narayan Rao, Dr. S. Venugopal Rao, Department of Physics, University of Hyderabad, **India**
- Prof. C. Vijayan, Department of Physics, IIT, Madras, **India.**
- Prof. G. K. Lahiri, Department of Chemistry, IIT Mumbai, **India**.

9. **Member of the professional bodies:**

- Member of the American Nano Society

10. Chair/ responsibility:

i) **Co-Chair** of the international research grant received under 'Australia-India Strategic Research Fund (**AISRF**)'-Joint program of **Australia** and **India** Government.

11. Extension work carried out:

Selection Committee Member:

- SHIVAJI UNIVERSITY, KOLHAPUR, Nominee of Vice-chancellor on Selection Committee for selection of **Lecturers**, since 2003.
- SHIVAJI UNIVERSITY, KOLHAPUR, Nominee of Vice-chancellor as a 'Subject Expert' on Selection Committees for selection of **Lecturers**, since 2003.

Examination Work Carried:

- Paper setter and Examiner- B. Sc. Inorganic Chemistry-1995-2003.
- Paper setter and Examiner- M. Sc. Inorganic Chemistry-since 2005.
- **Chairman**- M. Sc. Inorganic Chemistry Examination-2008-2010.

Ph. D. Thesis Examiner:

Periyar University, Salem, Tamilnadu, University of Mumbai, Ramanandtirth University, Nanded, Bharati Veedhyapeeth, Pune

12. Other Research Activities:

i Member-Organizing Committee of International Symposia on *"Drug Discovery and Process Research*" (DDPR) – Organized by the Department of Chemistry, January 23-25, 2003-Shivaji University, **Kolhapur.**

ii Member-Organizing Committee of International Conference on "*Nanomaterial and its Industrial applications"* – Jointly Organized by the Department of Chemistry and Department of Physics, December 23-25, 2008-Shivaji University, **Kolhapur.**

iii Member-Organizing Committee of National Conference on *Synthesis of new materials for industrial applications*-1, 2 Feb. 2008, Shivaji University, **Kolhapur**

iv Member-Organizing Committee of National Conference on "*Recent trend on functional material"*, December 23-25, 2009 - Shivaji University, **Kolhapur**

v Member-Organizing Committee of National Conference on "*Advance synthetic methodologies for functional materials"* December 23-25, 2009–Shivaji University, **Kolhapur.**

vi Member-Organizing Committee of National Conference on "*Advances in Synthetic Methodologies and New Materials."* 21 & 22 Jan. 2011-Shivaji University, **Kolhapur**

vii Member-Organizing Committee of National Conference on '*Current Research in Chemical Sciences'*-22, 23 Jan. 2013- Shivaji University, **Kolhapur**

vii Member-Organizing Committee of National Conference on '*Current Trends in Chemical and Nano Sciences'*-17, 18 Jan. 2014- Shivaji University, **Kolhapur**

13. Lectures delivered:

i) National Seminar on "New Developments in Chemistry", as a Chief Guest and Speaker, organized by J.S.R.D. College, Wagholi, Pune (4-6 Feb. 2010).

ii) Remedial coaching for SC/ST students at Department of Chemistry, Shivaji University, Kolhapur.

iii) A series of lectures delivered in workshop organized by Department of Chemistry, Shivaji University, Kolhapur

iv) Winter school on Chemical Science organized by Pune University, Pune at Department of Chemistry, Shivaji University, Kolhapur, 11.-31 Nov. 2013.

v) Resource person at "National symposium of organometallic Chemistry' organized by Rajashri Shahu College, Kolhapur on 20-21 December 2013.

14. Participation in Workshops/Symposia/Conferences.

I) Workshops:

i) UGC-Infonet E-Journal Consortium - Access to Chemical Abstract' conducted jointly by Information Library Network, Ahmadabad and Goa University at Goa University, **Goa** on 27.3.2004.

ii) Workshop on Organometallic Chemistry' organized by Bhabha Atomic Research Center (**BARC**) Mumbai, Sponsored by Department of Science and Technology (**DST**), Govt. of India -April 18-20, 2005.

II) Paper presented at Conference:

(A) National Conference:

i) Synthesis characterization and biological studies of some bivalent metal complexes with Schiff base derived from aminothiazole and substituted azosalicylaldehyde *XVIII Conference of Indian Council of Chemists* 27-29 Dec. 1999 North Maharashtra University, **Jalgaon** (M.S.) India.

ii) Synthesis and structural studies of Cu (II) and Ni (II) complexes with Schiff base ligand derived from 5-(2′-thiazolylazo) salicylaldehyde and 2-aminobenzoic acid. *XIX Conference of Indian Council of Chemists* 27-29 Nov.2000 Kuvempu University Shimoga**, Karnataka**, India.

iii) Studies on some binuclear metal complexes with tetradentate ligand derived from 5-(4′-phenyl,2′-thiazolylazo)salicylaldehyde and 2-Aminophenol. *XXI Conference of Indian Council of Chemists'* 24-26 Oct. 2002 Rani Durgavati, University, Jabalpur, **Madhya Pradesh**, India.

iv) Studies on some binuclear metal complexes with tetradentate ligand derived from 5-(4′-phenyl, 2′-thiazolylazo)salicylaldehyde and 2-Aminobenzoic acid. *39th annual convention of Chemists,* 22-26 Dec. 2002 Nagarjuna University, Nagarjunanagar, **Andhra Pradesh**, India.

v) Synthesis and Characterization of Mn(II), Fe(II), Co(II), Ni(II), Cu(II) and Zn(II) complexes with 5-(2'-thiazolylazo)2-hydroxybenzaldehyde and 5-(2'-thiazolyl azo)-2-hydroxyacetophenone41st *Annual Convention of Chemists*, 23-27 Dec. 2004, Delhi University, **Delhi**, India

vi) X-ray powder diffraction and spectral studies of some mixed ligand transition metal complexes, *Synthesis of new materials for industrial applications*-1, 2 Feb. 2008, Shivaji University, **Kolhapur**

vii) Mixed ligand complexes of Co(II) Ni(II) and Cu(II) complexes with 2-marcapto-3-phenyl-quinazoline-4(3H)-one, pseudohalides and some bidentate N-donor ligands: Synthesis, structure and electrochemical studies, *Advance synthetic methodologies for functional materials*- 23 & 24 Dec. 2009, Shivaji University, **Kolhapur**

viii) Studies of Mn(II), Ni(II), Cu(II) and Zn(II) complexes with 2-mercapto-3-substituted quinazoline-4-one and 1,10-phenanthroline or ethylenediamine as ligands, *Advances in Synthetic Methodologies and New Materials*. 21 & 22 January 2011, Shivaji University, **Kolhapur**

ix) Hetero-bimetallic M(II)/Ru(II) complexes composed of coordination and Organometallic sites: Synthesis, Characterization, photoluminescence and Nonlinear optical properties, *National conference on Chemistry of Chalcogens*, Defense Institute of Advance Technology, **Pune**

x) Alkynyl based Schiff base copper(I) complexes: Structural aspects and photoluminescence properties, *National conference on current research in chemical sciences*-22 & 23 Jan. 2013, Shivaji University, **Kolhapur**

xi) Alkynyl functionalized iminopyridine copper(I) phosphine complexes: Synthesis, spectroscopic characterization and photophysical properties, *National conference on Impact of Nanotechnology on Chemistry-28-30 Oct.2013*, Defense Institute of Advance Technology, **Pune**

xii) Synthesis, spectroscopic characterization and photophysical properties of Alkynyl functionalized iminopyridine copper(I) phosphine complexes: National Conference on '*Current Trends in Chemical and Nano Sciences'*-17, 18 Jan. 2014 - Shivaji University, **Kolhapur**

(B) International Conference:

i) Synthesis, Characterization and biological activities of Mn(II),Fe(II), Co(II), Ni(II), Cu(II) and Zn(II) complexes with 5-(4'-phenyl,2'-thiazolylazo)2-hydroxybenzalde-hyde and 5-(4'-phenyl, 2'-thiazolylazo)2-hydroxyaceto-phenone "*Drug Discovery and Process Research* (DDPR), 23-25 January 2003 Shivaji University, **Kolhapur**

ii) Synthesis and Characterization of Some Biological Active(Bio-active) Thiazolyl azo Derivatives and their Metal Complexes,5-10 Dec. 2004, *Second Asian Biological Inorganic Chemistry Conference* (AsBIC-II), **Goa, India**

iii) Extended Chain Quadrupolar Organometallics for Nonlinear optics, *Australia–New Zealand Organometallic Conference* (OZOM-4) 6-8 Jan. 2008- Australian National University, **Canberra, Australia**

iv) Characterization and electrochemical studies of Mn(II), Co(II), Ni(II) and Cu(II) complexes with 2-mercapto-3-substituted-quinazolin-4-one and 1,10-phenanthroline or ethylenediamine as ligands, *Nanomaterial and its Industrial Applications* 9-11 Dec 2008, Shivaji University, **Kolhapur**

v) Synthesis, characterisation and catalytic property of Schiff base Copper(I) complexes for the amination of aryl halide. *International conference on advanced materials*, 18-21 Feb 2008, School of chemical science, M.G. University, **Kottayam, Kerala**

vi) Tuning Nonlinear Optical Properties in *pi*-Delocalizable Ruthenium Complexes, *8th Conference of the Inorganic Chemistry Division of the Royal Australian Chemical Institute* (IC08). 14-18 Dec.2008 **Christchurch**, **New Zealand**

vii) Mixed ligand complexes of Mn^{II}, Co^{II}, Ni^{II} and Cu^{II} containing 2-mercapto-3-phenyl-quiazolin-4(3H)-one, pseudohalides and some bidentate N-donor ligands: Synthesis, structure and electrochemical studies, *Recent Research Trends in Chemical Sciences*, 2-6 Dec. 2009, VIT University, **Vellore, Tamilnadu**

viii) Copper(I) complexes with Schiff base and triphenylphosphine or *cis*-1,2-bis (diphenylphosphino)ethane as ligands: Effective catalysts for the amination of aryl halide, *3rd Asian Coordination Chemistry* conference 17-20 Oct. 2011, Indian Habitat Center, **New Delhi**

ix) Copper(II) complexes with hydrazonic ligands and heterocyclic coligands, *International Conference on Coordination Chemistry* **(ICCC40**) Sept. 2012, **Valencia, Spain**

15. Research Publications:

1. Copper(I) complexes with quinazolinone and 1,2-bis(diphenylphosphino)ethane as ligands: Synthesis, spectral characterization, luminescence and optical properties
   S. S. Chavan*, G. A. Gaikwad J. Coord. Chem. **Submitted** (**2014**)
2. Synthesis, structure and luminescence properties of alkynyl functionalized Schiff base copper(I) phosphine complexes
   A. N. Jadhav, **S. S. Chavan*,** *Inorg. Chem. Commun.* **Submitted** (**2014**)
3. Alkynyl functionalized iminopyridine copper(I) phosphine complexes: Synthesis, spectroscopic characterization and photophysical properties
   A. N. Jadhav, **S. S. Chavan,** J. Lumin., 148, 296-302 (**2014**)
4. Copper(II) complexes of N-(2-{[(2E)-2-(2-Hydroxy-(5-substituted)-benzylidene)-hydrazino] carbonyl}phenyl)benzamide ligands and heterocyclic coligands
   S. S. Chavan, V. A. Sawant, A. N. Jadhav, *Spectrochim, Acta* 117, 360–365(**2014**)
5. Zn(II) and Cd(II)-azido/thiocyanato complexes with thiazolylazo dye and triphenyl-phosphine: synthesis, characterization and fluorescence
   S. S. Chavan, B. A. Yamgar, B. G. Bharate, *J. Coord. Chem.* Volume 66 (10), (**2013**)
6. Heterobimetallic M(II)/Ru(II) (M = Ni, Zn) complexes containing coordination and organometallic sites: Synthesis, characterization, luminescence and NLO properties
   S. S. Chavan, B. G. Bharate, *Inorg. Chim. Acta* 33, 179–184 (**2013**)
7. Synthesis, characterization, photoluminescence and optical properties of hetero-bimetallic Cu/Ru hybrid complexes composed of coordination and organometallic sites.
   B. G. Bharate, A. N. Jadhav, **S. S. Chavan**, *Polyhedron* 33, 179–184 (**2012**)
8. Mixed-ligand complexes of copper(I) with Schiff base and triphenylphosphine: Effective catalysts for the amination of aryl halide
   S. S. Chavan, S. K. Sawant, V. A Sawant, G. K. Lahiri, *Inorg. Chem. Commun.*. 14 1373-1376 (**2011**)
9. Synthesis, spectral characterization, thermal and photoluminescence property of Zn(II) and Cd(II)-azido/thiocyanato complexes with thiazolylazo dye and 1,2-bis(diphenyl phoshino)ethane,
   B. A. Yamgar, V. A. Sawant, **S. S. Chavan**, *Spectro Chim Acta*, 78, 102-106 (**2011**)
10. Synthesis, characterization and luminescence properties of copper(I) complexes containing 2-phenyl-3-(benzylamino)-1,2-dihydroquinazolin-4(3H)-one and triphenyl phosphine as ligands
    S. S. Chavan, G. A. Gaikwad, V. A. Sawant, G. K. Lahiri, *Polyhedron,30, 1871-1875* (**2011**)
11. Photoelectrochemical applications of In_2Se_3 thin films by chemical deposition
    P. P. Hankare, K. C. Rathod, M. R. Asabe, A. V. Jadhav, S. S. Chavan, K. M. Garadkar, I..S. Mulla, *J. Mater. Sci: Mater. Electron*. 22, 359-364 (**2011**)

12. Synthesis, characterization, thermal and electrochemical studies of Cobalt(II) and Copper(II) pseudohalide complexes with 2-mercapto-3-phenyl-quinazoline-4(3H)-one and 1,10-phenanthroline or ethylenediamine as ligands.
V. A. Sawant, **S. S. Chavan**, V. B. Helavi *'Synth. React. Inorg. Nanometal. Chem.* 40:592-600 (**2010**)

13. Copper(I) complexes with Schiff base and 1,2-bis(diphenylphosphino)ethane as ligands: Synthesis, structure and catalytic properties for the amination of aryl halide
S. S. Chavan, S. K. Sawant, V. A. Sawant, G. K. Lahiri, *Inorg. Chim. Acta*,363, 3359-3364(**2010**)

14. Synthesis, characterization and photoluminescence properties of copper(II)–azido/ thiocyanato complexes with thiazolylazo dye and 1,2-bis(diphenylphosphino)ethane
B. A. Yamgar, V. A. Sawant, A. N. Jadhav**, S. S. Chavan,** *Inorg. Chem. Commun.* 13(10), 1207-1209 (**2010**)

15 Mangenese(II), cobalt(II) and nickel(II) complexes with 2-phenyl-3-(benzylamino)-1,2-dihydroquinazoline-4-(3H)-one, pseudohalides and some bidentate N-donor ligands
V. A. Sawant, B. A. Yamgar, **S. S. Chavan**, *Trans. Met. Chem.* 35, 357-361(**2010**).

16.. Synthesis, structural characterization, thermal and electrochemical studies of Mn(II), Co(II), Ni(II) and Cu(II) complexes containing thiazolylazo ligands
S. S. Chavan, V. A. Sawant, *J. Mol. Structure, 965, 1-6* (**2010**).

17. Synthesis, structural characterization, thermal and electrochemical studies of mixed ligand Cu(II) complexes containing 2-phenyl-3-(benzylamino)-1,2-dihydroquinazo-line-4-(3H)-one and bidentate N-donor ligands
V. A. Sawant, B. A. Yamgar, S. K. Sawant, **S. S. Chavan*,** *Spect. Chim. Acta, A*, 74, 1100-1106 (**2009**).

18. Characterization and electrochemical studies of Mn(II), Co(II), Ni(II) and Cu(II) complexes with 2-mercapto-3-substituted-quinazolin-4-one and 1,10-phenanthroline or ethylenediamine as ligands.
V. A. Sawant, S. N. Gotpagar, B. A. Yamgar, S. K. Sawant, R. D. Kankariya, **S. S. Chavan**, *Spect. Chim. Acta, **A,*** 72(3), 663-669 (**2009**)

19. Synthesis, characterization and effect of sintering temperature on magnetic properties of MgNi ferrite prepared by co-precipitation method.
P.P. Hankare, S. D. Jadhav, U. B. Sankpal, **S. S. Chavan,** K. J. Waghmare, B. K. Chougule, *J. Alloys and Compounds* 475(1-2) 926-929 (**2009**).

20.. Copper(II) complexes of thiazolylazo dye with triphenylphosphine and N_3^- or NCS^- as coligands: Synthesis, spectral characterization, electrochemistry and luminescence properties
B. A. Yamgar, V. A. Sawant, S. K. Sawant, **S. S. Chavan**, *J. Coord. Chem.* 62(14), 2367-2374 **(2009**).

21. Synthesis, characterization and catalytic study of Schiff base copper(I) complexes for the amination of aryl halide.
S. K. Sawant, G. A. Gaikwad, V. A. Sawant, B. A. Yamgar, **S. S. Chavan**, *Inorg. Chem. Commun..*, 12, 632-635(**2009**).

22. Synthesis, X-ray diffraction study and biological activity of 7-hydroxy-4-methyl-1H-quinolin-2-one
M. B. Deshmukh, Savita Dhongade-Desai and **S. S. Chavan**, *Indian J. Chem*. 44B, *1659(***2005**)

23. Synthesis and characterization of two derivatives of 2-mercapto-3-*m*-tolyl-3H-quinazolin-4-one.
M. B. Deshmukh, Savita Dhongade-Desai and **S. S. Chavan,** *Indian J. Phys.*79(3), 169 (**2005**).

24. X-ray diffraction studies of Ni(II), Cu(II) and Zn(II) with 2-[2′- hydroxysalicylidene 5′-(2″- thiazolylazo)]phenol**.**
S. S. Chavan and P. P. Hankare, *J. Indian Chem. Soc*.82, 1(**2005**).

25. X-ray diffraction studies of 2-[2′-hydroxysalicylidene,5′-(4”-phenyl-2″-thiazolylazo)] benzoic acid**.**
S. S. Chavan, *Indian. J. Phys* 78(9), 727 (**2004**).

26. Studies on some binuclear metal complexes with tetradentate ligand derived from 5-(2′-thiazolylazo)salicylaldehyde and 2-aminophenol.”
P. P. Hankare and S**. S. Chavan**, *Synth. React. Inorg. Met.-Org.Chem.*33(3), 425, (**2003**)

27. Synthesis and characterization of manganese(II), cobalt(II), nickel(II), copper(II) and zinc(II) complexes with 2-[2′-hydroxylsalicylidene, 5′-(4″-phenyl-2″-thiazolylazo)]benzoic acid and 2-[2′-hydroxylsalicylidene-5′-(4″-phenyl,2″-thiazolylazo)]phenol.
P.P. Hankare and **S. S. Chavan**, *Indian. J. Chem.* 42A, 456,(**2003**)

28. X-ray diffraction studies of 2-[2′-hydroxysalicylidene 5′-(2″-thiazolylazo)]phenol.
P.P. Hankare and **S. S. Chavan**, *Indian. J. Phys.* 76A(5), 485 (**2002**).

29. X-ray diffraction study of azo Schiff base.
P. P. Hankare, L. V.Gavali and **S. S. Chavan**, *Indian. J. Phys. 76A(6)587* (**2002**).

30. Synthesis, characterization and biological studies of some bivalent metal complexes of Schiff base derived from aminothiazole and substituted azosalicylaldehyde.
P.P. Hankare, R.K. Patil, **S. S. Chavan**, A.H. Jagtap and P.S. Battase, *Indian. J. Chem.* 40A, 1326 (**2001**).

31. Synthesis, X-ray diffraction study and biological activity of 8-(4–methyl-2-azothiazo lyl)-7-hydroxy-4-methylcoumarin
P. P. Hankare, A.H. Jagtap, **S. S. Chavan**, P.S. Battase and S. R. Naravane, *J. Indian. Chem. Soc.* 78, 417 (**2001**).

32. Synthesis, characterization and X-ray diffraction studies of 8-(4-phenyl-2-azothiazo-lyl)-7-hydroxy-4-methyl-coumarin.
P.P. Hankare, A.H. Jagtap, **S. S. Chavan** and P.S. Battase, *Indian. J. Chem.* 40B, 423 (**2001**)

33. X-ray diffraction studies of 2-[2′-hydroxysalicylidene-5′-(2″-thiazolylazo)]benzoic acid.
S. S. Chavan, P.P. Hankare, A.H. Jagtap and R.T. Pattar, *Indian. J. Phys.*75A (3), 269 (**2001**).