Curriculum-vitae



Personal Information-

Name- Dr. Anoop Kumar Pandey

Designation- Working as Assistant Professor Physics, K.S. Saket P.G. College Ayodhya

Faizabad from 30/04/2019

Gender- Male
Marital Status- Married
Nationality- Indian

Permanent Address- Village- Sekhauliya, PO- Annapur, District- Ambedakar Nager, Uttar

Pradesh, India, Pin Code- 224181

Mobile No- 07587702107

E-mail- anooppandeyias@gmail.com,

Academic Qualifications:

Course	Board/University/Institute	Division	% of Mark
High School	U.P. Board Allahabad	1 st	70.60
Intermediate	U.P. Board Allahabad	1 st	65.2
B.Sc.	University, R.M.L.Avadh Faizabad	1 st	66.08
M.Sc (Physics)	University, R.M.L.Avadh Faizabad	1 st	68.50
Ph. D. (Physics)	Lucknow University		
NET-JRF	UGC/CSIR	2004	
GATE	IIT/IISC	2007(AIR310 th)2008(AIR 82 th)2009(AIR 19 th)	

Training/Orientation/Refresher Coerces-

- 1. Orientation Course Conducted by ASC, Lucknow University Dated- 21Sep 20 Oct. 2015.
- 2. Refresher Course on environmental science (Interdisciplinary) conducted by Human Resource Development Centre, GGU University, Bilaspur. Dated- 1Sep to 23 September, 2016.

Membership of Professional/Learning Bodies:

- 1. Member of editorial board of Scientific research and advances
- 2. Former Member of Board of studied of Bastar University Jagadalpur
- 3. Member of New BSc Physics Syllabus designing committee C.G. 2018-19

Teaching Experience-

Teaching in UG and PG Classes, Joining Date- 27/11/2012 to 26/08/2017 as Assistant Professor (Physics) in Govt. Danteshwari PG College Dantewada (CG)

Teaching in UG and PG Classes, from -28/08/2017 to 29/04/2019 as Assistant Professor (Physics) in

Teaching in UG and PG Classes, Joining Date- 15/07/2005-28/02/2006 as Lecturerb (Physics) in Ganpat Sahay P.G. College Sultanpur (UP)

Teaching experience of UG classes of engineering physics Joining date 10/02/2011 to 28/02/2012 in SITM Lucknow.

Administrative work-

- 1. Worked as Chairman of UGC in Govt. Danteshwari PG College Dantewada District nodal of New Education Polity of India in Dantewada
- 2. Different college level responsibilities like- Assistant superintendent in exams, discipline, sports, cultural and other co-curricular committees
- 3. Former HOD of Physics, Chemistry Math in Govt. Danteshwari PG College Dantewada
- **4.** Former Member of RUSA,IQAC and other committees in our college
- **5.** Member of designing new curriculum for Physics in UG level course of Chhattisgarh.

Research Activities:

Organizing Conference/Seminar/Workshop

- 1. **Organizer of "Workshop on Bio-diversity Conservation**". Organized by Govt. Danteshwari PG College Dantewada (CG) and funded by Ministry of Environment and Forest, Government of India via Jan Kalyan Parishad. Dated- 13 February, 2014.
- 2. **Member of Organizing** committees "National Seminar on Challenges of Human Resource Development in Tribal Areas". In Govt. Danteshwari PG College Dantewada (CG). Dated- 16-17 January, 2015.

Pipeline Projects-

- 1. A Major Research Project Submitted to UGC entitled "Design of superhalogen and its application" in RSA.
- 2. A Minor Research Project Submitted to UGC CRO entitled "electrical and magnetic properties of transition metls A Major Research Project Submitted

LIST OF PUBLISHED PAPERS AND BOOKS

- 1. Quantum chemical study of PtF_n and PtCl_n (n=1-6) nano clusters: An investigation of superhalogen propertiesShamoon Ahmad Siddiqui and TabishRasheedAnoop PandeyComputational and Theoretical Chemistry 979 (2012) 119–127.
- 2. Electronic Structure, Optical Properties and Vibrational Analysisof2-Decenoic acid and its derivative by Density Functional Theory, Apoorva Dwivedi, **Anoop Kumar Pandey**, Neeraj Misra., Spectroscopy 26 (2011) 367–385.

- 3. FTIR spectra and Vibrational Spectroscopy of Loganin using Density Functional Theory, **AnoopPandey**, Shamoon A Siddiqui, ApoorvaDwivedi, NeerajMisra, Kanwal Raj, Spectroscopy 25 (2011) 287–302..
- 4. Quantum chemical study of RhF_nnano clusters: An investigation of superhalogen propertiesShamoon Ahmad Siddiqui**Anoop Kumar Pandey**,TabishRasheedMahima Mishra in Journal of Fluorine Chemistry Volume 135, March 2012, Pages 285–291.
- 5. Vibrational analysis of boldine hydrochloride using QM/MM approach NeerajMisra, Shamoon Ahmad Siddiqui, Ruby Srivastava, **Anoop Kumar Pandey**Sudha Jain, *Spectroscopy Vol. 24 No. 5*, (2010) 483-499.
- 6. "Molecular structure and vibrational spectra of 2 formylbenzonitrile by dendity functional theory and ab-initio Hartree-Fock calculations", NeerajMisra, Onkar Prasad, LeenaSinha, **AnoopPandey**, Journal of Molecular Structure: THEOCHEM 822 (2007) 45-47.
- 7. "Molecular structure, vibrational spectra and potential energy distribution of colchicine using ab initio and density functional theory", Shamoon Ahmad Siddiqui, <u>Apoorva Dwivedi</u>, Anoop Pandey, P. K. Singh, TanveerHasan, Sudha Jain, NeerajMisra, *Journal of Computer Chemistry*, *Japan Vol. 8*, *No.* 2 (2009) 59-72.
- 8. Semi-empirical Studies of different structures of fullerene rings Doped with Transition metals, ApoorvaDwivedi, **Anoop Kumar Pandey**, Onkar Prasad, LeenaSinha, NeerajMisra. *Chinese Journal of Physics*, CHINESE JOURNAL OF PHYSICS VOL. 50, NO. 1 2012.
- 9. Comparative study of vibrational spectra of two narcotic compounds using Density Functional Theory, **Anoop Kumar Pandey**, Shamoon Ahmad Siddiqui, NeerajMisra. *Chinese Journal of Physics*VOL. 51, NO. 3,2013.
- 10. Structural, Vibrational and Electronic properties of ring structures of small ZrO clusters in lower and higher spin state- A DFT Study, Neeraj Misra, Apoorva Dwivedi, **Anoop Kumar Pandey**, Journal of Atomic Molecular Science. Vol. **3**, No. 3, pp. 187-196 2012.
- 11. Electronic structure, non linear optical properties and vibrational analysis of gemifloxacin by density functional theory Shamoon Ahmad Siddiqui, TabishRasheed, Mohd Faisal, **Anoop Kumar Pandey**, SherBahadar KhanSpectroscopy: An International Journal Volume 27 (2012), Issue 3, Pages 185-206 doi:10.1155/2012/614710.
- 12. Ab initio study of the endohedral fullerene PbH4@C60" Fullerenes, Nanotubes and Carbon Nanostructures**Anoop Kumar Pandey**, <u>ApoorvaDwivedi</u> 2012 22: 679–686, 2014 Taylor & Francis Group ISNN-1536-383X.
- **13.** Quantum chemical study of pure and transition metal (Ni, Pd, Pt) doped hydrogenated silicon nano cages, NeerajMisra, ApoorvaDwivedi, **Anoop Kumar Pandey**, J. Comput. Method. Mol. Design, 2011, 1 (2):22-33.
- **14.** A combined experimental and quantum chemical studies on molecular structure, spectral properties, intra and intermolecular interactions and first hyperpolarizability of 4– (Benzyloxy)benzaldehydethiosemicarbazone and its dimer, Amit Kumar, PoonamRawat,

- VikasBaboo, DivyaVerma, R.N. Singh, DeeptiSaxena, H.M. Gauniyal, **Anoop Kumar Pandey**, Harish Pal, *Journal of Molecular Structure*, *Volume 1034*, 27 February 2013, Pages 374-385
- 15. Theoretical study of structural, vibrational, and electronic properties of Aluminiumantimonide, Gallium antimonide and Indium antimonide clusters, (AlSb, InSb, GaSb) n (n=1, 2, 3), **ANOOP PANDEY** et al, *J. Theor. Comput. Chem.* **12**, 1350056 (2013)
- 16. Quantum Mechanical Study on the Structure and Vibrational Spectra of Cyclobutanone and 1,2-Cyclobutanedione, **Anoop Kumar Pandey**, <u>ApoorvaDwivedi</u>, Neerajmisra, Spectroscopy, Volume 2013 (2013), Article ID 937915, 11 pages.
- 17. Normal modes, Molecular Orbitals and Thermochemical analyses of 2, 4 anad 3, 4 dichloro substituted phenyl-N-(1, 3-thiazol-2-yl)acetamides: DFT Study and FTIR spectra," by Ambrish Srivastava, **AnoopkumarPandey**, BadiadkaNarayana, Balladka K. Sarojini and NeerajMisra. Journal of Theoretical ChemistryVolume 2014, Article ID 125841, 10 pages ISNN 1082-4928.
- 18. Structural, Electronic, and Vibrational Properties of Isoniazid and Its DerivativeN-Cyclopentylidenepyridine-4-carbohydrazide: AQuantum Chemical StudyJournal of Theoretical ChemistryVolume 2014, Article ID 894175, 15 pagesISNN 1082-4928.
- **19.** 19. Reactive nature, substitution reaction, structural and vibrational properties of 2, 3 Dichloropridine by DFT Study, AbhishekBajpai, **Anoop Kumar Pandey**, Kamal Pandey, ApoorvaDwivediJournal of Computational Methods in Molecular Design, 2014, 4 (1):64-69.
- **20.** Structural, Vibrational and Electronic properties of Ga_xS_y (x+y=2-5) nanoclusters- A DFT Study, <u>ApoorvaDwivedi</u>, **Anoop Kumar Pandey**, Neerajmisra, *J. Comput. Method Mol. Design*2012, 2 (2):68-75.
- **21.** Quantum Chemical study and the effect of substitution of a Amino group on the reactivity of 4, Aminopyridine and 3,4 Diaminopyridine by Density Functional Theory", ApoorvaDwivedi, Shamoon Ahmad Siddiqui, **Anoop Kumar Pandey,**Onkar Prasad, LeenaSinha, NeerajMisra,*Der Pharma Chemica*, 2009, 1(2): 258-268.
- **22.** Comparative vibrational spectroscopic study of benzonitrile derivatives using density functional calculation, Neerajmisra, Shamoon A. Siddiqui, **Anoop Kumar Pandey**, SanjeevTrivedi, Der Pharma Chemica, 2009, 1 (1), 196-209.
- **23.** Comparative conformational, structural and vibrational study on the molecular structure of tyrosine and L-DOPA using density functional theory, Shamoon Ahmad Siddiqui, **Anoop Kumar Pandey**, ApoorvaDwivedi, Sudha Jain,NeerajMisra, *J. Chem. Pharm. Res.*, 2010, 2(4):835-850.
- 24. "Vibrational spectra and assignment of 3-(2-Nitrophenoxy) phthalonitrile by Ab initio Hartree-Fock and Density Functional Methods", NeerajMisra, **AnoopPandey**,

- ApoorvaDwivedi, SanjeevTrivedi, Shamoon Ahmad Siddiqui, *Der Pharma Chemica*, 2010, 2(4): 342-360.
- **25.** "Study of Hafnium Diboride Clusters Using Density Functional Theory", NeerajMisra*, ApoorvaDwivedi, Onkar Prasad, **Anoop Kumar Pandey**, Archives of Physics Research, 2010, 1 (2): 15-19. [ISSN 0976-0970]
- **26.** Vibrational analysis of Two Narcotic Compounds- Codeine and Morphine A comparative DFT study, Neeraj Misra, Apoorva Dwivedi, **Anoop Kumar Pandey**, Sanjeev Trivedi, Der Pharma Chemica, 2011, 3(3):427-448.
- **27.** Comparative Study of Vibrational spectra of two well known natural products Lupeol and Lupenone Using Density Functional Theory, Apoorva Dwivedi, **Anoopkumarpandey**, Neerajmisra, *Spectroscopy*: An International Journal Volume 27 (2012), Issue 3, Pages 155–166
- 28. "DFT Study of Picric acid and its derivative by first principles "Vijaynarayan, ApoorvaDwivedi, Abhishekbajpai, subodhpandey, **Anoop Kumar Pandey**, International Journal of Engineering Trends and Technology, Dec 2013 volume 4 issue 12. ISSN: 2231-5381.
- **29.** DFT Study Of Mndiboride(MnB₂)N{N=1-3),**Anoop Pandey**,International Journal of Engineering Research and (IJERT),December- 2013, Vol. 2, Issue 12 issue,ISSN: 2278- 0181.
- **30.** Structural, Electronic and Vibrational properties of Isoniazid and its derivative N-Cyclopentylidenepyridine-4-carbohydrazide-A quantum Chemical study, **Anoop Kumar Pandey**, VIkasBaboo, ApoorvaDwivedi, Hindawi Publishing CorporationJournal of theoretical Chemistry, Volume 2014, Article ID 894175, 15 pages.ISSN: 2314-6184.
- 31. Reactive nature, substitution reaction, structural and vibrational properties of 2, 3 Dichloropridine by DFT Study, AbhishekBajpai, Anoop Kumar Pandey, Kamal Pandey, ApoorvaDwivedi, Journal of Computational Methods in Molecular Design. Page No: 64-69, 2014, ISSN: 2231-3176.
- 32. Isolation, Identification, Molecular and Electronic Structure, Vibrational Spectroscopic Investigation and Anti-HIV-1 activity of Karanjin Using Density Functional Theory, Anoop Kumar Pandey, Abhishek Kumar Bajpai, Ashok Kumar, Mahesh Pal, VikasBaboo, ApoorvaDwivedi, Hindawi Publishing Corporation, Journal of theoretical Chemistry, 2014. ISSN: 2314-6184.
- **33.** Comparative Study of structural, vibrational, electronic properties of pentanoic acid (Valeric acid) and its derivative 4-oxopentanoic acid (Levulinic acid) by Density Functional Theory, "AbhishekBajpai", ApoorvaDwivedi, **Anoop Kumar Pandey**, J. Sci. Res. Adv. 2014, 1(1), 18–24.

- **34.** Molecular modeling and vibrational properties of 5-Bromobenzene-1, 3-dicarbonitrile using Density Functional Theory, Abhishek Kumar Bajpai, Manisha Singh, AnjuYadav, **Anoop Kumar Pandey** and ApoorvaDwivedi, J. Sci. Res. Adv. 2014, 1(1), 03–07.
- **35.** Normal modes, molecular orbitals and thermochemical analyses of 2, 4 and 3, 4 dichloro substituted phenyl-N-(1, 3-thiazol-2-yl)acetamides: DFT study and FTIR spectra Published J. Theoretical Chem. 2014.
- **36.** Uniform versus non-uniform scaling of vibrational bands: A test on 2-(2,6-Dichlorophenyl)-N-(1,3-thiazol-2yl) acetamide, Ambrish Srivastava, **Anoop Kumar Pandey**, Neeraj Mishra, Published Int. J. Spectroscopy, 2014.
- **37.** FT-IR spectroscopy, intra-molecular C-H···O interactions, HOMO, LUMO, MESP analyses and biological activity of two natural products, Triclisine and Rufescine: DFT and QTAIM approaches, Ambrish Srivastava, **Anoop Kumar Pandey**, Neeraj Mishra Spectrochim. ActaA Vol-136,682-689 (2015).
- **38.** Quantum chemical and spectroscopic investigations on cis and transconformers of 4-hydroxy-l-proline, Ambrish Srivastava, **Anoop Kumar Pandey**, Neeraj Mishra J. At. Mol. Sci. Vol. 5, No. 4, pp. 279-288 November 2014.
- **39.** Theoretical Study of small NiboiumSulphide cluster NbmSn(n,m=1-2)J.At.Molecular sciences Vol5 No3 page231-237.
- **40.** Stability and electronic properties of transition metal antimonides in ionic and neutral case-TMmSbn(m, n=1-2)Abhishek Kumar Bajpai, ApoorvaDwivedi and Anoop Kumar Pandey Page No: 38-45, 2014 JCMMD .
- **41.** Quantum chemical study on 2-bromo-3- hydroxy-6-methyl pyridine-A D. F. T. study Page No:411-417,2014, JCPOR.
- **42.** Quantum chemical study on 2, 6 Bis (Bromo-methyl) Pyridine- A D.F.T Study" . ApoorvaDwivedi, Anoop Kumar Pandey and AbhishekBajpai, Der PharmaChemica, 2014.
- **43.** Superconducting properties of Zinc Diboride Nanoclusters *J. Sci. Res. Adv. Vol. 2, No. 1, 2015, 48-50.*
- **44.** Structural, electronic and vibrational study of the endohedral fullereneSiH4@C60 Ab initio study *Cite this article: J. Sci. Res. Adv. Vol.* 2, 5 *No.* 2, 2015, 69-72
- **45.** Ab-initio study of 'N'-hydroxy-pyrimidine2carboximidamide by Density Functional Theory *J. Sci. Res. Adv. Vol. 2, No. 4, 2015, 158-162.*
- **46.** A quantum chemical study of YFn nano clusters An investigation of superhalogen properties Main Group Chemistry 14 (2015) 291–299

- **47.** Structural, Electronic Properties, Hydrogen Bonding Analyses, and Biological Activity of Two Multiple Myeloma Drugs: Lenalidomide and Pomalidomide *Polycyclic Aromatic Compounds*, *00:1–15*, *2015*
- **48.** Quantum Chemical Study on 5-(1,3-Dithian-2-Y L)- 2H-1,3-Benzodioxole- AD.F.T Study Journal of Chemistry and Chemical Sciences, *Vol.6(1)*, 78-87, *January 2016*
- **49.** Vibrational analysis of 1-Methyl-3-phenylthiourea- A density functional theory based study *J. Sci. Res. Adv. Vol. 2, No. 3, 2015, 131-135*
- **50.** Quantum chemical investigation on structures and energetics of Tungsten Fluoride (WFqn) species ($q = 0, \pm 1$; n < 6) *J. Chem. Sci.* Vol. 127, No. 10, October 2015, pp. 1853–185
- **51.** *Ab-initio* study of '2-(3-bromo phenyl)1,3-dithian by density functional theory Journal of Chemical and Pharmaceutical Research, 2016, 8(1):675-681
- **52.** Quantum chemical origin of high ionization potential and low electron affinity of Tungsten Hexafluoride Journal of Computational Methods in Molecular Design, 2015, 5 (4):142-146
- **53.** Quantum chemical study of 4-chloro-3-ethylphenol *J. Sci. Res. Adv. Vol. 2, No. 1, 2015, 38-41*
- **54.** Correction: The biological activity and molecular docking studies of three multiple myeloma drugs J. Sci. Res. Adv. Vol. 2, No. 2, 2015, 101-101
- **55.** Quantum chemical study on 2,6-bis(bromo-methyl)pyridine-A D.F.T. studyDer Pharma Chemica 7(1):55-61 · January 2015
- **56.** Molecular structure, vibrational analysis and electronic properties of 5-amino-1, 3, 4-thiadiazol-2(3h)-one using density functional theory AnoopkumarPandey, Mukesh Kumar Niyal and ApoorvaDwivedi Journal of Computational Methods in Molecular Design, 2016, 6 (1):23-31
- 57. Investigations on the frontier orbitals of FeFn (n = 1-6) superhalogen complexes and prediction of novel salt series Li (FeFn) Journal of Fluorine Chemistry 195 (2017) 85–92
- 58. VIBRATIONAL ELECTRONIC NBO AND NLO PROPERTIES OF RESORCINOL BY USING DFT METHODAcademic Social research 17 (2017) 41-54
- **59.** DFT of NaphazolineAdvances in Physical Science ResearchpISSN: 2321 9742Vol. xxx, No. xxx, pp. xxx, 2015
- **60.** Ab-initio Studies of 5-anilino-1,3,4-thiadiazole-2(3H)-thioneJ. Sci. Res. Adv. Vol. 3, No. 2, 2017

- 61. VIBRATIONAL ELECTRONIC NLO AND NBO STUDY OF 4-PYRAMIDINE NITRILE BY AB-INITIO METHODGLOBAL JOURNAL OF MULTIDISCIPLINARY STUDIES Volume-5, Issue-9, August- 2016
- 62. Molecular structure, vibrational analysis and electronic properties of 5-amino-1, 3, 4-thiadiazol-2(3h)-one using density functional theoryJournal of Computational Methods in Molecular Design, 2016, 6 (1):23-31
- 63. C60 as electron acceptor and donor: A comparative DFT study Li@C60 and F@C60 Ambrish K.Srivastava, Sarvesh Pandey Anoop Kumar Pandey, Neeraj Mishra Aust.J.Chem. 71(12) 953-956
- 64. Structural, IR Spectra NBO, TDDFT, AIM calculation, Biological activity and Docking Property of [1,2,4]-triazolo[3,4-*b*][1,3,4] thiadiazole Anoop Kumar Pandey D.V.Shukla, Vijay Singh Vijay narayan Mishra E. J. B.A. Sciences 5(4) 2018,280-288
- 65. Biological, Electronic, NLO, NBO, TDDFT and Vibrational Analysis of 1-benzyl-4-formyl-1H-pyrrole-3-carboxamide Anoop Kumar Pandey¹ Vijay Narayan Mishra³ Vijay Singh Accepted in IJCCE
- 66. A handbook of engineering Physics Vol.-I/II(lulu Publication)

Paper and book communicated

- 1. Vibrational Electronic and Optical properties of PROPOFOL by using DFT method Indian Journal of Chemical Technology
- **2.**FT-IR Spectra HOMO-LUMO MESP analysis Fukuai Function Docking and TDDFT of Proflavine:DFT approach Indian Journal of Biophysics and biochemistry
- 3.DFT study of changing various acidic properties in group of hydrogenated 3d transition metal Hexahalied Super Acid **JTCC**
- 4. Pseudo Type class of superhalogen Pt (CN)_n where n=1-6 in both linear and nonlinear

5. SYNTHESIS and DFT STUDY OF EBASTINIUM FUMARATE

Communicated in Iranian Journal of chemical society

A text book for 11th 12th class for physics Bihar Board (MBD publication)

PAPER PRESENTED IN CONFERENCES / WORKSHOPS

- 1. Structural, Vibrational, and Electronic properties of Group III Antimonides- (AlSb, InSb, GaSb) n (n=1, 2), 2nd National Conference on NanoMaterials and Nanotechnology, December 21-23 2009, Department of Physics, University of Lucknow, Lucknow-India.
- 2. Semi-empirical Studies of different structures of fullerene rings Doped with Transition metals, 2nd National Conference on Nanomaterials and Nanotechnology, December 21-23 2009, Department of Physics, University of Lucknow, and Lucknow-India.

- 3. Molecular structure and vibrational spectra of cinnamoyl shikonin using QM\MM method, Megh Nath Saha symposium on emerging trends in laser spectroscopy and applications, Department of Physics, University of Allahabad, and Allahabad-India.
- DFT study of pure and doped Silicon cages with transition metals, 3nd
 Conference on Nanomaterials and Nanotechnology, December 21- 23
 University Lucknow.
- 5. DFT study of small ZrO clusters, 3nd National Conference on Nanomaterials and Nanotechnology, December 21-23 2010, Amity University Lucknow.
- 6 Theoretical study of Transition metal nitride clusters (ZnN)_n n=1-4 -A DFT Approach, Prooceedings of **4th National Conference on Nanomaterials and Nanotechnology**, December 2011, Department of Physics, University of Lucknow, Lucknow.
- 7 Electronic structure, non linear optical properties and vibrational analysis of gemifloxacin by density functional theory, Proceedings of **4th National Conference on Nanomaterials and Nanotechnology**, December 2011, Department of Physics, University of Lucknow, Lucknow.
- 8 Study Of Zinc Diboride Clusters Using Density Functional Theory,5th National Conference on Nanotechnology and Materials Science,2013
- 9 Vibrational analysis and structure properties of picric acid by first principal International conference on nanoscience band nanotechonology 18-20 Nov.2013 in BBAU
- 10 Poor in environmental changing world a national seminar on Space science and Environment 20-21 Nov.2015 in Department of Physics Rajeev Gandhi P. G. College Ambikapur (C. G.)
- 11 DFT study of Calcium diboride Cluster Ist International conference Innovation Techniques in Engineering and Management 2/05/2015 organized by Surya Group of Institutions.
- Biological and Chemical activity of two anti HIV natural product Triclisine and Rufesine A national seminar on Traditional and tribal knowledge of India and its relevance present scenario 6th -7th February 2015 organized in Govt. Kakatiya P. G. College Jagadalpur (C.G.)