Proforma for information to be provided by the Teaching/ Academic/ Research Staff

1. **Name** :Ram Anjore Yadav

2. **Designation** : Professor

3. **Academic Qualifications:**

S. No.	Degree	Institution	Year	Division (% marks)
1	High School	U.P. Board, Allahabad	1972	79.0
2	Intermediate	U.P. Board, Allahabad	1974	76.6
3	B.Sc.	Banaras Hindu University	1976	76.3
4	M.Sc.	Banaras Hindu University	1978	67.9
5	Ph. D.	Banaras Hindu University	1984	-

4. **Area of Specialization: (brief write up, 200 words)**

Our current research focuses on two main areas of research

1) **Spectroscopy:** We are involved in the study of the vibrational characteristics of the following three types of molecules : (i) nucleic acid bases and their derivatives,(ii) molecules of medicinal importance and molecules of organic conductors and superconductors' classes. We study vibrational spectra experimentally using IR and Raman spectroscopy. To help analyze the IR and Raman spectra and have some more information regarding different molecular characteristics we perform ab initio and DFT computations employing the Gaussian soft-wares 03 and 09 versions. Five students have done Ph. D. in this area.

2) **Non-linear Optical Properties of Photorefractive Materials: P**hotorefractive materials are very important class of materials in the sense that these offer a medium for the non-linear interaction of two or more light waves. Such interactions lead to many important applications of these materials. We have recently started working in this area and are presently involved in the study of some resonators and other related area in these materials. Two students have done Ph. D. in this area. Two students have done Ph. D. in this area.

3) **Electromagnetics and Fibre Optics:** Electromagnetics is a very important and active research area in engineering and physics. Fibre optics exploits this area for analyzing theoretically different components used in fibre optic communications. Using Maxwell's equations we have studied spherical dielectric resonators with metallic shields which protects energy from going out side the resonators. Two students have done Ph. D. in this area also.

5. **Contact Information:**

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Tel: +91542-2368593

6. Projects Undertaken as PI / Co- PI:

1. UGC, New Delhi supported project on " Vibrational study of some tri-fluoro- anilines , benzonitriles and benzoic acids" **(2005-2008: ~ Rs. 5 lacs)**
2. UGC, New Delhi supported project on " Spectra and Vibrational Study of some Vitamins"(**2011-2013 ~ Rs. 6 lacs**)

7. **Awards/ Recognitions/ Memberships if any:**

- National Merit Scholarship holder from High School to M. Sc. (1972-1978)
- Gold Medal Recipient for standing first at the B. Sc. III Examination 1976 of Banaras Hindu University
- Life-Member, Laser and Spectroscopy Society of India
- Life-Member, Indian Association of Physics Teachers
- Life-Member, Indian Physics Association

8. List of 10 major Publications: (in order of importance)

1. Raman and infrared spectra and normal coordinate analysis for 1,2-di-iodo tetrafluorobenzene
R. A. Yadav, I. S. Singh and O. Sala
J. Raman Spectrosc. (G.B.) **14**,353-357 (1983).
2. Some comments on electronic and vibrational spectra and thermodynamic functions of dihalogen toluenes
R. A. Yadav
Spectrochim. Acta (G.B.) **42A**, 689-691 (1986)

3. Vibrational spectrum, force field calculations, thermodynamic functions and barrier to internal rotation for benzoyl fluoride
R. A. Yadav, R. Shanker, S. Ram and I. S. Singh
Spectrochim. Acta.(G.B.) **43A**, 901-910 (1987)

4. Raman scattering in magnetic materials
R. A. Yadav
Proc. Ind. Acad. Sci. (Chem. Sci.) **102**, 629-634 (1990)

5. Force fields for C ≡ N substituted benzenes : II. Planar and non-planar modes of the three isomeric di-cyanobenzenes
D. N. Singh, J. S. Singh and **R. A. Yadav**
J. Raman Spectrosc.(G.B.) **28**, 355-362 (1997)
6. Force field calculations and re-assignments of Raman and IR frequencies of pyrazine- N,N′-dioxide
R. A. Yadav , V Mukherjee, M Kumar and Rashmi Singh

Spectrochim. Acta (G.B.) **66A,** 964-971(2007)

7 . Infrared and ab initio studies of conducting molecules: 2,5-Diamino-3,6-dichloro-1,4-benzoquinone
R. L. Prasad, A. Kushwaha, Suchita, M. Kumar and **R. A. Yadav**
Spectrochim. Acta (G.B.) Part A, **69**(2), 304-311(2008)

8 Normal modes and quality factors of shielded composite dielectric spherical resonators
R. A. Yadav ,T. K. Yadav**,** M. K. Maurya, D. P. Yadav and N. P. Singh
*Ind. J. Phy. , **83(10)** (2009) 1421-1438.*

9. Study of modulation instability in a temporally incoherent photorefractive ring resonator below the threshold with incoherent light
M. K. Maurya, T. K. Yadav, Ruchi Singh, **R. A. Yadav** and D. P. Singh
*Opt. Comm. ,**283(11)** (2010) 2416-2424*

10 Investigation of crystal structure, vibrational characteristics and molecular conductivity of 2,3-dichloro-5,6-dicyno-p-benzoquinone
P.Rani and **R.A.Yadav**
*Spectrochimica Acta Part **A 137**, 2015, 1334-1347*

9. Additional Information/ Achievements:

- Reviewer, Spectrochimica Acta Part A
- Reviewer Vibrational Spectroscopy
- Reviewer , J. Optical Soc. Am
- Reviewer, *Opt..Laser Tech*
- Reviewer, J. Mol. Struct.
- Reviewer, J. Mol. Struct.(Theochem)

10. Full List of Publications: Total number of Papers published- **99**
with details as:
*(i) Spectroscopy-**75** , (ii) Electromagnetics-**02** and (iii) Nonlinear optical effects in photorefractive materials-**22***

Research Publications of Prof. R. A. Yadav

Papers Published in Journals

(A) Spectroscopy

2. Vibrational spectra of three isomeric amino benzonitriles
S. Ram, **R. A. Yadav** and J. S. Yadav
The J. Sci. Res., BHU (India) **30(1)**, 207-226 (1980-81)

3. Raman and infrared spectra of terephthalaldehyde

R. A. Yadav, Ramakant, P. C. Mishra and I. S. Singh
Pramana (India) **18**, 311-315 (1982)

4. Raman and infrared spectra of 1,3-bis-(trifluoromethyl) benzene
R. A. Yadav, Shyampati, N. P. Singh and I. S. Singh
Ind. J. Pure Appl. Phys.**20**, 674-676 (1982)

5. Raman and infrared spectra of 3-fluoro trifluoromethyl benzene
R. A. Yadav and I. S. Singh
Ind. J. Pure Appl. Phys. **20**, 677-680 (1982)

6. Raman spectrum of phthalaldehyde
R. A. Yadav and I. S. Singh
The J. Sci. Res. BHU (India) **33(2)**, 1-4 (1982-83)

7. Raman and infrared spectra and normal coordinate analysis for 1,2-di-iodo tetrafluorobenzene
R. A. Yadav, I. S. Singh and O. Sala
J. Raman Spectrosc. (G.B.) **14**,353-357 (1983).

8. Vibrational spectra of o- and m-ethyl phenols
R. A. Yadav and I. S. Singh
The J. Sci. Res., BHU (India) **33(2)**, 133-144 (1982-83)

9. Vibrational studies of o-, m- and p-trifluoromethyl benzaldehydes
R. A. Yadav and I. S. Singh
Ind. J. Phys. **58B**,556-569(1984).

10. Vibrational studies of trifluoromethyl benzene derivatives: p-trifluoromethyl aniline
R. A. Yadav and I. S. Singh
Spectrochim. Acta (G.B.) **41A**, 191-197 (1985)

10. Vibrational spectra and normal coordinate analysis for substituted trifluoromethyl benzenes
R. A. Yadav and I. S. Singh
Proc. Ind. Acad. Sci. (Chem. Sci.) **95**, 471-487 (1985)

11. Polarized Raman and infrared spectra and vibrational analysis for α Naphthylamine
R. Shanker, **R. A. Yadav**, I. S. Singh and O. N. Singh
Pramana (India)**24**, 749-755 (1985).

12. Normal coordinate analysis for 2,4,6-trichlorophenol
R. A. Yadav, R. Shanker and I. S. Singh
Ind. J. Pure Appl. Phys. **23**, 522-524 (1985)

13. Polarized Raman and infrared spectra of 2-chloro, 6-methyl aniline
R. Shanker, **R. A. Yadav**, I. S. Singh and O. N. Singh
Ind. J. Pure Appl. Phys. **23**, 343-345 (1985)

14. Hydrogen bonding in o- and m-ethyl phenols
R. A. Yadav and I. S. Singh
Ind. J. Pure Appl. Phys. **23**, 627-627 (1985)

15. Some comments on electronic and vibrational spectra and thermodynamic functions of dihalogen toluenes
R. A. Yadav
Spectrochim. Acta (G.B.) **42A**, 689-691 (1986)

16. ab initio calculations of fundamental frequencies for isomeric di-fluorobenzenes
O. P. Singh, J. S. Yadav and **R. A. Yadav**
Proc. Ind. Acad. Sci.(Chem. Sci.) **99**, 159-166 (1987)

17. Vibrational spectrum of 1,2,4,5-tetrabromobenzene
R. A. Yadav and R. Shanker
J. Raman Spectrosc.(G.B.) **18**, 555-559 (1987)

18. Vibrational spectrum, force field calculations, thermodynamic functions and barrier to internal rotation for benzoyl fluoride
R. A. Yadav, R. Shanker, S. Ram and I. S. Singh
Spectrochim. Acta.(G.B.) **43A**, 901-910 (1987)

19. Vibrational studies of biomolecules . I. 2-thio-uracil
R. A. Yadav, P. N. S. Yadav and J. S. Yadav
Proc. Ind. Acad. Sci. (Chem. Sci.) **100**, 69-78 (1988)

20. Vibrational studies of biomolecules . II. 2-thio-cytosine
R. A. Yadav, P. N. S. Yadav and J. S. Yadav
Spectrochim. Acta.(G.B.) **44A**, 1201-1206 (1988)

21. Raman scattering in magnetic materials
R. A. Yadav
Proc. Ind. Acad. Sci. (Chem. Sci.) **102**, 629-634 (1990)

22. Infrared spectrum of N-t-BOC-Alanyl-Proline
K. Singh, **R. A. Yadav** and I. S. Singh
Ind. J. Phys. **65B**, 277-282 (1991)

23. Force fields of carbonic-di-halides
K. Singh, **R. A. Yadav** and D. K. Rai
Ind. J. Phys. **65B**, 283-285 (1991)

24. Vibrational studies of bio-molecules. III. 6-thio-guanine
K. Singh, **R. A. Yadav** and J. S. Yadav
Spectrochim. Acta (G.B.) **47A**, 819-820 (1991)

25. Vibrational spectra, thermodynamic functions and barrier to internal rotation for isomeric tri-fluoromethyl benzoylchlorides
Shanker, **R. A. Yadav**, I. S. Singh and O. N. Singh
J. Raman Spectrosc.(G.B.) **23**, 141-146 (1992)

26. Force fields for benzoylchloride : I-Vibrational assignments of non-planar modes revisited
R. A. Yadav

Spectrochim. Acta (G.B.) **49A**, 891-895 (1993)

27. Surface enhanced Raman scattering of 2-cyanopyridine adsorbed on silver colloidal particle-comment,
R. A. Yadav
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28. Vibrational studies, barrier height and thermodynamic functions for biomolecules: 5-trifluoromethyl uracil
R. Shanker, **R. A. Yadav** and I. S. Singh
Spectrochim. Acta (G.B.) **50A**, 1251-1258 (1994)

29. Direction-cosines for barrier height determination: A general formalism
R. Shanker and **R. A. Yadav**
Asian J. Phys. (India) **5**, 225-229 (1996)

30. IR and Raman spectra, force fields, barrier heights against internal rotations and Thermodynamic functions for isomeric trifluoromethyl anilines
D. N. Singh, R. Shanker, **R. A. Yadav** and I. S. Singh
J. Raman Spectrosc.(G.B.), **27**, 177-184 (1996).

31. Laser Raman and IR spectra and force fields for 2,6-difluorobenzonitrile
V. K. Rastogi, C. B. Arora, S . K. Singhal , D. N. Singh and **R. A. Yadav**
Spectrochim. Acta (G.B.) **53A**, 2505 (1997)

32. Force fields for C ≡ N substituted benzenes : I. Force fields for benzonitrile
D. N. Singh and **R. A. Yadav**
Asian J. Phys. (India) **6**, 369-377 (1997)

33. Force fields for C ≡ N substituted benzenes : II. Planar and non-planar modes of the three isomeric di-cyanobenzenes
D. N. Singh, J. S. Singh and **R. A. Yadav**
J. Raman Spectrosc.(G.B.) **28**, 355-362 (1997)

34. Force fields for CHO substituted benzenes : I. Planar and non-planar modes of benzaldehyde
D. N. Singh and **R. A. Yadav**
Asian Chem. Lett.(India) **2**, 65-73 (1998).

35. Force fields for planar and non-planar modes of fluorobenzene revisited
J. S. Singh D. N. Singh and **R. A. Yadav**
Ind. J. Pure Appl. Phys. **37**, 97-103 (1999)

36. Force field for planar modes of fluorobenzene revisited
J. S. Singh D. N. Singh and **R. A. Yadav**
Asian J. Phys.(India) **9**, 45-50 (2000)

37. FT-Raman spectrum and ab-initio and density functional computations of the vibrational spectrum, molecular geometry, atomic charges and some molecular properties of anti-carcinogenic drug: 5-fluorouracil

V. K. Rastogi, C. B. Arora, **R. A. Yadav**, C. Singh and M. A. Palafox
J. Raman Spectrosc.(G.B.) **31,** 595-604(2000)

38. Laser Raman and IR spectra and force fields for 2,4-dichlorobenzonitrile
V. K. Rastogi, V. Jain, M. A. Palafox, D. N. Singh and **R. A. Yadav**
Spectrochim. Acta (G.B.) **57A**, 209-216 (2001)

39. Vibrational studies of trifluoromethyl benzene derivatives I: 2-amino-5-chloro and 2- amino-5-bromo benzotrifluorides
N. P. Singh and **R. A. Yadav**
Ind. J. Phys. **75B**(4), 347-355 (2001)

40. Vibrational spectra and force fields for 2, 3-; 2, 4-; 2, 5- and 3, 4-dihydroxy-benzaldehydes
D.N. Singh, I. D. Singh and **R. A. Yadav**
Ind. J. Phys. (India) **76B**, 35-46 (2002)

41. Infrared and Raman spectral studies and evaluation of force fields for the three isomeric methoxy benzaldehydes
D. N. Singh, I. D. Singh and **R. A. Yadav**
Ind. J. Phys. **76B**,307-318 (2002).

42. Vibrational studies of trifluoromethyl benzene derivatives II: 5-amino-2-fluoro and 5- amino-2-chloro benzotrifluorides
R. K. Yadav, N. P. Singh and **R. A. Yadav**
Ind. J. Phys. **77B**, 419-425(2003).

43. Vibrational spectra and force field calculations for 2-amino-5-chloro- and 2-amino-5- bromo- benzotrifluorides
R. A. Yadav, R. K. Yadav and N. P. Singh
Spectrochim. Acta (G.B.) **64A**, 454-463(2006)

44. Force field calculations and re-assignments of Raman and IR frequencies of pyrazine- N,N′-dioxide
R. A. Yadav , V Mukherjee, M Kumar and Rashmi Singh
Spectrochim. Acta (G.B.) **66A,** 964-971(2007)

45. Infrared and ab initio studies of conducting molecules: 2,5-Diamino-3,6-dichloro-1,4-benzoquinone
R. L. Prasad, A. Kushwaha, Suchita, M. Kumar and **R. A. Yadav**
Spectrochim. Acta (G.B.) Part A, **69**(2), 304-311(2008)

46. Quantum chemical determination of molecular geometries and interpretation of FTIR and Raman spectra for 2,3,4-and 2,3,6-tri-fluoro-benzonitriles
V. Mukherjee, Karunakar Singh, N. P. Singh and **R. A. Yadav**
Vib. Spectrosc., **47**(1), 26-37(2008)

47. *ab initio* determination of molecular geometries and vibrational frequencies of CX_3 COOH (X = H, F, Cl, Br)
R. A. Yadav, M. Kumar, R. Singh, P. Singh, S. Jaiswal, G. Srivastav, R. L. Prasad

Spectrochim. Acta (G.B.) Part A, **71**(4), 1565-1570(2008)

48. Quantum chemical determination of molecular geometries and interpretation of FTIR and Raman spectra for 2,4,5- and 3,4,5-tri-fluoro-benzonitriles
V. Mukherjee, Karunakar Singh, N. P. Singh and **R. A. Yadav**
Spectrochim. Acta (G.B.) Part A, **71**(4), 1571-1580(2008)

49. FTIR and Raman spectra and SQM force field calculation for vibrational analysis of 2,3,4- and 2,3,6-tri-fluoro-anilines
V. Mukherjee, Karunakar Singh, N. P. Singh and **R. A**. **Yadav**
Spectrochim. Acta (G.B.) Part A, **73**(1), 44-53(2009)

50. FTIR and Raman spectra, DFT and normal coordinate computations of 2,4,5- and 2,4,6-tri-fluoroanilines
V. Mukherjee, N. P. Singh and **R. A. Yadav**
Spectrochim. Acta (G.B.) Part A, **73**(2), 249-256(2009)

51. Structural and vibrational studies of molecular conductors using quantum mechanical methods: 1,3-Dithiole-2-thione, 1,3-dithiole-2-one, 1,3-dioxole-2-one and 1,3- dioxole-2-thione
S. Jaiswal, A. Kushwaha, R. Prasad, R. L. Prasad and **R. A. Yadav**
Spectrochim. Acta (G.B.) Part A, **74(1),**16-25(2009)

52. Energetics and structural insights of molecular conductors using density functional theory methods : 1,3–dithiole-2-thione, 1,3-dithiole-2-one, 1,3-dioxole-2-one and 1,3-dioxole-2-thione
R. L. Prasad, A. Kushwaha, Rajendra Prasad, S. Jaiswal and **R. A. Yadav**
J. Theo. Comp. Chem., **8**(**6)**, 1485-1495 (2009)

53. Experimental and calculation aspects of vibrational spectra and optimized geometry of 2,3,4-tri-fluoro-benzoic acid dimer
V. Mukherjee, N. P. Singh and **R. A. Yadav**
Spectrochim. Acta (G.B.) Part A, **74 (5)**,1107-1114(2009)

54. FTIR and Raman spectra, DFT and SQMFF calculations for geometrical interpretation and vibrational analysis of some trifluorobenzoic acid dimers
V. Mukherjee, N.P. Singh and **R. A. Yadav**
Vib. Spectrosc., **52(2)**, 163-172 (2010)

55. DFT study of molecular geometries and vibrational characteristics of uracil and its thio-derivatives and their radical cations
R. Singh, S. Jaiswal, M. Kumar, P. Singh, G. Srivastav and **R. A. Yadav**
Spectrochim. Acta(G.B.) Part A, **75**(1), 267-276 (2010)

56. *ab initio* studies of molecular structures, conformers and vibrational spectra of heterocyclic organics: I. Nicotinamide and its N-oxide
M. Kumar, S. Jaiswal, R. Singh, G. Srivastav, P. Singh, T. N. Yadav and **R. A. Yadav**
Spectrochimica Acta(G.B.) Part A, **75**(1),281-292(2010)

57. ab initio Determination of Geometries and Vibrational Characteristics of Building Blocks of Organic Superconductors: 4,5-ethylenedithio-1,3-dithiole-2-thione, and 4,5-ethylenedithio-1,3-dithiole-2-one
S. Jaiswal, Deepshikha Singh, R.L. Prasad and **R.A**. **Yadav**
Spectrochimica Acta(G.B.) Part A, **76**(3-4),297-310(2010)

58. Vibrational study on the molecular structure of 1,4-napthoquinone and 2- methyl-1,4-napthoquinone and their radical anions by using density functional theory.
Priyanka Singh, N.P. Singh and **R.A.Yadav**
J. Chem.. Pharmacy. Res. 2(2010) 199-224

59. Study of the optimized molecular structures and vibrational characteristics of neutral L-Ascorbic acid and its anion and cation using density functional theory
J. Chem.. Pharmacy. Res. 2(2010) 656-681
Priyanka Singh, N.P. Singh and **R.A.Yadav**

60. FTIR and Raman spectra and optimized geometry of 2,3,6-tri-fluorobenzoic acid dimer: A DFT and SQMFF study
V. Mukherjee, N.P. Singh, R.A. Yadav
Spectrochimica Acta Part A **77**(4), 787-794 (2010)

61 Quantum mechanical studies of conformers, molecular structures and vibrational characteristics of heterocyclic organics: Nicotinic acid and 2- fluoronicotinic acid
Priyanka Singh, N.P. Singh and **R.A.Yadav**
J. chem.. pharmacy. Res. (2011)

62. Comparative structural and vibrational studies of 6-amino purine (Guanine) and its radical species using density functional theory.
Rashmi Singh, M.Kumar,, P.Singh, and **R.A.Yadav**
J. Chem.. Pharmacy. Res. 3 (2011) 25-37

63. Experimental IR and Raman Spectra and quantum chemical studies of molecular structures, conformers and vibrational characteristics of L- ascorbic acid and its anion and cation.
R.A.Yadav, Poonam Rani, Priyanka Singh, M Kumar, R.Singh, N.P.Singh
Spectrochim Acta 84(2011)6-21.

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64. Experimental IR and Raman Spectra and quantum chemical studies of molecular structures, conformers and vibrational characteristics of nicotinic acid and its N-oxide.
M.Kumar, **R.A.Yadav**
Spectrochim Acta 79(2011) 1316–1325

65. Optimized geometry and vibrational spectra and NBO analysis of solid state 2,4,6 - tri-fluorobenzoic acid hydrogen bonded dimer
V. Mukherjee, N.P. Singh, **R.A. Yadav**
Journal of Molecular Structure, Volume 988, Issues 1-3, 24-34 (2011)

66. Vibrational studies and electron-molecular vibrational coupling of tetrafluorotetracyanoquinodimethane

P. Rani , R.A. Yadav
Bulletin of Laser and Spectroscopy Society of India, **ISSN:2229-3752;** Special issue dedicated to late Prof. D. K. Rai, **19,** 97-112(2011-2012)

67 *ab initio* determination of geometries and vibrational characteristics of building blocks of organic super-conductors: TTF and its derivatives
P. Rani, R.A. Yadav
Spectrochimica Acta Part A, 99, 2012, 303-315

68 DFT study of vibrational spectra of 2-(2-hydroxyphenyl) Benzothiazole
U. Pandey, R. P. Singh, M. Srivastava, R. A. Yadav
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69 Vibrational studies of benzene, pyridine, pyridine-N-oxide and their cations
M. Kumar, Mayuri Srivastava, **R.A. Yadav**
Spectrochimica Acta Part A, 111, 2013, 242-251

70 Experimental and theoretical studies of vibrational spectrum and molecular structure and related properties of pyridoxine (vitamin B6)
Mayuri Srivastava, P. Rani, N.P. Singh, **R.A. Yadav**
Spectrochimica Acta Part A 120, 2014, 274-286

71. Experimental Raman and IR spectral and theoretical studies of vibrational spectrum and molecular structure of Pantothenic acid (vitamin B5)
Mayuri Srivastava, N.P.Singh, and **R.A.Yadav**
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72. Synthesis, characterization and quantum chemical investigation of molecular structure and vibrational spectra of 2,5-dichloro-3,6-bis-(methylamino)1,4-benzoquinone
B. P. S. Gautam, Mayuri Srivastava, R. L. Prasad and **R.A. Yadav**
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73. DFT Study of Conformational and Vibrational Characteristics of 2-(2-Hydroxyphenyl) Benzothiazole Molecule
Urmila Pandey, Mayuri Srivastava, R.P.Singh and **R.A.Yadav**
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74. Raman and IR studies and DFT calculations of the vibrational Spectra of 2, 4-Dithiouracil and its cation and anion
R. Singh and **R. A. Yadav**
*Spectrochimica Acta Part **A 130**, 2014, 188-197*

75. Investigation of crystal structure, vibrational characteristics and molecular conductivity of 2,3-dichloro-5,6-dicyno-p-benzoquinone
P.Rani and **R.A.Yadav**
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(B) Electromagnetics

1. Normal modes and quality factors of homogeneous isotropic spherical

dielectric resonators : I- shielded dielectric sphere.
I. D. Singh and **R. A. Yadav**
Pramana (India) ***62****,1255-1271(2004)*

2. Normal modes and quality factors of shielded composite dielectric spherical resonators
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Ind. J. Phy. , ***83(10)*** *(2009) 1421-1438.*

(C) <u>Non-linear Optical Effects in Photorefractive Materials</u>

1. Dependence of gain and phase-shift on crystal parameters and pump intensity in unidirectional photorefractive ring resonators
M. K. Maurya, T. K. Yadav and **R. A. Yadav**
Pramana, J. of Phy., ***72 (4) (****2009) 709-726*

2. Oscillation dependence of two-wave mixing gain for unidirectional ring resonator in photorefractive materials
M. K. Maurya, T. K. Yadav and **R. A. Yadav**
Opt. Laser Tech., ***42(3)*** *(2010) 465-476*

3. Minimization of the fluctuation in the signal beam intensity of a nonlinear optical medium with a transmission grating
M. K. Maurya, T. K. Yadav and **R. A. Yadav**
Opt. .Laser Tech. ***42(5)*** *(2010)775-782*

4. Study of modulation instability in a temporally incoherent photorefractive ring resonator below the threshold with incoherent light
M. K. Maurya, T. K. Yadav, Ruchi Singh, **R. A. Yadav** and D. P. Singh
*Opt. Comm. ,****283(11)*** *(2010) 2416-2424*

5. Feedback method of the noise suppression in wave-mixing amplifiers based on non-linear materials with photorefractive response in a reflection grating configuration
M.K. Maurya, **R.A. Yadav**
Opt. Comm, ***283(12)*** *(2010) 2615-2621*

6. Effect of photoconductivity and dielectric constant of the photorefractive materials on two-beam coupling gain and phase-shifts for a single unidirectional photorefractive ring resonator
M.K. Maurya , **R.A**. **Yadav**
Opt. Laser Tech., ***42(6)*** *(2010) 883-893*

7. Oscillation characteristics of a coupled unidirectional ring resonators with Photorefractive crystals
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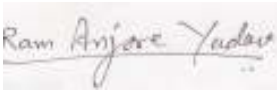

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