

## **CV of Prof. Kedar Singh**

1. Name: Prof. Kedar Singh
2. Current Position and Address: Professor of Physics, School of Physical Sciences,  
Director , Advanced Instrumentation Research Facility (AIRF),  
Jawaharlal Nehru University, New Delhi-110067,  
Phone No. 01126738934/01126704784 (O),  
Mobile No. 8318360128  
Email: [kedar@mail.jnu.ac.in](mailto:kedar@mail.jnu.ac.in) , [kedarbhp@rediffmail.com](mailto:kedarbhp@rediffmail.com)
3. Educational Qualifications: M.Sc.( Physics), Ph.D. (Experimental Condensed Physics)
4. Academic/Research experience/Employment:

| S. No. | Post held                                                                 | Organization                                 | From       | To         |
|--------|---------------------------------------------------------------------------|----------------------------------------------|------------|------------|
| 1      | Professor of Physics,<br>School of Physical<br>Sciences,                  | Jawaharlal Nehru<br>University, New<br>Delhi | 01.12.2017 | Continue   |
| 2      | Associate Professor of<br>Physics, School of<br>Physical Sciences,        | Jawaharlal Nehru<br>University, New<br>Delhi | 01.12.2014 | 30.11.2017 |
| 3      | Assistant Professor,<br>Department of<br>Physics, Institute of<br>Science | Banaras Hindu<br>University, Varanasi        | 17.05.2004 | 30.11.2014 |

5. Administrative experience:

| S. No. | Post held                                                     | Organization                                 | From       | Continue   |
|--------|---------------------------------------------------------------|----------------------------------------------|------------|------------|
| 1      | Director,<br>Advanced<br>Instrumentation<br>Research Facility | Jawaharlal Nehru<br>University,<br>New Delhi | 05.01.2024 | Continue   |
| 2      | Dean,<br>School of Physical<br>Sciences, JNU                  | Jawaharlal Nehru<br>University,<br>New Delhi | 08.02.2022 | 07.03.2024 |
| 3      | Dean,<br>School of Physical<br>Sciences, JNU                  | Jawaharlal Nehru<br>University,<br>New Delhi | 08.02.2020 | 07.02.2022 |

6. Area of Specialization: Experimental Condensed Matter Physics
7. Dissertations Supervised
  - (a) Ph.D. Thesis supervised : 12
  - (b) Ph.D. Thesis under supervision: 04
  - (b) Post Graduation (M.Sc.) Projects: 30
  - (c) Mentored of Post Doctoral Fellows: 05

8. List of research publications:

Total published research papers in reputed Journals: 153 (Please see enclosure-1)

9. Number of Books/Book Chapters/ Edited / Authored: 05

01 Book "Smart Nanostructure Material and Sensor Technology" ISBN 978-981-19-2684-6, Published (2022) in Springer Nature.

02. Book "Advanced Functional Materials for Optical and Hazardous Sensing: Synthesis and Applications" ISBN 978-981-99-6013-2, Published (2023) in Springer Nature

03. Book " Low-Dimensional Multifunctional Hybrid Nanostructured Materials (Engineering Materials): Energy and Environmental Applications" ISBN 978-981-96-7952-2, Published (2025) in Springer Nature

01 Book Chapter "Core/Shell Quantum Dots: Synthesis, Properties and Devices", 2020, 28, 1–28, Springer Nature

02. Metal halide perovskite nanomaterials for battery applications" 2023, 537-558, book chapter, Woodhead Publishing , Elsevier, UK

10. Patent :01

Patent Applied: "Advanced Current Collector for Alkali/Alkali Earth Metal Batteries and A Method of Fabricating the Same", Application Number: **IN 202311078891**, Application Date 20 November 2023.

11. h-index-31, i10-index-94, citation 3215

12. Honors/ Award/ Recognitions received :

(a) Raman fellow for Post Doctoral Studies in US under Indo-US 21<sup>st</sup> Century Knowledge Initiative Program (2013-14) availed at High Magnetic Field Laboratory, Florida, USA.

(b) Better Opportunities for Young Scientists in Chosen Areas of Science and Technology (BOYSCAST) fellow (2008-09) availed at Florida State University, USA.

13. Members :

Member of Executive Council, JNU (2021-22)

Member of JNU Court, Academic Council JNU (2016-18), (2020- 2022) (2022-2024)

Member of Board of study in various reputed institutes.

Member of Admission Advisory Committee, JNU (2020-22)

Executive member of Thermo-physical Society of India,

Member of Microscope Society of India, American Chemical Society, Chaloginde Forum.

Convener of International conferences, workshops, training programs and Vigyan Manthan Series.

14. Number of Research Projects Handled: Nine ( Approximate grant 230 Lakhs)

**School of Physical Sciences has received Rs 468 Lakhs under DST FIST program during my Deanship.**

| S. No. | Title                                                                                                                                       | Grant Period                                | Cost (Rs. in L) | Funding Agency                          |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-----------------|-----------------------------------------|
| i      | Development of radiation-resistant high entropy alloys for energy applications                                                              | 01/08/2024 to 31/07/2027                    | 74.17           | STARS, Ministry of Education, New Delhi |
| ii     | Self Assemble and Investigations of Low Dimensional Pervoskites for Photovoltaic Applications                                               | March, 2022 – March 2025 (Running)          | 30.60           | SERB, New Delhi                         |
| iii    | Investigation of Optical and Magnetic Properties of Some Transition Metal Doped Diluted Magnetic Semiconductors for Spintronic Applications | May 15, 2017 to May 14, 2021 (completed)    | 46.52           | SERB, New Delhi                         |
| iv     | Synthesis and characterization of Magnetic Semiconductor Quantum Dots for Device Applications                                               | July 2015 to 31 March 2019 (completed)      | 11.00           | UPE-II, JNU                             |
| v      | Development and Characterization of Ge-Sb-Te Phase Change Materials for Memory Applications                                                 | April 1, 2015 to March 31, 2018 (completed) | 23.00           | SERB, New Delhi                         |
| vi     | Preparation and investigation of Carrier-Type Reversal Metal modified Chalcogenide Glasses                                                  | April 1, 2013 to March 31, 2015 (Completed) | 10.51           | UGC, New Delhi                          |
| vii    | Synthesis and Characterization of Carbon Nanotube Doped Chalcogenide Glassy Composites                                                      | July 1, 2011 to June 30, 2014 (Completed)   | 15.50           | CSIR, New Delhi                         |
| viii   | Synthesis and characterization of multi-component chalcogenide glasses                                                                      | April, 2008 to March 31, 2011               | 11.82           | UGC, New Delhi                          |
| ix     | Study of structural relaxation in chalcogenide glasses                                                                                      | July 1, 2006 to Jun30, 2009                 | 8.00            | CSIR, New Delhi                         |

## Curricular activities

Convener of Vigyan Manthan Series, JNU (2018-2021)

Chairman, Webinar on National Education Policy 2020 : Opportunities in Research and Innovation ( 31 Mar 2021), SPS, JNU, Delhi

Coordinator, 18<sup>th</sup> Refresher Course in Physical and Nanosciences ( 16-28, Nov 2020), HRDC, JNU, New Delhi

Chairman, Webinar on Nanoscience and Nanotechnology in the Present Scenario (9th & 10th June, 2020), SPS, JNU, New Delhi

Convener, Webinar on Material Science, Technology & Society ( 8-9, May 2020), SPS, JNU, New Delhi

Coordinator, 17<sup>th</sup> Refresher Course in Physical and Nanosciences ( 18-30, Nov 2019), HRDC, JNU, New Delhi

Coordinator of Refresher Course in Physics held on Oct 5-30, 2015 at HRDC, JNU, New Delhi

## List of Publication of Prof. Kedar Singh Annexure-1

| S. No. | Details of the Paper                                                                                                                                                                                                                                                                                       |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.     | Simultaneous measurements of thermal conductivity and diffusivity of $\text{Se}_{85-X}\text{Te}_{15}\text{Sb}_X$ ( $X = 2, 4, 6, 8$ and 10) chalcogenide glasses at room temperature<br>Kedar Singh, N. B. Mahrjan and N. S. Saxena*<br>phys. stat. sol. (a) 189, 1 197-202, (2002).                       |
| 2.     | Simultaneous measurements of thermal conductivity and thermal diffusivity of $\text{Se}_{80}\text{Te}_{20-X}\text{In}_X$ ( $X = 2, 4, 6$ and 10) chalcogenide glasses at room temperature<br>N. S. Saxena*, Mousa M. A. Imran and Kedar Singh<br>Bulletin of Material Science 25, 241, (2002).             |
| 3.     | Thermal properties of neutron irradiated $\text{Se}_{80}\text{Te}_{10}\text{In}_{10}$ glass<br>Kedar Singh and N. S. Saxena*<br>Mater. Sci. Engg. A. 346, 287, (2003).                                                                                                                                     |
| 4.     | Temperature dependence study of thermal conductivity and thermal diffusivity of treated Oil-Palm-Fiber Reinforced phenolformaldehyde composites<br>Kedar Singh, N. S. Saxena*, M. S. Sreekal and S. Thomas<br>Journal of Applied Polymer Science 98, 13, 3458, (2003).                                     |
| 5.     | Calorimetric Studies in $\text{Se}_{75}\text{Te}_{25-X}\text{Sn}_X$ Chalcogenide glasses<br>N. B. Maharjan, Kedar Singh and N. S. Saxena*<br>phys. stat. sol. 395, 1, 305-310, (2003).                                                                                                                     |
| 6.     | Structural relaxation of hybrid composite of phenol formaldehyde<br>Kedar Singh, N. S. Saxena*, S. Thomas and M. S. Sreekala<br>Indian J. Eng. &Material Science 10, 65, (2003).                                                                                                                           |
| 7.     | Kinetics of Ge-As-Se in Glass Transition Region<br>Kedar Singh and N. S. Saxena*<br>Bulletin of Material Science 26, 543, (2003).                                                                                                                                                                          |
| 8.     | Temperature dependence of thermo-physical properties of untreated oil- palm- fiber reinforced phenol-formaldehyde composites<br>Kedar Singh, N. S. Saxena* and S. Thomas<br>J. Scientific & Industrial research 62, 903, (2003).                                                                           |
| 9.     | Pressure dependence of thermal conductivity and thermal diffusivity of Se-Te -In chalcogenide glasses"<br>Kedar Singh and N. S. Saxena*<br>Indian J. Pure & Appl. Physics 41, 466, (2003).                                                                                                                 |
| 10.    | Thermal properties of pine apple leaf fiber reinforced composites for different filler concentrations using transient plane source technique<br>Ravindra Mangal, N. S. Saxena*, M. S. Sreekala, S. Thomas and Kedar Singh<br>Mater. Sci. Engg. A 339, 281-285, (2003).                                     |
| 11.    | Temperature dependence of thermo-physical properties of $\text{Se}_{80}\text{Te}_{10}\text{In}_{10}$ chalcogenide Glass.<br>Kedar Singh and N. S. Saxena*<br>Mater. Sci. Engg. A 329 (1-2), 38, (2005).                                                                                                    |
| 12.    | Thermophysical properties on Zn -Se pellets<br>N. S. Saxena*, R. Sharma, Kedar Singh and T. P. Sharma<br>J. Mat. Sci. Lett. 40, 523, (2005).                                                                                                                                                               |
| 13.    | Simultaneous measurements of thermal conductivity and diffusivity of $\text{Se}_{100-X}\text{In}_X$ ( $x = 0, 5, 10, 15$ and 20) chalcogenide glasses at room temperature<br>Kedar Singh, N. S. Saxena* and D. Patidar<br>Journal of Physics and Chemistry of Solids, 66, 946, (2005).                     |
| 14.    | Composition dependence of the electrical conductivity of $\text{Se}_{85-X}\text{Te}_{15}\text{Sb}_X$ ( $x = 2, 4, 6, 8$ and 10) chalcogenide glasses at room temperature<br>V. K. Saraswat, Kedar Singh, N. S. Saxena*, V. Kishore, T. P. Sharma and P. K. Saraswat, Current Appl. Physics, 6, 64, (2006). |

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| 15. | Energy band gap of $\text{Se}_{100-x}\text{In}_x$ chalcogenide glasses<br>Kedar Singh*, N. S. Saxena, O. N. Srivastav, D. Patidar and T. P. Sharma<br>Chalcogenide Letters, 3, 3, 33-36, (2006).                                                          |
| 16. | Electrical conductivity of Se-In Chalcogenide Glasses<br>V.K. Saraswat*, V.Kishore, Kedar Singh, N.S.saxena and T.P.Sharma<br>Chalcogenide Letters 3, 8, 61-65, (2006).                                                                                   |
| 17. | Electrical measurements of $\text{Se}_{85-x}\text{Te}_{15}\text{Sb}_x$ glasses<br>Vibhav K Saraswat, K. Singh, N.S.Saxena*<br>Indian Journal of Pure and Applied Physics 44, 782, (2006).                                                                 |
| 18. | Thermal Transport in $\text{Se}_{81}\text{Te}_{15}\text{Sb}_4$ Chalcogenide Glass<br>A.K. Singh, Pushpendra Kumar, Kedar Singh* and N.S.Saxena<br>Chalcogenide Letters, 3, (2006), 139–144.                                                               |
| 19. | Thermo-physical properties of Se-Te-Sb vitreous chalcogenide semiconductors<br>Pushpendra Kumar, Kedar Singh*<br>Chalcogenide Letters 4, (2007), 127-132.                                                                                                 |
| 20. | Correlative study of optical, electrical and thermal transport properties of $\text{Se}_{100-x}\text{In}_x$ chalcogenide glasses,<br>Abhay Kumar Singh, Kedar Singh*<br>Journal of Optoelectronics and Advanced Materials 9, 3756 – 3759, (2007).         |
| 21. | Temperature dependence of effective thermal conductivity and effective thermal diffusivity of $\text{Se}_{90}\text{In}_{10}$ bulk chalcogenide glass<br>Kedar Singh*, Abhay Kumar Singh and N.S. Saxena<br>Current Applied Physics, 8, 159-162, (2008).   |
| 22. | Pre-exponential Factor for the Non-Isothermal Crystallization in Glassy $\text{Se}_{85-x}\text{Te}_{15}\text{Sb}_x$ ( $0 \leq x \leq 10$ ) Alloys<br>N. Mehta & K. Singh*<br>Philosophical Magazine, 88 (2008) 1411-1421.                                 |
| 23. | Effect of Slow Neutron Radiation on the Pre-exponential Factor of Thermally Activated Crystallization in $\text{Se}_{96}\text{In}_4$ Chalcogenide Glass<br>N. Mehta, K. Singh* & N. S. Saxena<br>Journal of Physics D: Applied Physics, 41 (2008) 135406. |
| 24. | Comparative Analysis of Some Thermo-physical Properties of $\text{Se}_{90}\text{Zn}_{10}$ and $\text{Te}_{90}\text{Zn}_{10}$ alloys<br>N. Mehta, K. Singh* & N. S. Saxena<br>Thermochimica Acta, 475 (2008) 80-82.                                        |
| 25. | Effect of annealing on structures and effective thermal conductivity of $\text{Se}_{90}\text{In}_{10}$ chalcogenide glass,<br>Abhay Kumar Singh, Kedar Singh*, N.S.Saxena<br>Journal of Ovnic Research 4, 107 – 111, (2008).                              |
| 26. | Comparative Analysis of Thermal Crystallization in $\text{Cu}_{50}\text{Ti}_{50}$ and $\text{Cu}_{50}\text{Zr}_{50}$ Metallic Glasses<br>N. Mehta, K. Singh* & N. S. Saxena<br>Physica B, 403 (2008) 3928-3931.                                           |
| 27. | Effect of Sb and Sn additives on the activation energies of glass transition and crystallization in binary $\text{Se}_{85}\text{Te}_{15}$ alloy<br>N. Mehta, K. Singh* & S. Kumar<br>Phase Transitions, 82 (2009) 43-51.                                  |
| 28. | Effect of Lithium ion-irradiation on crystallization kinetics of glassy $\text{Se}_{98}\text{In}_2$ alloy<br>H. Kumar, N. Mehta*, K. Singh & N. S. Saxena<br>Philosophical Magazine Letters, 89 (2009) 126-135.                                           |
| 29. | Electrical Properties of $\text{Se}_{93-x}\text{Zn}_2\text{Te}_5\text{In}_x$ Chalcogenide Glasses<br>A. K. Singh, N. Mehta & K. Singh*<br>Chalcogenide Letters, 6 (2009) 9-14.                                                                            |
| 30. | Correlation between Meyer-Neldel Rule and phase separation in $\text{Se}_{98-x}\text{Zn}_2\text{In}_x$ chalcogenide glasses<br>A. Singh, N. Mehta & K. Singh*<br>Current Applied Physics, 9 (2009) 807-811.                                               |
| 31. | Observation of inverse Meyer-Neldel rule in thermally activated crystallization of hybrid composite of phenol formaldehyde                                                                                                                                |

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|     | N. Mehta, K. Singh* & S. Kumar<br>Philosophical Magazine, 89 (2009) 797 - 806.                                                                                                                                                                                                                                                     |
| 32. | Electrical properties of Se-Zn-In chalcogenide glasses<br>A. Singh, N. Mehta & K. Singh*<br>The European Physical Journal Applied Physics, 46 (2009) 20303.                                                                                                                                                                        |
| 33. | On the glass transition phenomenon in Se-Te and Se-Ge based ternary chalcogenide glasses<br>N. Mehta, K. Singh*, A. Kumar<br>Physica B, 404 (2009) 1835-1838.                                                                                                                                                                      |
| 34. | Effect of ionic irradiation on the pre-exponential factor of thermally activated crystallization in $\text{Co}_{66}\text{Si}_{16}\text{B}_{12}\text{Fe}_4\text{Mo}_2$ metallic glass<br>N. Mehta, K. Singh* & N. S. Saxena<br>Journal of Physics and Chemistry of Solids, 70 (2009) 811–815.                                       |
| 35. | Co-relation between pre-exponential factor and activation energy of non-isothermal crystallization for virgin and irradiated $\text{Fe}_{78}\text{B}_{13}\text{Si}_9$ metallic glass<br>N. Mehta, K. Singh* & N. S. Saxena<br>Physica B, 404 (2009) 2184–2188.                                                                     |
| 36. | Optical and FTIR properties of $\text{Se}_{93-x}\text{Zn}_2\text{Te}_5\text{In}_x$ Chalcogenide Glasses<br>A. K. Singh, N. Mehta & K. Singh*<br>Physica B, 404 (2009) 3470–3474.                                                                                                                                                   |
| 37. | Effect of indium additive on glass forming ability and thermal stability of Se-Zn-Te chalcogenide glasses<br>A. K. Singh, N. Mehta & K. Singh*<br>Philosophical Magazine Letters, 90 (2010) 201-208.                                                                                                                               |
| 38. | Crystallization kinetics and thermal stability of $\text{Se}_{98-x}\text{Zn}_2\text{In}_x$ chalcogenide glasses,<br>Abhay Kumar Singh and Kedar Singh*<br>Philosophical Magazine, 89, 1457–1472, (2009).                                                                                                                           |
| 39. | Composition dependence UV-Visible and MID-FTIR properties of $\text{Se}_{98-x}\text{Zn}_2\text{In}_x$ (X= 0, 2, 4, 6 and 10) chalcogenide glasses<br>Abhay Kumar Singh and Kedar Singh*<br>Journal of Modern Optics 56, 471-476, (2009).                                                                                           |
| 40. | Element directed aqueous solution synthesis of copper telluride nanoparticles characterizations and optical properties<br>Pushpendra Kumar and Kedar Singh*<br>Crystal growth & Design, 9, (7), 30089-30094, (2009).                                                                                                               |
| 41. | Effect of annealing below crystallization temperature on structural and mechanical properties of $\text{Co}_{66}\text{Si}_{16}\text{B}_{12}\text{Fe}_4\text{Mo}_2$ metallic glass<br>Pushpendra Kumar, Kedar Singh*, T.P. Yadav, O.N. Srivastava.<br>Journal of Optoelectronics and advanced materials 11, (8), 1082-1087, (2009). |
| 42. | Calorimetric studies of glass transition phenomenon in glassy $\text{Se}_{80-x}\text{Te}_{20}\text{Sn}_x$ alloys<br>H. Kumar, N. Mehta & K. Singh*<br>Physica Scripta, 80 (2009) 065602.                                                                                                                                           |
| 43. | Composition dependence of thermal stability, micro-hardness and compactness in glassy $\text{Se}_{90}\text{In}_{10-x}\text{Ge}_x$ alloys<br>H. Kumar, N. Mehta*, K. Singh & A. Kumar<br>Physica B, 404 (2009) 3761-3765.                                                                                                           |
| 44. | Effect of Lithium ion-irradiation on glass transition kinetics of glassy $\text{Se}_{98}\text{In}_2$ alloy<br>H. Kumar, N. Mehta*, K. Singh & N. S. Saxena<br>Phase Transitions, 83 (2010) 1-9.                                                                                                                                    |
| 45. | Effect of In and Zn additives on some thermal properties of a-Se<br>N. Mehta, K. Singh* & N. S. Saxena<br>Solid State Science, 12 (2010) 963-965.                                                                                                                                                                                  |
| 46. | Effect of high energetic ionic radiation in thermally activated crystallization of $\text{Co}_{66}\text{Si}_{15}\text{B}_{16}\text{Fe}_6\text{Ni}_1$ metallic glass: Observation of MN rule<br>N. Mehta, K. Singh* & N. S. Saxena<br>Radiation Effects and Defects in Solids, 166 (4) (2011) 251-257                               |

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| 47. | Study of dielectric properties of Se-Zn-In chalcogenide glasses<br>A.K. Singh, N. Mehta, K. Singh*<br>Optoelectronics and advanced materials-Rapid Communication 12, (2010), 1700-1705.                                                                                                                                                           |
| 48. | Synthesis of CdSe nanoparticles at 50 °C by wet chemical method<br>Pushpendra Kumar and Kedar Singh*<br>Current Nanoscience, 6, (1) 89-93, (2010).                                                                                                                                                                                                |
| 49. | Ferromagnetism in Cu doped ZnSe Semiconducting Quantum Dots<br>Pushpendra Kumar and Kedar Singh*<br>Journal of Nanoparticle Research, 13 (2011) 1613- 1620.                                                                                                                                                                                       |
| 50. | Calorimetric studies of crystallization kinetics of $\text{Se}_{75}\text{Te}_{15-x}\text{Cd}_{10}\text{In}_x$ multicomponent chalcogenide glasses using non-isothermal DSC<br>S Kumar, K Singh*, N Mehta<br>Philosophical Magazine Letter, 90, (2010), 547-557.                                                                                   |
| 51. | Template-free Solvothermally Synthesized ZnSe/ZnSe: $\text{Eu}^{3+}$ Nanoparticles, Structural, Optical and Raman Studies<br>Pushpendra Kumar and Kedar Singh*<br>Current Nanoscience 6, (5) 402-407, (2010).                                                                                                                                     |
| 52. | Calorimetric studies of $\text{Se}_{75}\text{Te}_{15}\text{Cd}_{10}$ and $\text{Se}_{75}\text{Te}_{10}\text{Cd}_{10}\text{In}_5$ multicomponent chalcogenide glasses<br>Sunil Kumar, Kedar Singh*<br>Physica B: Condensed Matter 405, (2010), 3135-3140.                                                                                          |
| 53. | Wurtzite ZnSe quantum dots: Synthesis, Characterization and PL properties<br>Pushpendra Kumar and Kedar Singh*<br>Journal of Optoelectronics and advanced materials 1, (2009) 59-69.                                                                                                                                                              |
| 54. | Structural, Optical and Raman studies of Template-free Solvothermally Synthesized ZnSe/ZnSe: $\text{Ce}^{3+}$ Nanoparticles<br>Pushpendra Kumar and Kedar Singh*<br>Journal of Luminescence, 130, (2010), 2026-2031.                                                                                                                              |
| 55. | Template Free -Solvothermally Synthesized Copper Selenide ( $\text{CuSe}$ , $\text{Cu}_{2-x}\text{Se}$ , $\beta\text{-Cu}_2\text{Se}$ and $\text{Cu}_2\text{Se}$ ) Hexagonal Nanoplates from Different Precursors at Low Temperature<br>Pushpendra Kumar, Kedar Singh* and O. N. Srivastava<br>Journal of Crystal Growth, 312, (2010), 2804-2813. |
| 56. | Observation of Meyer Neldel rule and crystallization rate constant stability for $\text{Se}_{93-x}\text{Zn}_2\text{Te}_5\text{In}_x$ chalcogenide glasses<br>A K Singh and Kedar Singh*<br>The European Physical Journal of Applied Physics, 51(3) (2010)30301                                                                                    |
| 57. | Calorimetric studies of glass transition in glassy $\text{Se}_{75}\text{Te}_{15-x}\text{Cd}_{10}\text{In}_x$ alloys using non- isothermal DSC technique<br>Sunil Kumar, Kedar Singh* and Neeraj Mehta<br>Physica Scripta, 82, (2010), 04560-04565.                                                                                                |
| 58. | Synthesis, characterizations, and optical properties of copper selenide quantum dots<br>Pushpendra Kumar , Kedar Singh*<br>Structural Chemistry 22(2011) 103-110                                                                                                                                                                                  |
| 59. | Calorimetric studies of non-isothermal crystallization in amorphous $\text{Cu}_x\text{Ti}_{100-x}$ alloys<br>N Mehta K Singh and N S Saxena<br>Bull. Mater. Sci., 34, No. 7( 2011) 1459–1463                                                                                                                                                      |
| 60. | Localized structural growth and kinetics of $\text{Se}_{98-x}\text{Zn}_2\text{In}_x$ ( $0 \leq x \leq 10$ ) amorphous alloys<br>A. K. Singh and Kedar Singh*<br>Physica Scripta, 83, (2011), 025605                                                                                                                                               |
| 61. | The effect of Indium additives on crystallization kinetics and thermal stability of Se-Te-Sn chalcogenide glasses<br>Sunil Kumar and Kedar Singh*<br>Physica B 406, (2011)1519                                                                                                                                                                    |
| 62. | Calorimetric studies of thermal crystallization in glassy $\text{Se}_{80-x}\text{Te}_{20}\text{Sn}_x$ ( $0 \leq x \leq 10$ ) alloys<br>H Kumar, N Kumar and K Singh<br>Phys. Scr. 83 (2011)065602                                                                                                                                                 |

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| 63. | Simultaneous measurements of thermal conductivity and thermal diffusivity of $\text{Se}_{90-x}\text{Te}_5\text{Sn}_5\text{In}_x$ ( $x = 0, 3, 6$ and $9$ ) multi-component chalcogenide glasses<br>Sunil Kumar and Kedar Singh<br>J Mater Sci. 47 (2012) 3949                                                                                  |
| 64. | Room temperature ferromagnetism in magic- sized Cr- doped CdS dilute magnetic semiconducting quantum dots<br>P .Srivastava, P. Kumar and K. Singh<br>J. of Nano particle research ,13 (2011)5077- 5085                                                                                                                                         |
| 65. | Effect of some metallic additives ( Ag, Cd and Sn) on thermal transport properties of a-Se<br>A. Sharma, K. Singh and N Mehta<br>J of therm. Anal. Calorim. (2012) 109:915–920                                                                                                                                                                 |
| 66. | Glass Transition, Thermal stability and glass-forming tendency of $\text{Se}_{90-x}\text{Te}_5\text{Sn}_5\text{In}_x$ multicomponent chalcogenide glasses<br>Sunil Kumar and Kedar Singh*<br>Thermochimica Acta, 528 (2012) 32-37                                                                                                              |
| 67. | Quantum Phase Transition from Superparamagnetic to Quantum Superparamagnetic State in Ultrasmall $\text{Cd}_{1-x}\text{Cr(II)}_x\text{Se}$ Quantum Dots?<br>Weiwei Zheng, Pushpendra Kumar, Aaron Washington, ZhenxingWang,Naresh S. Dalal, Geoffrey F. Strouse, and Kedar Singh*<br>J . of the American Chemical Society 134 (2012) 2172–2179 |
| 68. | Investigations on structural, optical and second harmonic generation in solvothermally synthesized pure and Cr-doped ZnO nanoparticles<br>P. Kumar,J. Singh, Kedar Singh, R. S. Tiwari, O. N. Srivastava and A. C. Pandey<br>CrystEngComm 14 (2012)1653                                                                                        |
| 69. | Low temperature synthesized thermoelectric $\text{Sb}_2\text{Te}_3$ irregular nanoflakes<br>Punita Srivastava and Kedar Singh*<br>Materials Letters 75(2012)42-44                                                                                                                                                                              |
| 70. | Evidence of a $\text{ZnCr}_2\text{Se}_4$ Spinel Inclusion at the Core of a Cr-Doped ZnSe Quantum Dot<br>Weiwei Zheng, Kedar Singh, Zhenxing Wang, Joshua T. Wright, Johan van Tol, Naresh S. Dalal, Robert W. Meulenberg, and Geoffrey F. Strouse<br>J . of American Chemical Society 134 (2012) 5577-5585                                     |
| 71. | Effect of Indium additive on thermal Transport properties of Se-Te-Cd multi- component chalcogenide glasses<br>Sunil Kumar and Kedar Singh*<br>J. of Thermal Analysis and Calorimetry(2012) 110:519–522                                                                                                                                        |
| 72. | Effect ofPbadditiveoncrystallizationkineticsof $\text{Se}_{80}\text{In}_{20}$ glassy matrix<br>Indra Sen Ram, Kedar Singh<br>Physica B: Condensed Matter 407 (2012) 3472                                                                                                                                                                       |
| 73. | Structural and Thermal properties of chemically synthesized $\text{Bi}_2\text{Te}_3$ nanoparticles<br>Punita Srivastava and Kedar Singh<br>J. of Thermal Analysis and Calorimetry (2012) 110:523–527                                                                                                                                           |
| 74. | Synthesis of CdSe nanoparticles by solvothermal route: Structural, Optical and Spectroscopic properties<br>Punita Srivastava and Kedar Singh*<br>Advanced Materials Letters (Accepted)-2012                                                                                                                                                    |
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