

Dr. Dinesh Jasrotia

Designation : Assistant Professor (Senior Scale)
Subject : Physics
Area of Specialization : Solid State Physics, Materials Science
College : G.G.M. Science College, Jammu.
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Summary

- Ph.D. degree in **Physics**
- Currently working on **Materials Science and Solid State Physics**

Awards and Achievements

1. **Young Achiever Award in DAE-SSPS-2007** nominee by Board of Department of Atomic Energy, Government of India during 2007.
2. **Research Advisor** of Board of Editors and Publications of the **American Biographical Institute, U.S.**
3. **Research Papers Reviewer Award** of Physica B: Physics of Condensed Matter, Elsevier, **Amsterdam, The Netherlands** during 2016.
4. **Awarded the International Union of Crystallography** grant to attend International School on Mathematical and Theoretical Crystallography, held at **Université Henri Poincaré Nancy I – France** during 2005.
5. **Awarded the International Union of Crystallography** grant to attend European Powder Diffraction Conference held at **University of Geneva, Geneva, Switzerland** during 2006.
5. **Awarded the Post-Doctoral Fellowship** by Kwazulu-Natal Univ., **South Africa** during 2007.
6. **Awarded the UGC-IUC Consortium** at **Mauritius University, Mauritius** during 2011.
7. **Awarded the UGC Research** grant under the major research project during 2013.
8. **Awarded the Council of Scientific and Industrial Research (CSIR)-Research Associateship** in April 2002.
9. **Awarded the Council of Scientific and Industrial Research (CSIR)-Research Associateship** in June 2005.
10. **Achievement of supervising one Ph.D.** and registering another one scholar under joint supervision at Banasthali University, Rajasthan while working in undergraduate college.

Workshops, Seminars, Symposia and Conferences attended

1. Three weeks **All India Workshop/Training Course** on Applications of Direct Methods in Crystallography for Small/Medium sized Molecules, held at University of Madras, Chennai, during December 1st-21st, 1998.
2. **XXIX National Seminar** on Crystallography, held at University of Madras, Chennai, during December 21st-23rd, 1998.
3. **XI-National Seminar** on Ferroelectrics and Dielectrics, held at University of Jammu, Jammu, during November 1st-3rd, 2000.
4. **XXXI-National Seminar** on Crystallography, held at BARC, Mumbai, during June 19th-22nd, 2001.
5. **XXXII National Seminar** on Crystallography, held at Department of Physics, University of Jammu, Jammu Tawi, during Oct., 24th -26th, 2002.
6. Two Weeks **Indo-German School** on Synchrotron Radiations and their Application, held at CAT, Indore, during Nov. 11th -22nd, 2002.
7. **International Symposium** on Drug Discovery and Process Research (DDPR-03), held at Shivaji University, Kolhapur (India), during Jan. 23rd -25th, 2003.
8. **1st J & K Science Congress**, held at University of Jammu, Jammu Tawi during February 7-9th, 2005.
9. **International Summer School on Mathematical and Theoretical Crystallography**, held at *Université Henri Poincaré, Nancy I – France*, during June 20-24th, 2005.
10. Department of Atomic Energy - **Solid State Physics Symposium** held at Bhabha Atomic Research Centre, Trombay, **Mumbai**, India during 5th -9th Dec. 2005.
11. European Powder Diffraction International Conference (**EPDIC-10**) held at Faculty of Sciences, **University of Geneva, Geneva, Switzerland** during Sept. 1-4th, 2006.
12. Selected as nominee for “**Young Achiever Award**” in the **Solid State Physics Symposium** held at University of **Mysore**, India during 27th -31st Dec. 2007.
13. Presented paper in **National Symposium on Frontier Areas in Solid State and Materials Science** held at ISCAS, University of Jammu from Oct. 16-18th, 2013.
14. **National Energy Meet-2013** held at **University of Kota, Kota, Rajasthan** on Dec. 02, 2013.
15. **Invited speaker** in 2nd **National Conference** on Multifunctional Advanced Materials organized by ICMR, DRDO, ISRS at Centre for Excellence in Nanotechnology and School of Physics and Materials Science, **Shoolini University, Solan, H.P.** during June 11-12, 2014.
16. Presented research paper in UGC sponsored **National Conference** on “Recent Advances in Materials Science and Technology” held at **M.L.V. Govt. College, Bhilwara, Rajasthan** during December 22-23, 2014.
17. Presented research paper in 2nd **National Conference** on Interdisciplinary Sciences” held at Govt. G.M. Science College, Jammu during February 27-28, 2015.

18. Presented research paper in 10th **JK Science Congress** held at University of Jammu, Jammu during march 14-16, 2015.
19. Attended Mid-Term Research Project Meeting at University Grants Commission, **New Delhi** on 12 -13th Jan 11-13th, 2014.
20. Attended Three Weeks UGC sponsored Refresher Course in the subject Physics held at UGC Academic Staff College, University of Jammu, Jammu from Feb. 2nd -21st, 2015.
21. Attended 10th JK Science Congress held at University of Jammu, Jammu from March 14th – 16th, 2015.
22. Presented Research Paper during 3rd Indo-Italian Workshop on Energy and Health (IIWEc) held at **University of Delhi, Delhi** during 3-4th July, 2015.
23. Presented Research Paper during International Conference on research innovations in Science engineering and technology held at YCET, Jammu during 20-21st Nov., 2015.
24. **Invited speaker** in 3rd **National Conference** on Multifunctional Advanced Materials organized by ICMR, DRDO, ISRS at Centre for Excellence in Nanotechnology and School of Physics and Materials Science, **Shoolini University, Solan, H.P.** during May 11-13, 2015.
25. Attended the **International Conference** on GREENTECH-2017 held at **JNU, New Delhi** on 5th March, 2017.

Research Publications

Annexure – 1

List of papers published in National and International Journals

Year: 2017

1. Bikram Singh, Atul Thakur, Mukesh Kumar, Sanjay K. Verma and **Dinesh Jasrotia**,
“Structural and Optical Properties of Inorganic-Organic Hybrid Material of Acetanilide Tetrachloromercurate(II)”
Journal of Materials Science: Materials in Electronics, (2017) DOI: 10.1007/s10854-017-6758-0
[U.K.]

Year: 2016

2. Ajit Kumar, Sanjay K. Verma, P.A. Alvi and **Dinesh Jasrotia**,
“Nano-spatial parameters from 3D to 2D lattice dimensionality by organic variant in [ZnCl₄]⁻ [R]⁺ hybrid materials: Structure, architecture-lattice dimensionality, microscopy, optical Eg and PL correlations”
AIP Proc. **1724**, 020004 (2016); doi: 10.1063/1.4945124 [U.S.]

Year: 2015

3. Mukesh Kumar, Sanjay K. Verma, Bikram Singh, Atul Thakur, Ajit Kumar and **Dinesh Jasrotia**,
“2D Interwoven Metal-Organic Framework in Tetrachloromercurate(II) based Hybrid Material”, *Chem Sci Trans.*, 2015, 4(2) pp. 629-637. [India]

4. Ajit Kumar, M. Kumar, Sanjay K. Verma, P.A. Alvi and **Dinesh Jasrotia**
 “Single Crystal Growth, X-ray Structure Analysis, Optical Band Gap, Raman Spectra, Strain Tensor and Photoluminescence properties in $[\text{HgCl}_4]^- [\text{R}]^+$ and $[\text{ZnCl}_4]^- [\text{R}]^+$ Hybrid Materials”
J. Fundamental and Applied Sciences 7(3) [2015] 422. [Algeria]

5. Ajit Kumar, Sanjay K. Verma, P.A. Alvi and **Dinesh Jasrotia**,
 “Single crystal growth, structural, morphological and Raman Tensor Studies of ZnCl_2 based hybrid material.
AIP Proc. **1675**, 020041 (2015); doi: 10.1063/1.4929199 [U.S.]

6. Bikram Singh, Atul Thakur, Mukesh Kumar and **Dinesh Jasrotia**,
 “Bang of hydrogen bonding on covalent bonds in $[\text{HgX}]$ based Inorganic-organic Hybrid Materials”,
Ind. J. Appl. Res., 2015, 5(9) pp. 38-43. [India]

Year: 2014

7. **Dinesh Jasrotia**, Mukesh Kumar and S Dalela.
 “Structure-property-relationship of p-toluidinium tetrachloromercurate (II)”
AIP proceedings, 1591 (2014)1247-1249 [U.S.]

8. Mukesh Kumar and **Dinesh Jasrotia**,
 “Route to physical homogeneous synthesis of $\text{N-H}^+ \dots \text{Cl}^-$ bonded 2D interpenetrated Hg(II) based inorganic-organic hybrid derivative”,
J. Chem. Cryst., JOCC-S- 2014-00319.

Year: 2013

9. **J. Dinesh**,
 Analysis of secondary interactions and structure-activity-relationship of two benzoic acids
Acta Physica Polonica A, 123 (3) (2013) 704-708. [Poland]

10. **Dinesh**, Mukesh Kumar and Sourabh Dalela
 $\text{Hg} \dots \text{Hg}$ interactions in mercuric chloride based hybrid materials
Int. J. Materials Physics, 4(1) (2013)11-21. [India]

11. Mukesh Kumar, **Dinesh** and Sourabh Dalela
 Analysis of Mercuriophilic Interactions in $[\text{HgBr}]^-$ Hybrid Materials
Int. J. Adv. Mat. Sci. 4(1)(2013)23-35. [India]

Year: 2012

12. Aran Kumar, J. **Dinesh** et al.,
 “Convenient Route to Alkylene Dithiophosphato Ligands: Synthesis and Crystallographic Analysis of $[\text{OCH}_2\text{CMe}_2\text{CH}_2\text{OPS}_2\text{HNEt}_3]$ ”
J. Chem.Crystallogr. Vol. 42(4) (2012) 299-304. [U.S.]

Year: 2011

13. **Dinesh** et al.,
 “3D Isostructurality in inorganic organic Hybrid materials”
AIP proceedings, 227 (2011) 1393. [U.S.]

Year: 2009

14. **Dinesh** et al.,
“Isostructurality in two Hg and Cd Hybrid structures”
Acta Cryst. C64 (2009) m1598. [U.K.]
15. Rajnikant, **Dinesh** et al.,
“Synthesis and X-ray Structure of Acetoxy-4-methyl Phenyl Methyl Acetate”
J. Chem. Crystallogr. Vol. 39 (2009) 835-837. [U.S.]

Year: 2008

16. Rajnikant, **Dinesh** et al.,
“X-ray Structure Analysis of 3beta-Hydroxy-4-(1,4-oxazin-4-yl)-androstane”
Crystallography Reports, Vol. 53(7) (2008) 1119-1123. [Russia]
17. Rajnikant, **Dinesh** and Bhavnaish Chand
“Comparative Crystallographic and Hydrogen Bonding Analysis of Pregnane Derivatives”
Journal of Chemical Crystallography, Vol. 38(3)(2008)211-280. [U.S.]
18. Rajnikant, **Dinesh** and Bhavnaish Chand
“Biological-activity-predictions and hydrogen bonding analysis of Estrane derivatives: A case study of steroids”
Journal of Chemical Crystallography, Vol. 38(6) (2008)567-576 [U.S.]

Year: 2007

19. V.P. Gupta, **Dinesh** et al.,
“X-ray crystallographic, spectroscopic and quantum chemical studies on ethyl 2-cyano-3-N, N-dimethylamino acrylate”
Spectrochimica Acta A, 68 (2007) 237-243. [U.S.]
20. Rajnikant, **Dinesh** and Bhavnaish Chand
“Analysis of intra- and intermolecular hydrogen bonds in androstane derivatives: A case study of steroids”
Zeiteschrift fuer Kristallographie S26 (2007) 587-592. [Germany]
21. Rajnikant, **Dinesh** et al.,
“A comparative crystallographic analysis of the X-ray structure of three cholest-based steroidal molecules”
Ind. J. Chem. Vol. 46B (11) (2007) 1855-1860. [India]
22. Rajnikant, **Dinesh** and Bhavnaish Chand
“Biological-activity-predictions, crystallographic comparison and hydrogen bonding analysis of cholane derivatives: A case study of steroids”
Indian Journal of Biophysics and Biochemistry, 44 (2007) 458-469 [India]
23. Rajnikant, **Dinesh**, et al.
“A comparative crystallographic analysis of the X-ray structure of three cholest-based steroidal molecules”
Ind. J. Chem. Vol. 46B (11) (2007) 1855-1860. [India]

Year: 2006

24. Rajnikant, **Dinesh**, et al.
“4-cyano-N[4-n-decycloxy-benzylideno]-aniline”
Acta Cryst. E62 (2006) o3662-o3663. [U.K.]
25. Rajnikant, **Dinesh**, et al.
“2,3-diphenyl-quinoxaline”
Acta Cryst. E62 (2006) o2356-o2357. [U.K.]
26. Rajnikant, **Dinesh**, et al.
“Synthesis and structure determination of 7a-aza-B-homostigmast-5-eno [7a, 7-d] tetrazole-3-yl chloride”
Journal of Chemical Crystallography, Vol. 36(12) (2006) 793-798. [U.S.]
27. Rajnikant, **Dinesh**, et al.
“Molecular and crystal structure of 4-ethoxycarbonyloxy-1-oxo-1H-Phthalazine-2-carboxylic acid ethyl ester.”
Crystallography Reports, Vol. 51(4) (2006) 655-658. [Russia]
28. Rajnikant, **Dinesh**, et al.
“Synthesis, X-ray structure and study of X-H...A interactions in N,N'-bis-(4-methoxy-benzylidene)-hydrazine”
Ind. J. of Pure & Appl. Phys. Vol. 44 (2006) 602-605. [India]
29. Rajnikant, **Dinesh**, et al.
“Crystal Structure of 4-(2-hydroxy-phenylamino) pent-3-en-2-one”
Heterocyclic Communications Vol. 12 (2006) 129-134 [Israel]
30. Rajnikant, **Dinesh**, et al.
“Synthesis, X-ray structure and N-H...O interactions in 1,3-diphenyl urea”
Bulletin of Materials Science Vol. 29 (3) (2006) 1-4 [India]
31. Rajnikant, **Dinesh**, et al.
“Analysis of O-H...O and C-H... interactions in biphenyl-2,2'-dimethanol : A Supramolecular Structure”
Journal of Chemical Crystallography. Vol. 36(5) (2006) 331-336 [U.S.]
32. Rajnikant, **Dinesh** et al.
“Analysis of C-H...O hydrogen interactions and TLS parameters in 5a-oxa-β-homo-5α-cholestan-6-one”
Journal of Chemical Crystallography. Vol. 36(2) (2006) 343-348. [U.S.]
33. Rajnikant, **Dinesh**, et al.
“1-(2- Carboxyphenyl)-2-(3-methyl phenoxy)-5-phenyl-1,3,4-triazole”
Acta Cryst. E62 (2006) o1373-1374. [U.K.]
34. Rajnikant, **Dinesh** et al.
“Synthesis and X-ray Crystallographic Analysis of 17β-Hydroxy-17-methylandro-4-ene-17-one”
Journal of Chemical Crystallography. Vol. 36(5) (2006) 283-287. [U.S.]

Year: 2005

35. Rajnikant, **Dinesh**, et al.
“Crystallographic Analysis of 9-(3-methylbut-2-enyloxyfurano)[3,2-g]benzopyran-

2-one”

Journal of Chemical Crystallography. Vol. 35(11) (2005) 913-916.

[U.S.]

36. Rajnikant, **Dinesh**, et al.

“Crystallographic investigations of benzothiazol-2-yl-hydrazine”

Journal of Chemical Crystallography. Vol. 35(4) (2005) 293-296.

[U.S.]

37. Rajnikant, **Dinesh**, et al.

“X-ray crystallography of cholest-3,5-diene-7-one”

Crystallography Reports. Vol. 50(3) (2005) 419-422.

[Russia]

38. Rajnikant, **Dinesh**, et al.

“Synthesis and X-ray structure Analysis, structure-activity relationship of benzoic acid [1-(6-methyl-2,4-dioxo-3,4-dihydro-2H-pyran-3-yl)-eth-(E)-ylidene]-hydrazide with a water molecule (C₁₅H₁₄N₂O₄.H₂O)”

Journal of Chemical Crystallography. Vol. 35(5) (2005) 357-360.

[U.S.]

39. Rajnikant, **Dinesh**, et al.

“Structure analysis of 3 β -Acetoxy-12-keto-(25R)-5b-spirostanyl acetate”

Indian Journal of Physics. Vol. 79(3) (2005) 285-287

[India]

40. Rajnikant, **Dinesh**, et al.

“Crystal structure analysis of 1H,4H-tetrahydroquinolizino-(9,9a,1gh) coumarin”

Indian Journal of Physics. Vol. 79(1) (2005) 73-75

[India]

Year: 2004

41. Rajnikant, V.K. Gupta, **Dinesh**, et al.

"Structure analysis of 9-(1,2-propenyl)-6-carbethoxy-2-methyl-2,3-dihydrofuro [2,3-h] benzopyran-5H-one"

Journal of Chemical Crystallography Vol. 34(11) (2004) 737-743.

[U.S.]

42. Rajnikant, **Dinesh**, et al.

“Synthesis and structure analysis of 2-(2’-propanonylthio)-3-(O-methyl phenyl) quinazol- 4(3H)one”

Journal of Chemical Crystallography, 34(10) (2004) 693-696.

[U.S.]

43. Rajnikant, **Dinesh**, et al.

“Synthesis and Structure of 3 β -Hydroxyandrost-5-en-17-one (C₁₉H₂₈O₂. CH₃OH)”

Journal of Chemical Crystallography, 34(8) (2004) 523-528.

[U.S.]

44. Rajnikant, **Dinesh**, et al.

“Synthesis and X-ray Structure analysis of 2-acetylamino-Benzoic acid”

Journal of Chemical Crystallography, Vol. 34(7)(2004) 471-475.

[U.S.]

45. Rajnikant and **Dinesh**.

"Intramolecular C-H...N and intermolecular N-H...N interactions in 2-amino-4-phenyl-1,3-thiazole"

Indian Journal of Physics, Vol. 78 (7) (2004) 587-589.

[India]

46. Rajnikant, **Dinesh**, et al.

“X-ray analysis of 2-aniline benzo (2,3-b)cyclopentane-1,3-dione”

Bulletin of Materials Science, Vol. 27(4) (2004) 337-340.

[India]

47. Rajnikant, V.K. Gupta, **Dinesh**, et al.

"Crystallographic investigations of 1,4-Benzothiazin-2(1H)one and 3-Methyl-1,4-

benzothiazin-2(1H)one"
Crystallography Reports, Vol. 49 (3) (2004) 427-429. [Russia]

48. Rajnikant, **Dinesh**, et al.
"Crystallographic analysis of 1H,4H-tetrahydro-8-methyl-quinolizino (9,9a,1gh) coumarin"
Indian Journal of Pure & App. Physics, Vol. 42 (2004) 338-340. [India]

49. Rajnikant, **Dinesh** and Dalbir Singh
"Crystal Structure determination and role of hydrogen interactions in 3,3'-dimethoxy biphenyl"
Bulletin of Materials Science, Vol. 27(1) (2004) 31-34. [India]

50. Rajnikant, **Dinesh**, et al.
"Crystal structure of 17 α -acetoxyprogesterone"
Crystal Research and Technology. Vol. 39 (4) (2004) 353-358. [Germany]

Year: 2003

51. Rajnikant, V.K. Gupta, **Dinesh**, et al.
"Structure analysis of 2-cyano-3-N, N-dimethyl amino acrylate"
Asian Journal of Physics, Vol. 12(1) (2003) 93-97. [India]

52. Rajnikant, **Dinesh**, et al.
"2,6-Dimethylquinolin-4(1H)-one"
Acta Cryst. Vol. E59 (2003) o1768-o1769. [U.K.]

53. Rajnikant, V.K. Gupta, **Dinesh**, et al.
"X-ray Structure Analysis of 4-cyano-4'-n-undecycloxybiphenyl"
Crystallography Reports, Vol. 48(2) (2003) 286-289. [Russia]

54. Rajnikant, Naresh Kumar, **Dinesh**, et al.
"X-ray Structure Analysis of *Cassia Tora*-Linn: **Herbal Medicine**"
Asian Journal of Physics, Vol. 12(1) (2003) 99-102. [India]

55. Rajnikant, V.K. Gupta, **Dinesh**, et al.
"Role of H-binding in organic molecular assemblies: study of some steroids"
Asian Journal of Physics, Vol. 12(1) (2003) 93-97. [India]

56. Rajnikant, V.K. Gupta, **Dinesh**, et al.
"Role of H-binding in organic molecular assemblies: study of some steroids"
Asian Journal of Physics, Vol. 11(3) (2003) 314-316. [India]

Year: 2002

57. Rajnikant, **Dinesh** et al.
"Synthesis and Crystallography of cholest-3,5-diene-7-one - A steroid"
Journal of Chemical Crystallography. Vol. 32(9) (2002) 325-329. [U.S.]

58. Rajnikant, V.K. Gupta, **Dinesh**, et al.
"Crystallographic comparison of 4-cyano-4'-n-decycloxybiphenyl and 4-cyano-4'-n-dodecycloxybiphenyl"
Mol. Cryst. & Liq. Cryst., Vol. 383 (2002) 99-113. [U.S.]

59. Rajnikant, V.K. Gupta, **Dinesh** et al.
"Crystal structure analysis of 4-phenylquinolin-2(1H)one"
Crystallography Reports, Vol. 47(3) (2002) 494-496. [Russia]

60. Rajnikant, V.K. Gupta, **Dinesh** et al.
 "Structure elucidation of 3 β -Acetoxy-cholest-5-ene-7-one - A steroid"
Crystallography Reports, Vol. 47(1) (2002) 75-79. [Russia]

Year: 2001

61. Rajnikant, V.K. Gupta, **Dinesh** et al.
 "Structure analysis of Methyl-3,4-dihydro-3-(p-methylphenyl)-4-oxo-2-quinazolinyl
 thiopropionate"
Crystal Research & Technology, Vol. 12 (36) (2001) 1451-1456. [Germany]
62. Rajnikant, V.K. Gupta, **Dinesh** et al.
 "Crystallographic investigations of 3 β -Acetoxy-5 α -cholestan-6-one-semicarbazone
 - A steroid"
Crystal Research & Technology, Vol. 11 (36) (2001) 1281-1288. [Germany]
63. Rajnikant, V.K. Gupta, **Dinesh** et al.
 "Crystallography of cholest-4-ene-3, 6-dione - A steroid"
Crystallography Reports, Vol. 46 (6) (2001) 1045-48. [Russia]
64. Rajnikant, V.K. Gupta, **Dinesh**, et al.
 "Structural study of 2,4-dichlorobenzanilide-An aromatic substituted amide"
Ind. J. Pure & Appl. Phys., Vol. 39 (2001) 313-315. [India]

Review Research Articles

65. Rajnikant, V.K. Gupta and **Dinesh**.
 "The role of hydrogen bonding in organic molecular assemblies: A case study of
 some steroids"
Asian Journal of Physics, Vol. 12(1) (2003) 85-91. [India]
66. Rajnikant and **Dinesh**
 "The Weak C-H...O Hydrogen Bond in Alkaloids: A case study"
Bulletin of Materials Science. Vol. 28(3) (2005) 187-198. [India]
67. Rajnikant, **Dinesh** and Bhavnaish Chand
 "Comparative crystallographic and hydrogen bonding analysis of cholestane
 derivatives"
Acta Cryst. A Vol. A62 (2006) 136-145. [U.K.]
68. Rajnikant, **Dinesh** and Bhavnaish Chand
 "Analysis of intra- and intermolecular hydrogen bonds in androstane derivatives:
 A case study of steroids
Zeitschrift fuer Kristallographie S26 (2007) 587-592. [Germany]
69. Rajnikant, **Dinesh** and Bhavnaish Chand
 "Biological-activity-predictions, crystallographic comparison and hydrogen bonding
 analysis of cholane derivatives: A case study of steroids"
Indian Journal of Biophysics and Biochemistry, 44 (2007) 458-469 [India]
70. Rajnikant, **Dinesh** and Bhavnaish Chand
 "Comparative Crystallographic and Hydrogen Bonding Analysis of Pregnane
 Derivatives"
Journal of Chemical Crystallography, Vol. 38(3)(2008)211-280. [U.S.]

71. Rajnikant, **Dinesh** and Bhavnaish Chand

“Biological-activity-predictions and hydrogen bonding analysis of Estrane derivatives:

A case study of steroids”

Journal of Chemical Crystallography, Vol. 38(6) (2008)567-576

[U.S.]

Book Publications

N.A.

Patents

N.A.

Research Projects (Minor / Major Project)

UGC-Major Research Project “**Crystal Engineering and Characterization of $[MX_4]^- [R]^+$ Inorganic-Organic Hybrid Materials**” vide UGC letter No. F. 42-777/2013 (SR) dated: 26-02-2014.

Project No: 42-777/2013

Amount: Rs. 946,800.00 [Nine Lacs, forty six thousand and eight hundred]

Principal Investigator: **Dr. Dinesh Jasrotia**, Department of Physics, GGM Science College, Jammu.

Academic Qualifications

Examination Passed	Board/ University	Subjects	Year	Division / Grade / Merit
SSC	JKBSE	Eng. Maths, Hindi, Social Sciences, Science.	1991	1st
Higher Secondary	JKBSE	Maths, Physics, Chemistry, Eng.	1993	1st
Bachelor’s Degree(s)	University of Jammu	Maths, Physics, Chemistry, Eng.	1996	1st
Master’s Degree(s) (M.A/M.Sc.)	HNU Central University	Physics	1998	1st
NET/SLET				
Other Diploma / Certificates etc.	IGNOU	P.G. Diploma in Higher Edu.	Perusing	

Research Experience

Research Stage	Title of Work /Thesis	University where the work was carried out	Year
M. Phil or equivalent			
Ph.D.	Crystallographic Analysis of some small organic molecules by using X-ray Diffraction and Computational Techniques	University of Jammu	1999-2002
D.Sc/D.Litt.			

Training (Please specify)	Post-Doctorate	Wits University, South Africa	2007
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Teaching Experience

Courses Taught	Name of the University/ College/Institution	Duration
iv) U.G. (B.A./B.Sc. etc.) (B.A./B.Sc. etc. Hons.)	J&K Higher Education Department (GWC, Udhampur, GGM Sc.Coll., Jammu)	10 years
v) P.G. (M.A./M.Sc.,etc.)	University of Jammu	02 Years
vii) Any other(e.g Women Study, Skill Development , Add on courses, Coaching (JUET, CET) etc)		

Extension Work / Community Service

- 1) Established the **Crystal Research Group** in **Jammu and Kashmir State** and a **Research Laboratory** in **GGM Science College, Jammu** for students to pursue their research work upto M.Phil and Ph.D. Level in collaboration with National Universities. Supervised 1 Ph.D. and 5 M.Phil. for completion of their research work and publication of results in Journals of International Repute.
- 2) Generated the **contractual job opportunities** as Research Fellow/Project Fellow in UGC sponsored research project titled, "Crystal Engineering and Characterization of Inorganic-Organic [MX] [R] Hybrid Materials".
- 3) Study of **Bioactive properties** of crystals extracted from medicinal plants of Jammu and Kashmir State vis-à-vis their X-ray structural behavior relationship in collaboration with **Himalaya Research Laboratory**.
- 4) Presented talk in **International School on Mathematical and Theoretical crystallography** during June 2005 held at **University of Henri Poincare, Nancy, France**.
- 5) Delivered an **Invited Talk** in **National Symposium** on Frontier Areas in Solid State and Materials Science at **ISCAS, University of Jammu, India**.
- 6) Delivered an **Invited Talk** in **National Symposium** on MAM at Shoolini University, Solan, HP, India. (certificate copies enclosed).
- 7) **Research related visits to Abroad:**
 1. Laboratory of Crystallography, Faculty of Sciences, University Henri Poincare, Nancy-I, France (2005).
 2. Solid State Physics Laboratory, Faculty of Sciences, University of Geneva, Geneva, Switzerland (2006).
 3. Institute of Molecular Science, University of Witwatersrand, Johannesburg, South Africa (2007).
 4. Crystal Engineering Laboratory, Department of Chemistry, University of KwaZulu-Natal, Pietermaritzburg, South Africa (2007).

8) Research Experience at various Institutions:

1. Research Experience of Single Crystal X-ray Data Collection on CAD-4 Diffractometer at Regional Sophisticated Instrumentation Centre, Indian Institute of Technology, Chennai, India for ~ 2 months.
2. Research Experience of Powder X-ray Diffraction Collection at Powder X-ray Diffraction Laboratory, Indian Association for Cultivation of Science, Kolkata, India for ~1 week.
3. Research Experience of synthesis and growth of some cholest-based steroids at Steroidal Chemistry Laboratory, Aligarh Muslim University, Aligarh, India for ~2 week.
4. Research Experience of Single Crystal X-ray Data Collection and Data Reduction at Department of Crystallography and Biophysics, Madras University, Chennai, India for ~ 1 month.
5. Research Experience of synthesis and growth of few sulphur containing compounds at Chemistry Department, Jamia Hamdard, Hamdard University, New Delhi for ~1 week.
6. Research Experience at Department of Chemistry, Bhavnagar University, Bhavnagar Gujarat during 23-26th, 2002 according to Research Collaboration meeting.
7. Research Experience of Analyzing the Powder X-ray Diffraction Data by using **Rietveld and Ab-initio methods** at Solid State and Structural Chemistry Unit, Indian Institute of Science, Bangalore, India for ~2 week.
8. Research Experience of studying the Theoretical Crystallography at **Université Henri Poincaré Nancy I – France** for ~1 week.
9. Research Experience of studying the Powder Diffraction Methods at Solid State Laboratory, Faculty of Sciences, **University of Geneva, Geneva, Switzerland** for ~1 week.
10. Research Experience of synthesis of Inorganic materials by using swift-Heating/ Slow-cooling technique at Molecular Structure Institute, Department of Chemistry, Faculty of Sciences, **University of Witwatersrand, Johannesburg, South Africa** for ~2 week.
11. Research Experience of synthesis of Inorganic materials by using by multi-step technique at School of Chemistry, Faculty of Sciences, **University of KwaZulu-Natal, Pietermaritzburg, South Africa** for ~1 month.
12. Research Experience of **UV-Vis data collection** at Department of Physics, Banasthali University, Rajasthan, India for 3 days during Nov.2013.