# DR. DEVENDER SINGH

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***devenderjakhar@rediffmail.com***
*Phone : +91-1262-393131 (Off.)*
*+91-1262-393134 (Room)*


## ❖ Presently working in the research fields of :

- Advanced phosphors (Up and Down convertor) and OLEDs materials
- Fabrications of EL Devices with Inorganic and organic Light Emitting materials
- Solar cells (Thin solar films and DSSC)
- Trace metal determination in biological, food, soil samples etc.

## ❖ Academic Societies/Associations affiliated

- Life Member of Indian Science Congress Association (***ISCA***-L-12745)
- Life Member of Chemical Research Society of India (**CRSI**-LM-924/2007)
- Life Member of Material Research Society of India (**MRSI-**LM B**-**942/2007)
- Life member of Chemical council of Chemist (**ICC**-LF-1232/2007)
- Life Member of Indian Society of the Analytical Scientist-Delhi Chapter **(ISAS-DC-**LM-41/2013)
- Life member of Society for Materials Chemistry (**SMC**-LM-863)
- Fellow Member of International Congress of Chemistry and Environment (**FICCE**)
- Member of Korean Institute of Chemical Engineers (**KIChE**)
- Member of Material Research Society of Singapore **(MRS)**

## ❖ Abroad Visits

- Visited the Nanyang Technological University and National Singapore University, Singapore for a week [**2016**].
- Visited the Centre of Physics, Universidade do Minho, Braga, Portugal on FP7/IRSES European Union -Marie Curie International Research Staff Exchange Scheme for doing research work on the International Research Project based on the "**DEVELOPMENT OF A NEW GENERATION OF CIGS-BASED SOLAR CELLS" [**NANOCIS- 269279]. [**2014**]
- Visited the Centre of Physics, Universidade do Minho, Braga, Portugal on FP7/IRSES European Union -Marie Curie International Research Staff Exchange Scheme for doing research work on the International Research Project based on the "**DEVELOPMENT OF A NEW GENERATION OF CIGS-BASED SOLAR CELLS" [**NANOCIS- 269279]. [**2013**]
- Visited the Centre of applied Physics, Universidade do Politechnica, Valencia, Spain on FP7/IRSES for doing research work on the International Research Project based on the "**DEVELOPMENT OF A NEW GENERATION OF CIGS-BASED SOLAR CELLS" [**NANOCIS- 269279]. [**2013**]
- Visited the Sensors and Material Research Centre of the Korea Institute of the Energy Research, S. Korea, for doing research work under the collaboration of the KIER and M.D. University. [**2004**]

## ❖ Research papers

| | | |
|---|---|---|
| Published in Journals | : | **60 +** 6 (communicated) |
| Presented in Conferences | : | **25** |

## ❖ Research Guidance – Scholars are working on the following topics:-

- "SYNTHESIS AND OPTOELECTRONIC CHARACTERIZATION OF MIXED METAL OXIDE PHOSPHORS" **(Vijeta Tanwar) (Reg. No. 06-GG-1128)** (Ph. D Awarded in April, 2016)
- *"SYNTHESIS AND OPTOELECTRONIC CHARACTERIZATION OF HETEROCYCLIC LIGAND BASED METAL COMPLEXES"* **(Shri Bhagwan) (**Ph. D thesis submitted in Sept, 2016)
- *"SYNTHESIS AND CHARACTERIZATION OF LUMINESCENT MATERIALS"* **(Suman)**
- "STRUCTURAL STUDIES OF ALUMINATE PHOSPHOR MATERIALS" **(Sonika )**

## ❖ Educational qualifications

| Degree | Year of passing | University/ Institute |
|---|---|---|
| **Ph.D** | **2005** | Collaboration of Maharshi Dayanand University, Rohtak, India and Korea Institute of Energy Research , Daejon, South Korea |
| **M.Sc** | **2001** | Maharshi Dayanand University, Rohtak, Haryana |
| **B.Sc** | **1999** | Maharshi Dayanand University, Rohtak, Haryana |

## ❖ Career profile

| Designation | Institute served | Duration | |
|---|---|---|---|
| | | From | To |
| **Assistant Professor [Stage III]** | Department of Chemistry, M.D. University, Rohtak | 12July, 2015 | Till now |
| **Assistant Professor [Stage –II]** | Department of Chemistry, M.D. University, Rohtak | 12July, 2010 | 12July, 2015 |
| **Assistant Professor [Stage –I]** | Department of Chemistry, M.D. University, Rohtak | 14June, 2010 | 12July 2010 |
| **Assistant Professor [Stage –I]** | Pt. NRS Govt. College, Rohtak | 27Sept. 2008 | 14June, 2010 |
| **Assistant Professor [Stage –I]** | Government College, Jhajjar | 12July, 2006 | 27Sept. 2008 |
| **Lecturer (Assistant Professor)** | University Institute of Engineering and Technology (UIET) M. D. University, Rohtak | 14 Nov, 2005 | 12July, 2006 |
| **Lecturer (Guest)** | UIET (Earlier-Department of Engineering & Technology) M. D. University, Rohtak | 16Aug., 2005 | 25 Oct.,2005 |

## ❖ Training programmes

| Name of the Training programme | Arranged by the organization | Date of the event |
|---|---|---|
| **Short Term Course (STC) on Research Methodology** (All discipline) | HRDC-Kurukshetra University, Kurukshetra | 28.04.2016 to 04.05.2016 |
| **Refresher Course** Himachal Pradesh University, Shimla, Himachal Pradesh. | Himachal Pradesh University, Shimla, Himachal Pradesh. | 19.11. 2012 to 08.12. 2012 |
| **Training course** on "*Capacity Building for Lecturers of Higher Education*" conducted by HIPA, Gurgaon, Haryana. | HIPA, Gurgaon, Haryana | 29.06.2009 to 03.07. 2009 |
| **Training for Eduset** on "Script Writing" at NITTR, Chandigarh | NITTR, Chandigarh | 03 – 07 Nov. 2008 |
| **Refresher Course** Pt. NRS Govt. College, Rohtak | Pt. NRS Govt. College, Rohtak | 05 – 25 May 2008 |
| **Induction Training Programme** on "Induction Training Programme for newly recruited Government Lecturers at HIPA, Gurgoan, HR | HIPA, Gurgoan, Haryana. | 28 May to 15 June 2007 |
| **Orientation Course at** Himachal Pradesh University, Shimla, Himachal Pradesh. | Himachal Pradesh University, Shimla, Himachal Pradesh. | 01 – 30 April 2007 |

❖ **Project undertaken**

| Title of the project | Duration | Funding agency | Status |
|---|---|---|---|
| Growth and opto-electronic characterization of the phosphor materials | 2011-2014 | UGC, New Delhi | **Completed Jan 2015** |

❖ **Publications**

Book Authored – 02 and Book Chapter-02

| Name of book | Publisher | ISBN |
|---|---|---|
| Comprehensive Engineering Chemistry | I. K. International Publisher, New Delhi. | 9788189866556 |
| **Comprehensive Nuclear Chemistry & Radiochemistry** *Fundamental and Applications* | (releasing soon) | |
| **Developments in Organic Light Emitting Materials and Their Potential Applications** | ***"Advanced Magnetic and Optical Materials"*** Advanced Materials Book Series WILEY-Scrivener Publisher, USA | Book chapter-Accepted |
| **Recent Advancements in Luminescent Materials and Their Prospective Applications** | ***"Advanced Magnetic and Optical Materials"*** Advanced Materials Book Series WILEY-Scrivener Publisher, USA | Book chapter-Accepted |

❖ **Awards and distinctions**

➢ **Got the Best paper presentation Awards of *Chemical Sciences* in the Indian Science Congress Association, 2008, held at Vishakhapatnam, Andhra Pradesh.**

❖ **Assignment with in the M.D. University, Rohtak.**

- **Activities/Assignments**

➢ Hostel Warden of Boys Hostel -III (Himalaya) and Boys Hostel -V (Udiagiri) since Aug 2010.

➢ Worked as organizer and Treasurer in the National Conference on Advances in Chemical Sciences (ACS-2013) organized by Department of Chemistry, Maharshi Dayanand University, Rohtak, Haryana (Mar., 1-2, 2013).

➢ Worked as organizer in the National Conference on Thermodynamics and Biological System (NCTBS-2011) organized by Department of Chemistry, Maharshi Dayanand University, Rohtak, Haryana (Nov. 26-28, 2011).

➢ Worked as organizer in the SCIENCE CONCLAVE organized by Maharshi Dayanand University, Rohtak, Haryana (Dec., 2-3, 2011).

➢ Attended the Workshop on Current Perspectives in Advance Material Science organized by Deptt. of Physics, Pt. NRS Govt. College, Rohtak (Feb. 8-9, 2012).

➢ Attended the Workshop on Material Science organized by Deptt. of Physics, M. D. University, Rohtak (25$^{th}$ March, 2011). ETC.

## ➢ List of publications in various reputed journals

| Sr. No. | Title with name of author(s) as appearing in the publication | Journal name, Vol, Year, pages | Impact factor | ISSN / ISBN |
|---|---|---|---|---|
| **67** | *Preparation and optical characterization of $CaMgSi_2O_6:RE^{3+}$ ($RE^{3+}$ =Eu or Tb) nanophosphors for light emitting applications*<br>Devender Singh[*†], Vijeta Tanwar[†], Shri Bhagwan, K. C. Singh, Anura Priyajith Samantilleke, Bernabe Mari, Pratap Singh Kadyan and Ishwar Singh | **Submitted** | | |
| **66** | *Enhancement of down conversion emission properties of green $SrAl_2O_4:Eu^{2+},Ln^{3+}$ ($Ln^{3+}$=Dy / Y, Pr) nanophosphors*<br>**Devender Singh***, Vijeta Tanwar, Anura Simantilke, Bernanbe Mari, Pratap Singh Kadyan and Ishwar Singh | Submitted to<br>Journal of Materials Science: Materials in Electronics | 1.82 | ISSN : 0976-3961 |
| **65** | *Synthesis and enhanced luminescence characteristics of Ln(III)-complexes of fluorinated β-diketone and oxygen donor ancillary ligands for white OLEDs applications*<br>**Devender Singh***, Kapoor Singh, Shri Bhagwan, Raman Kumar Saini, Pratap Singh Kadyan and Ishwar Singh | **Communicated to**<br>Journal of Electronic Materials | 2.719 | ISSN: 0361-5235 |
| **64** | *Synthesis and Enhanced Luminescence studies of Eu(III) Ternary Complexes of β-diketones and heteroaromatic Monodentate Auxiliary Ligands*<br>**Devender Singh***, Kapoor Singh, Shri Bhagwan, Raman Kumar Saini, Pratap Singh Kadyan and Ishwar Singh | **Communicated**<br>Advanced Materials Letters | | |
| **63** | *Optical characteristics of sol-gel derived $M_3SiO_5:Eu^{3+}$ (M = Sr, Ca and Mg) nanophosphors for display device technology*<br>**Devender Singh***, Suman Sheoran, Shri Bhagwan and Sonika Kadyan | Journal of Materials Science: Materials in Electronics-<br>**Communicated** | 1.82 | ISSN : 0976-3961 |
| **62** | *Enhancement of down conversion emission properties of green $SrAl_4O_7:Eu^{2+},Ln^{3+}$ ($Ln^{3+}$=Y, Pr) nanophosphors*<br>**Devender Singh***, Vijeta Tanwar, Anura Simantilke, Bernanbe Mari, Pratap Singh Kadyan and Ishwar Singh | **Communicated to**<br>Electronic Materials letters | 1.569 | ISSN: 0957-4522<br>ISSN: 1573-482X |
| **61** | Optical Characteristics of Eu(III) doped $MSiO_3$ (M = Mg, Ca, Sr and Ba) Nanomaterials for White Light Emitting Applications<br>Devender Singh[*], Suman Sheoran Vijeta Tanwar and Shri Bhagwan, | Journal of Materials Science: Materials in Electronics-<br>2016-accepted.. ……. | 1.82 | ISSN : 0976-3961 |
| **60** | Synthesis and luminescent characteristics of $M_3Y_2Si_3O_{12}:Eu^{3+}$ (M = Ca, Mg, Sr and Ba) nanomaterials<br>Devender Singh[*†], Suman Sheoran | Journal of Materials Science: Materials in Electronics-<br>2016-online.. ……. | 1.82 | ISSN : 0976-3961 |
| **59** | ***Synthesis and optical characterization of color-tunable heterocyclic ligand based beryllium(II) complexes for white lighting applications***<br>***Devender Singh****, Shri Bhagwan, Vijeta Tanwar and Raman Kumar Saini* | Materials & Design<br>(2016)<br>100 , 245–253 | 3.997 | ISSN: 0264-1275 |
| **58** | *Synthesis and characterization of color-tunable mixed ligand based magnesium complexes for display device applications*<br>**Devender Singh***, Shri Bhagwan, Raman Kumar Saini and Vijeta Tanwar | Journal of Materials Science: Materials in Electronics<br>**2016, 27(6), 6464-6473** | 1.82 | ISSN : 0976-3961<br>eISSN : 0976-397X |
| **57** | Optoelectronic Properties of Color-Tunable Mixed Ligand Based Zinc Complexes for White Light Emitting Devices<br>**Devender Singh***, Shri Bhagwan, Raman Kumar Saini, Vijeta Tanwar and Vandna Nishal | Journal of Electronic Materials<br>**2016, 45, 4865-4874**<br>**DOI 10.1007/s11664-016-4721-0** | 1.64 | ISSN: 0361-5235 |

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|---|---|---|---|---|
| **56** | *Synthesis and luminescent characterization of $SrAl_4O_7:Eu^{2+},RE^{3+}$ (RE=Nd, Dy) nanophosphors for light emitting applications*<br>Devender Singh*[1, 2], Vijeta Tanwar[1], Anura Simantilleke[2], Bernabe Mari[3], Pratap Singh Kadyan[1] and Ishwar Singh[1] | Journal of Materials Science: Materials in Electronics<br>**2016, 27:5303-5308** | 1.82 | ISSN : 0976-3961<br>eISSN : 0976-397X |
| **55** | *Fabrication and Characterization of DSSCs Based on Nano-TiO2 Using azo dyes as Organic Photosensitizers*<br>Raman Kumar Saini†, **Devender Singh**†, Shri Bhagwan, Ishwar Singh and Pratap Singh Kadyan* | Journal of Nanoelectronics and Optoelectronics<br>**2016, 11(5), online……** | 0.55 | ISSN: 1555-130X (Print): EISSN: 1555-1318 |
| **54** | *Synthesis and Optoelectronic characterization of poly (toluene-co-perylene) copolymer for Light Emitting Application*<br>Raman Kumar Saini**, Devender Singh**, Shri Bhagwan, Sonika and Pratap Singh Kadyan | Nanotechnology-Asia<br>**2016, online …….** | U.R | ISSN: 1878-5352 |
| **53** | *Preparation and Enhanced Luminescence of Tb(III) Ternary Complexes of β-diketones and Monodentate Auxiliary Ligands*<br>**Devender Singh***, Kapoor Singh, Shri Bhagwan, Raman Kumar Saini, Pratap Singh Kadyan and Ishwar Singh | Cogent Chemistry<br>(2016), 2: 1134993<br>10 pages | U.R | ISSN: 0141-9382 |
| **52** | *Bis(5,7-dimethyl-8-hydroxyquinolinato)beryllium(II) complex as optoelectronic material*<br>**Devender Singh***, Kapoor Singh, Shri Bhagwan , Raman Kumar Saini, Pratap Singh Kadyan and Ishwar Singh | Journal of Luminescence<br>2016, 169, 9-15 | 2.69 | ISSN 0022-2313 |
| **51** | *Luminescent Characterization of $Eu^{2+}$ doped $BaMAl_{10}O_{17}$ (M = Ca/Mg or both) Blue Nanophosphors for White Light Emitting Applications*<br>**Devender Singh***, Vijeta Tanwar, Anura Simantilke, Pratap Singh Kadyan and Ishwar Singh | Journal of Materials Science: Materials in Electronics<br>(2015) 26: 9977–9984 | 1.82 | ISSN: 0957-4522 (print) ISSN: 1573-482X (elect.) |
| **50** | *Photoluminescent Characterization of $MAl_2O_4:Eu^{2+},Dy^{3+}$ (M = Ca /Ca+Ba /Ca+Mg) Blue Nanophosphors for White Light Display Applications*<br>**Devender Singh***, Vijeta Tanwar, Anura Simantilke, Bernanbe Mari, Pratap Singh Kadyan and Ishwar Singh | Advanced Materials Letters<br>**2016, 7**(1), 47-53 | 1.90 | ISSN : 0976-3961<br>eISSN : 0976-397X |
| **49** | *Rapid synthesis and enhancement of down conversion emission properties of green $SrAl_2O_4:Eu^{2+},Ln^{3+}(Ln^{3+}=Dy/Dy,Nd)$ nanophosphors*<br>**Devender Singh***, Vijeta Tanwar, Anura Simantilleke, Bernabe Mari, Pratap Singh Kadyan and Ishwar Singh | Journal of Electronic materials<br>2016, 45:2718-2724 | 1.64 | ISSN: 0361-5235 |
| **48** | *Rapid synthesis and enhancement in down conversion emission properties of $BaAl_2O_4:Eu^{2+},RE^{3+}(RE^{3+}=Y, Pr)$ nanophosphors*<br>**Devender Singh***, Vijeta Tanwar, Anura Simantilke, Bernanbe Mari, Pratap Singh Kadyan and Ishwar Singh | Journal of Materials Science: Materials in Electronics,<br>2016, 27:2260-2266 | 1.82 | ISSN: 0957-4522 (print) ISSN: 1573-482X (elect.) |
| **47** | *Optoelectronic characterization of trivalent europium doped $Gd_2O_3$ and $MGd_2O_4$ (M =Ba or Sr) nanophosphors for display device applications*<br>**Devender Singh***, Vijeta Tanwar, Shri Bhagwan, Suman Sheoran, Vandna Nishal, Anura Priyajith Samantilleke, Bernabe Mari and Pratap Singh Kadyan | Journal of Nanoelectronics and Optoelectronics<br>2016, 11, 305-310 | 0.55 | ISSN: 1555-130X (Print): EISSN: 1555-1318 |
| **46** | *Synthesis and optical characterization of europium doped $MY_2O_4$ (M = Mg, Ca, Sr) nanophosphors for solid state lightening applications*<br>**Devender Singh***, Vijeta Tanwar, Shri Bhagwan, Vandna Nishal, Suman Sheoran, Sonika Kadyan, Anura P. Samantilleke and Pratap Singh Kadyan | Indian Journal of Materials Science<br>2015, Article ID 845065, 8 pages | U.R | 2314-7490 (Online) |
| **45** | *Characterization and luminescent properties of zinc-Schiff base complexes for WOLED.*<br>Vandna Nishal, **Devender Singh**, Raman Kumar Saini, Vijeta Tanwar, Sonika and Pratap Singh Kadyan | Cogent Chemistry<br>(2015), 1: 1079291, 10 pages | U.R | ISSN: 0141-9382 |
| **44** | *Synthesis and Optical Characterization of Mixed Ligands Beryllium-Complexes for Display Device Applications* | International Journal of Optics 2015 (2015), Article ID | 0.509 | **ISSN:** 1687-9384 |

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|---|---|---|---|---|
| | Vandna Nishal, **Devender Singh**, Raman Kumar Saini, Vijeta Tanwar, Shri Bhagwan Sonika Kadyan, Ishwar Singh and Pratap Singh Kadyan | 691854, 7 pages | | **E-ISSN:** 1687-9392 |
| **43** | *Synthesis and optoelectronic characterization of heterocyclic ligands based Magnesium-complexes as light emitting materials*<br>Vandna Nishal, **Devender Singh**, Raman Kumar Saini, Shri Bhagwan , Vijeta Tanwar, Sonika, Sonia Verma, Ishwar Singh and Pratap Singh Kadyan | Der Pharma Chemica<br>2015, 7(9) :326-333 | 0.516 | |
| **42** | *Optoelectronic characterization of zinc complexes for display device applications*<br>Vandna Nishal, **Devender Singh**, Raman Kumar Saini, Shri Bhagwan, Vijeta Tanwar, Sonika, Ritu Srivastava and Pratap Singh Kadyan | Journal of Materials Science: Materials in Electronics,<br>2015, 26 (9), pp. 6762-6768 | 1.82 | ISSN: 0957-4522<br>ISSN: 1573-482X (elect.) |
| **41** | *Optoelectronic characterization of $Eu^{3+}$ doped $MLa_2O_4$ (M = Sr, Ca, Mg) nanophosphors for display devices*<br>**Devender Singh**, Vijeta Tanwar, Anura P. Samantilleke and Pratap Singh Kadyan | Cogent Physics<br>2015, 2: 1104200, 13 pages | U.R | |
| **40** | *Photovoltaic characterization of dye sensitized solar cells based on $TiO_2$ nanoparticles using triarylmethane dyes as photosensitizers*<br>Raman Kumar Saini, **Devender Singh**, Shri Bhagwan, Sonika, Ishwar Singh and Pratap Singh Kadyan | Journal of Nanoelectronics and Optoelectronics<br>2016, 11,(3) 175-182. | 0.55 | ISSN 1555-130X (Print): EISSN: 1555-1318 |
| **39** | *Photovoltaic analysis and effect of electrolyte on nano-titania based DSSCs using Patent blue V dye*<br>Raman Kumar Saini, **Devender Singh**, Shri Bhagwan, Sonika, Ishwar Singh and Pratap Singh Kadyan | Der Pharma Chemica,<br>**2015, 7(8), 162-169** | 0.516 | ISSN 0975-413X |
| **38** | *Photovoltaic characterization of nano-titania based DSSCs using xanthene dyes*<br>Raman Kumar Saini, **Devender Singh**, Shri Bhagwan, Sonika, Ishwar Singh and Pratap Singh Kadyan | Research Journal of Pharmaceutical, Biological and Chemical Sciences (RJPBCS) 2015, 6(5), 1108-1116. | 0.209 | ISSN 0975-8585 |
| **37** | *Heavy metals in Wheat Grains of Haryana (India) and their Health Implications.*<br>Sonia Verma, Sanjiv K. Yadav, Sudesh Yadav, **Devender Singh*** and Ishwar Singh* | Communicated<br>Journal of chemical and pharmaceutical research, 2015, 7(10):342-351. | 0.751 | ISSN: 0975-7384 |
| **36** | *Evaluation of Serum Metal Profile in Relation to Biri Smoking using ICP-MS*<br>Sonia Verma, Sudesh Yadav*, **Devender Singh**, Partap Singh Kadyan and Ishwar Singh | Environmental Analytical Chemistry 2015<br>95, 14, 1385–1394 | 1.295 | **ISSN** 0306-7319 (Print), 1029-0397 (online) |
| **35** | *Characterization of Near Infrared Light Emitting (benzene-co-pentacene) copolymer.*<br>Raman Kumar Saini, **Devender Singh**, Shri Bhagwan, Sonia Verma, Sonika and Pratap Singh Kadyan | *Der Pharma Chemica, 2014, 6, (4), 256-260* | 0.75 | ISSN 0975-413X |
| **34** | *Synthesis and optoelectronic characterization of mono(5,7-dichloro-8- hydroxyquinolinato)bis(8-hydroxyquinolinato)aluminium(III) complex.*<br>Kapoor Singh, **Devender Singh**, Amit Kumar, Shri Bhagwan, Raman Kumar Saini, Pratap Singh Kadyan, Ritu Shrivastva and Ishwar Singh* | Advanced Science Letter,<br>2014, 20, 1396-1400 | **1.253** | ISSN/eISSN 1936-6612/1936-7317 |
| **33** | *Enhanced luminescence from the β-diketone based europium complexes*.<br>Kapoor Singh, Raman Kumar Saini, **Devender Singh**, Pratap Singh Kadyan, Shri Bhagwan, Ritu Shrivastva and Ishwar Singh* | Advanced Science Letter,<br>2014, 20, 1475-1478 | **1.253** | ISSN/eISSN 1936-6612/1936-7317 |
| **32** | *Synthesis and Optical Characterization of Terbium Doped $M_2SiO_4$ Nanophosphors.*<br>**Devender Singh***, Vijeta Tanwar, Shri Bhagwan, Anura P. Simantilleke, Ishwar Singh and Pratap Singh Kadyan | Advanced Science Letter, 2014<br>20, 1531-1534 | **1.253,** | ISSN/eISSN 1936-6612/1936-7317 |
| **31** | *Synthesis and luminescent characterization of $MAlO_3:Eu^{3+}$ red nanophosphors.*<br>**Devender Singh***, Vijeta Tanwar, Shri Bhagwan, Sonika, | Advanced Science Letter,<br>2014 , 20, 1726-1729 | **1.253** | ISSN/eISSN 1936-6612/1936- |

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|---|---|---|---|---|
| | Pratap S. Kadyan, Anura P. Simantilleke and Bernabe Mari | | | 7317 |
| **30** | *A new zinc-schiff base complex as an electroluminescent material.*<br>Vandna Nishal, **Devender Singh**, Amit Kumar, Vijeta Tanwar, Ishwar Singh, Ritu Srivastava and Pratap Singh Kadyan* | Journal of Organic Semiconductors,<br>2014, 2(1), 15-20 | U.R | ISSN/ E-ISSN 2160-6099/ 2160-6110 |
| **29** | *Synthesis and characterization of soluble (Benzene-co-perylene) copolymer.*<br>Raman Kumar Saini*, **Devender Singh**, Shri Bhagwan, Sonika and Pratap Singh Kadyan | Chemical Science Transactions, 2014, 3(3), 1193-1199. | 0.705 | ISSN/E-ISSN 2278-3458/ 2278-3318 |
| **28** | *Red emitting $MTiO_3$ (M = Ca or Sr) phosphors doped with $Eu^{3+}$ or $Pr^{3+}$ with some cations as co-dopants.*<br>B. Mari, K.C. Singh, Paula Cembrero-Coca, Ishwar Singh, **Devender Singh**, Subash Chand | Display, 2013, 34(4), 346–351 | **1.201** | 0141-9382 |
| **27** | *Synthesis, Characterization and Electroluminescent Characteristics of Mixed-Ligand Zinc(II) Complexes.*<br>Vandna Nishal, Amit Kumar, Pratap Singh Kadyan, **Devender Singh**, Ritu Srivastava, Ishwar Singh, Modeeparampil N. Kamalasanan | Journal of Electronic Materials, 42(6), 2013, 973-978 | **1.64** | 0361-5235 |
| **26** | *Tris[2,4,6-(2-hydroxy-4-sulhpo-1-naphthylazo)]-s-triazine, trisodium salt as a spectrophotometric Reagent for microdetermination of Lead(II) in alloys, environmental and biological samples.*<br>Pratap Singh Kadyan*, **Devender Singh**, Sapana Garg, Sonia Verma and Ishwar Singh | Research Journal of Chem. Environ., 17(3), 2013, 53-58. | **0.636.** | **E-ISSN No. 2278-4527** |
| **25** | *Selective Determination of Uranium Using 1-(2-Quinolylazo)-2,4,5-Trihydroxybenzene as a Colorimetric Reagent.*<br>Pratap Singh Kadyan*, Sapana Garg, **Devender Singh** and Sonia Verma | Chemical Science Transaction, 2(2),2013, 435-440. | 0.705 | ISSN/E-ISSN 2278-3458/ 2278-3318 |
| **24** | *Spectrophotometeric Determination of Zinc (II) in Food-Stuffs and Biological Samples with Tris-[2,4, 6-(2-Hydroxy-4-Sulpho-1-Naphthylazo)]-S-Triazine, Trisodium Salt.*<br>Sapana Garg, **Devender Singh**, Sonia Verma and Pratap Singh Kadyan* | Journal of Chemical, Biological and Physical Sciences, 2(4), 2012, 1746-1752. | 0.703 | **e- ISSN: 2249 –1929** |
| **23** | *Micro-determination of Vanadium using 1-(2-Quinolylazo)-2,4,5-trihydroxybenzene as an Analytical Reagent .*<br>Pratap Singh Kadyan, **Devender Singh**, Ashok Sharma, Poonam, Sonia Verma and Ishwar Singh* | Der Pharma Chemica, 4(4), 2012, 1577-1581. | 0.516 | 0975-413X |
| **22** | *Enhanced Red Emission from Europium Doped Yttrium Oxide Nano Phosphor.*<br>**Devender Singh***, Pratap Singh Kadyan, Vijeta Tanwar, Vandna Nishal, Sang-Do Han and Ishwar Singh | Asian Journal of Chemistry, 24(12), 2012, 5873 – 5875 | **0.27** | 0970-7077 |
| **21** | *Spectrophotometric determination of trace cadmium in tobacco with tris-[2,4,6- (2-hydroxy-4- sulpho-1-naphthylazo)]-s-triazine, trisodium salt*<br>Pratap Singh Kadyan, **Devender Singh** and Ishwar Singh | Asian Journal of Chemistry, 24(12), 2012, 5876-5878. | **0.27** | 0970-7077 |
| **20** | *Rapid gel synthesis and optical characterization of the $Y_{2-x}O_3$:$xTb^{3+}$ nano phosphor .*<br>**Devender Singh***, Ishwar Singh, Pratap Singh Kadyan, Subash Chand, Vijeta Tanwar and Sang Do Han | Archives of Applied Science Research, 4 (1), 2012, 518-523. | U.R | 0975-508X |
| **19** | *Micro-determination of palladium using 2, 6-bis(1-hydroxy-2-naphthylazo)pyridine as an analytical reagent.*<br>Pratap Singh Kadyan, **Devender Singh** and Ishwar Singh* | Asian Journal of Chemistry, 24(10) 2012, 4594-4596. | **0.27** | 0970-7077 |
| **18** | *Spectrophotometric Determination of Silver with 1-(2-Quinolylazo)-2,4,5-trihydroxybenzene.*<br>Pratap Singh Kadyan, **Devender Singh**, Ashok Sharma, Poonam, Sonia Verma and Ishwar Singh* | Journal of Indian Council of Chemists, 28(2), 2011. | U.R | 0971-5037 |
| **17** | *1-(2-Quinolylazo)-2,4,5-trihydroxybenzene as Spectrophotometric Reagent for Micro-determination of* | Der Pharma Chemica, 3(6), 2011, 70-74. | 0.516 | 0975-413X |

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| | *naphthylazo)pyridine as a spectrophotometric method for determination of phosphate and citrate.*<br>Ishwar Singh, Ashok K. Sharma, Sanjiv K. Yadav and **Devender Singh** | (3&4**)**, **2003**, 1699-1702. | . | |
| **2** | *Synthesis and analytical applications of a new heterocyclic bis-azo dye: 2,6-Bis(7-hydroxyphenanthryl-8-azo)pyridine*<br>Ishwar Singh, Ashok K. Sharma, Sanjiv K. Yadav and **Devender Singh** | Asian journal of chemistry, **2003**, 15(2), 1069-1074. | 0.27 | ISSN: 0970-7077 |
| **1** | *Synthesis and analytical studies of a new bis-azo dye: 2,6-Bis(9-hydroxyphenanthryl-10-azo)pyridine*<br>Ishwar Singh, Ashok K. Sharma, Sanjiv K. Yadav, **Devender Singh** and Sang Do-Han | Asian journal of chemistry, **2003**, 15(1), 185-190. | 0.27 | ISSN: 0970-7077 |

## ➢ Participation and papers presented in conference/seminar/workshop/symposia etc.

| Sr. No. | Title of the paper presented | Title of the conference/ seminar etc & organizer | Date of event | Conferences/ Other details |
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| **25** | Optical Characterization of Trivalent Europium Doped $M_2SiO_4$ (M=Sr, Ca, Mg) Nanophosphors for Optoelectronic Applications | IUMRS-ICEM2016 held at Suntec Singapore | 4-8 July, 2016 | International |
| **24** | Synthesis and luminescent characterization of $CaMgSi_2O_6:RE^{3+}$ ($RE^{3+}$ =Eu or Tb) nanophosphors | International Conference on Materials Science & Technology held at University of Delhi, Delhi, India | 1-4 march, 2016 | International |
| **23** | Synthesis and Optical Characteristics of Color-Tunable Mixed Ligand Based Zinc Complexes for Organic Light Emitting Devices | NCOSC-2016, Department of Chemistry, Guru Jambheswar University of Science and Technology, Hisar, Haryana | 17-18 Feb, 2016 | National |
| **22** | Enhanced optical characterization of the terbium (III)-complexes of β-diketone and ancillary ligands | Presented at International conference held at Birla Institute of Technology and Science, Pilani | 16-18 Oct. 2015 | International |
| **21** | Synthesis and improved optical properties of the β-diketone based Eu(III)-complexes | Presented at National conference held at Gurukul Kangri Vishvidhalaya, Haridwar | 28-30 sept 2015 | National |
| **20** | Preparation and optical characterization of the blue-green nanophosphors | NSAS held at Jamia Humdard University, New Delhi | Feb, 2015 | National |
| **19** | Synthesis and Spectral Characterization of Europium doped $MY_2O_4$ phosphors | Indian Science Congress, hled at University of Mumbai, Maharastra | 3-7 Jan, 2015 | National |
| **18** | Synthesis and Optical Characterization of Terbium Doped $M_2SiO_4$ Nanophosphors | Presented in the National conference ( NCNRE-2014) held at Jamia Milia Ishlamia University, New Delhi | 28-29 April, 2014 | National |
| **17** | Synthesis and characterization of Zinc-schiff base complex as a blue electroluminescent material | Presented in the Indian Science Congress (ISCA), Jammu University, Jammu. | 3-7 Feb, 2014, | National |
| **16** | Synthesis and optoelectronic Characterization of $SrAl_4O_7$: $Eu^{2+}$, $(Dy, Y)^{3+}$ nano phosphor | Presented in the National conference on **Advances in Chemical Sciences** (ACS-2013), held at Department of Chemistry, Maharshi Dayanand University, Rohtak, Haryana. | 1-2 Mar, 2013 | National |
| **15** | Synthesis and Optoelectronic Characterization of the Green Nano Phosphor | Presented in the 31st Annual Conference of Indian Council of Chemists (ICC), held at Department of Chemistry, Saurashtra University, Rajkot, Gujrat. | 26-28 Dec., 2012 | National |
| **14** | Synthesis and Characterization of the $SrLa_2O_4$:Eu phosphor | Presented in National Conference on "Global Challenges: New Frontiers in Chemical Sciences" (GC-NFCS-2012), held at Kurukshetra University, Kurukshetra. | 22-23Sep, 2012, | National |

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| **13** | Micro-determination of Lead(II) in Environmental and Biological samples | Presented in the National Seminar on Environmental Pollution and its Mitigation Strategies, held at JNU, New Delhi. | 28-29 Mar, 2012, | National |
| **12** | Enhanced Red emission from europium doped Yttrium oxide Nano phosphor | Presented in the International Conference on Global Trends in Pure & applied Chemical Sciences (ICGTCS-2012), held at Udaipur, India | 3-4 Mar, 2012 | International |
| **11** | Determination of Uranium Using a Heterocyclic Azo Dye as a Colorimetric Reagent | Presented in the National conference on SETMRC, held at Ujjain, M.P. | 25-26 Nov 2011 | National |
| **10** | Synthesis and optical characterization of nano ZnS phosphor | Presented in the Indian Science Congress, SRM University, Chennai | 3-7 Jan 2011 | International |
| **9** | Synthesis and Optical properties of red nano $(Y_{1-x}Eu_x)_{2-y}K_yO_{3-y}$ phosphor | Presented in the Indian Council of Chemist, Punjab University, Chandigarh | Dec 2010 | National |
| **8** | Synthesis of green (ZnS:Cu,Cl) electroluminescent phosphor for thick-film EL devices | Presented in the Indian Science Congress, KERELA, Jan 2010 | 3-7 Jan, 2010 | National |
| **7** | Synthesis and Optical Characterization of Nanocrystalline $Y_2O_3:Tb^{3+}$ Phosphor By Novel Method | Presented in the 27$^{th}$ Annual conference of Indian Council of Chemist held at Haridwar | Dec, 2008 | National |
| **6** | Preparation and Optical Properties of Green Eu-Doped Long Persistent Aluminate Phosphor | 95$^{th}$ Indian Science Congress, Visakhapatnam, Andhra Pardesh | 3-7 Jan, 2008 | National |
| **5** | Synthesis and optical characterization of nano $(Y_{1-x}Eu_x)_2O_3$: MX phosphor | International Workshop on Advanced Materials and Technologies for Nano and Oxide Electronics,IIT, Delhi | Feb. 2007 | International |
| **4** | A new method for the preparation of nano long persistent aluminate phosphor and their optical properties | 18th Annual General Meeting of the Materials Research Society of India (MRSI), NPL, New Delhi | Feb. 2007 | National |
| **3** | Synthesis and luminescence characterization of Eu-doped $Y_2O_3$ phosphor by improved combustion method | National Symposium on Modern Trends in Chemical Sciences, KU, Kurukshetra | Oct, 2006 | National |
| **2** | Synthesis and optical characterization of Eu-doped $Y_2O_3$ and $[(Y,Gd)_2O_3]$ phosphor by improved method | ASID 06, New Delhi | Oct, 2006 | International |
| **1** | Micro-determination of copper in foodstuffs and biological samples with the help of a new bis-azo dye. | Presented in '90th Indian Science Congress' held at Banglore | Jan 2003 | National |