

## CURRICULUM VITAE

**Dr. Harish Kumar**

**Associate Professor**

**Dept. of Chemistry, School of Chemical Sciences,  
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### **ACADEMIC PROFILE**

- Ph.D. (Electrochemistry; 2005) from M.D. University, Rohtak, Haryana.
- M. Sc. (Physical Chemistry) from M.D. University, Rohtak, Haryana. (Division 1<sup>st</sup>, 2000). Topper in Physical Chemistry MDU, Rohtak.
- B. Sc. from Jat College affiliated to M.D. University, Rohtak, Haryana. (Division 1<sup>st</sup>, 1998).

### **EXPERIENCE [Teaching & Research]: 15 Years**

- Working as **Associate Professor**, Dept. of Chemistry, School of Chemical Sciences, Central University of Haryana, Mahendergarh since August 14<sup>th</sup> 2018 to till date.
- Worked as **Assistant Professor**, Dept. of Chemistry, Ch. Devi Lal University, Sirsa, from 24 Sept., 2004 to 13.08.2018.
- Worked as a **Lecturer** in Israna Engg. College Panipat, from 01 April 2004 to 23 Sept 2004.
- Worked as a **Guest Faculty** in the Department of Chemistry M.D.U. Rohtak, from 29<sup>th</sup> August 2003 to 31 March 2004.
- Worked as a **Lecturer** for B.Sc. Classes at Jat College Rohtak, from 01 Jan. 2003 to 28 August 2003.

### **ADMINISTRATIVE WORK/DUTY PERFORMED**

- Worked as Incharge, Dept. of Chemistry, CLDU, Sirsa for more than 10 years.
- Independently developed 03 M.Sc. Labs, 01 Research Lab and 01 Central Instrumentation lab.
- Organized National Science Day on 28<sup>th</sup> Feb. 2013, 2014 and 2015.
- Organized a National Conference on Emerging Trends in Chemical Science & Tech.
- Organized different Extension Lecture Series.
- Member of Central Purchase Committee of CDLU, Sirsa.
- Acted as Member of different Inspection Committee.
- Acted as Member of Selection Committee at CDLU, Sirsa.
- Acted as Programme Officer, NSS, CDLU, Sirsa.
- Acted as Nodal Officer, Election and Nodal officer, Aadhar Card.

### **MEMBER OF ACADEMIC BODIES**

- Member of PGBOS & R (Post Graduate Board of Studies & Research) : 11 years
- Member of UG BOS (Under Graduate Board of Studies) : 05 years
- Member of DRC (Dept. Research Committee) : 10 years
- Course Coordinator M. Phil. Chemistry (Distance mode)
- Incharge, Chemistry Department, CDLU, Sirsa.
- Nodal Officer, Election, Ch. Devi Lal University, Sirsa.
- Programme Officer, NSS Unit, Ch. Devi Lal University, Sirsa.
- Member of different Inspection Committees.
- Member of different Selection Committees.
- Organized a National Conference and acted as **Organizing Secretary and Co-Convener** of National Conference **Emerging Trends in Chemical Science & Technology**.
- Member of Innovative Proposal Committee.

- Member of Ph.D. Admission Committee.
- Appointed as Observer for the PCP classes of M. Phil. Chemistry at Jat College, Rohtak.
- Member of Teaching & Learning & Evolution Committee.
- Member of Governance & Leadership Committee.
- Member of Literacy Club and Fine Art Club.
- Member of Organizing Committee of National Workshop on IPR, CDLU, Sirsa.

## RESEARCH AREAS

- Electrochemistry, Electrochemical sensor & biosensors
- Corrosion of metals and their alloys
- Nanotechnology and Composite materials
- Material Chemistry

## RESEARCH SUPERVISION

M.Sc. Dissertation	27 (Awarded)
M. Phil.	42 (Awarded)
Ph.D.	09 (Awarded) + 02 (Thesis submitted)
Ph.D. pursuing	01

## RESEARCH FUNDING

Major Research Projects Completed : Two

- 1) Study of vapour phase corrosion inhibitors for mild steel under atmospheric condition” of Rs. 11.05 lac of UGC New Delhi. (Completed)
- 2) Electrochemical Biosensors for the Detection of Biological Weapon of Rs. 22.52 lac of DRDO, New Delhi. (Completed) ERIP/ER/0903768/M/01/1462 dated 11.12.2015
- 3) Industrial Consultancy Project: One (Two year duration, ongoing)

## SCHOLASTIC ACHIEVEMENTS

- **Best Paper Awarded** in the National Conference organized by MDU Rohtak on 7<sup>th</sup> March, 2018.
- **Best Paper Award** by the Conference World in International Conf. on Recent Innovations in Sciences, Management, Education & Tech. organized by JCD Vidyapeeth, Sirsa on 27<sup>th</sup> August, 2016.
- **Awarded MC-IRSES International Research Staff Exchange Scheme (IRSES)**, Worked on construction & working of CIGS-based solar cells in the Dept. de Fisica Aplicada, Universitat Politecnica de Valencia (UPV), Spain under Nano CIS project entitled DEVELOPMENT OF A NEW GENERATION OF CIGS-BASED SOLAR CELL funded by the European Union during the period 02.03.15 to 01.04.15.
- **Awarded Summer Research Fellowship -2012** by Indian Institute of Science, IISC, Bangalore from 01<sup>st</sup> May to 26<sup>th</sup> June 2012.
- Qualified **NET/ L. S.** (Lectureship) Exam. **Consecutive five times**, conducted by **CSIR-UGC, New Delhi** held in Dec. 2000, June 2001, Dec. 2001, June 2002 and Dec. 2002.
- Qualified **GATE (Graduate Aptitude Test of Engg.)** held by IIT Kanpur in Feb. 2001.
- **Programme Officer (Founder)**, NSS Unit, Ch. Devi Lal University, Sirsa.
- **Course Coordinator**, M. Phil Chemistry, Distance Mode.

- **Nodal Officer, Election**, Ch. Devi Lal University, Sirsa.
- **Incharge**, Dept. of Chemistry, Ch. Devi Lal University, Sirsa.

## MEMBERSHIP OF ASSOCIATIONS/SOCIETIES

1. Member of Editorial Board of Asian J. of Expt. Chemistry.
2. Member of Editorial Board, J. of Chemistry & Chemical Sciences.
3. Reviewer of J. of Electrochem. Society.
4. Reviewer of Arabian J. of Chemistry.
5. Life Member of Indian Science Congress Association (Membership No. L-23023)
6. Life Member of Indian Council of Chemists (Membership No. LF/1799)
7. Life Member of The Indian Thermodynamic Society (Membership No. LM-323)

## PUBLICATIONS

### BOOK PUBLISHED: 04

- **Text Book of Physical Chemistry** by Prentice Hall India, N. Delhi. (1<sup>st</sup> edition 2010 ISSN no. 978-81-203-4088-6, 2<sup>nd</sup> edition 2015)
- **Advanced Physical Chemistry** by Laxmi Pub. House, N. Delhi.
- **Chemistry Special -1** by Laxmi Pub. House, New Delhi.
- **Antiscalant & Corrosion Inhibitor for Cooling Water System** by LAP, Lambert Academic Publishing, Germany. ISSN No. 978-3-659-35199-0 Year 2013.

### BOOK CHAPTERS (06)

- Management of New Emerging Wastes of Aluminium Metal by protecting it from Corrosion Proc. of Intern. Conf. on Energy-Water-Waste Nexus for Environ. Management, Dept. of Energy & Environ. Sci., CDLU, Sirsa from 28-30 Jan., 2012.
- Reverse Micellar Synthesis, Characterization & Antibacterial Study of Nickel Nanoparticles Harish Kumar, Renu Rani & Rajkumar Salar Proc. of Internat. Conf. "Advances in Control, Chemical Engineering, Civil Engg. & Mechanical Engg." held at Tennrife Island, Spain during 30 Nov. 02 Dec 2010, pp. 88-94 (ISBN: 978-960-474-251-6)
- Separation of 16 Environment Pollutants Polymeric Aromatic Hydrocarbons using Micellar Capillary Electrophoresis Harish Kumar & Renu Malik Proc. National Conference on Environment Degradation: Effects, challenges and Remedies 25-27 Feb., 2010, JCD Vidyapeeth, Sirsa.
- Tempelate Synthesis and Characterization of Cryptand. Proc. of National seminar on Recent Trends in chemistry, during 21-22 Jan. 2009, Panjabi University, Patiala.
- Polymeric anionic surfactant for Micellar Capillary Electrophoresis: Separation of 16 priority pollutants. Proc. of National Conference on Environmental Degradation-Challenges and Remedies, 13-14 March, 2008, Maharashi Markandeshwar University, Mullana p. 292.
- Nanotechnology Quantum Dots (QDS) in Biological Labeling. Harish Kumar & Vikas Proc. of National Conference on Information Technology: Setting Trends in Modern Era, 8th Annual Conference of Indian Society of Information Theory & Applications (ISITA), Dec. (2007) p. 266.

### RESEARCH PUBLICATIONS

Papers Published:	92	Conferences/Seminars/workshops attended:	56
Review Articles :	03	Delivered Invited Talks:	06
Monograph:	01	Judgment of Poster Sessions:	02
Total Impact Factor:	68.9	Citation Index :	1104
Highest Impact Factor:	04.3	h-index :	12

## **SELECTED PUBLICATIONS**

- 1) Influence of Sodium hexameta phosphate (SHMP) antiscalant on the corrosion of carbon steel in cooling water systems.  
Harish Kumar & R S Chaudhary  
**Ind. J. Chem. Tech.** 17(5) (2010) pp. 181-190 (IF: 0.491) ISSN: 0971-457X  
(Scopus & ICI)
- 2) Synergistic effect of some antiscalants as Corrosion inhibitor for Industrial Cooling Water System.  
Harish Kumar, S. Yadav, R. S. Chaudhary & Dheeraj Kumar  
**J. of Applied Electrochem.** 39(8) 2009 1339-47. IF: 2.223. ISSN: 0021-891X  
(Scopus and WoS)
- 3) Biosensor based on Enzyme coupled PVC reaction cell for Electrochemical Measurement of serum total Cholesterol.  
Vikas, Harish Kumar & C. S. Pundir  
**Sensors & Actuators B: Chemical**, 136 (2009) 235-241 (IF: 4.758) ISSN: 0925-4005  
(Scopus)
- 4) Influence of Trisodium phosphate (TSP) antiscalant on the corrosion of Carbon Steel in Cooling Water Systems  
Harish Kumar, Vishal Saini, Dheeraj Kumar & R. S. Chaudhary  
**Ind. J. Chem. Tech.** 16, Sept. (2009) 401-410 (IF: 0.491) ISSN: 0971-457X  
(Scopus & ICI)
- 5) Refining of Psophocarpustetragonolobus (L.D.C.) Seed Oil  
Anil Duhan, Yeshwant, T R Ahlawat, K S Ahlawat & Harish Moudgil  
**Environment & Ecology**, 27(3), (2009) 1146-1152 (ISSN: 0970-0420) (ICI listed)
- 6) Novel Fabrication of Cellulose Acetate Membrane Bound Carbon Electrode for Bi-enzymatic determination of Lactate.  
Vikas, Harish and D. S. Ahlawat  
**Sensors & Transducers J.**, 73(11), (2006) pp. 804-809. (IF: 0.47) ISSN: 1726-5749 (Scopus)
- 7) Influence of Sodium tripolyphosphate (STPP) antiscalant on the Corrosion of Carbon Steel in Cooling Water Systems.  
Harish Kumar & R. S. Chaudhary  
**Bull. Electrochem.** 22 (07), (2006) 289-296. ISSN: 0256-1654 (IF: 0.33) (Scopus & ICI)
- 8) Technique to determine antiscalants efficiency for Industrial Cooling Water System.  
R S Chaudhary & Harish Kumar  
**Ind. J. Chem. Tech.** 11, Nov. (2004) 777-782 (IF: 0.491) ISSN: 0971-457X  
(Scopus & ICI)
- 9) Inhibitors for controlling the Corrosion of high Nitrogen steels in Hydrochloric acid solution.  
R. S. Chaudhary, N. K. Handa, Harish Kumar & S. Chowdhary  
**J. Electrochem. Soc. India**, 52(2) (2003) 64-71. (IF: 2.76) ISSN: 0013-466X  
(Scopus & WoS)
- 10) Inhibitors for controlling the Corrosion of Brass in Nitric acid solution.  
**Trans. SAEST** 38 (2003) pp. 97-104. ISSN: 0036-0678 (IF : 0.31)  
R. S. Chaudhary, Rashmi Arora & Harish Kumar
- 11) Corrosion Characteristics of Nitrogen containing steels.  
R. S. Chaudhary, N. K. Handa, Harish Kumar & S. Chowdhary  
**Bull. Electrochem.** 18(10), (2002) p. 461 ISSN: 0256-1654 (IF: 0.33) (Scopus & ICI)
- 12) Inhibitive action of Myristyl dimethyl benzyl ammonium chloride towards 70/30 brass alloy in 3N HNO<sub>3</sub> Solution.  
**Trans. SAEST** 37(3&4), (2002) pp. 107-113. ISSN: 0036-0678.  
R. S. Chaudhary, Rashmi Arora & Harish Kumar

- 13) Non-enzymatic Amperometric sensor for the detection of Hydrazine as an Environment Pollutant  
Harish Kumar and Neetu  
**Research J. of Chemistry and Environ.**, 21 (6) June (2017) pp. 01-07 ISSN: 0972-0626 **IF: 0.636** (Scopus)
- 14) Synthesis, characterization, and antibacterial activities of chromium oxide nanoparticles Against *klebsiella pneumonia*  
Poonam Sangwan and Harish Kumar  
Asian J. of Pharmaceutical & Clinical Res, 10(2), 2017 pp. 01-04. ISSN: 2455-3891 **IF 0.48**. (Scopus)
- 15) Corrosion inhibition of mild steel by using Hexylamine as corrosion inhibitor in acidic medium  
Hari Om, Harish Kumar, Pradeep Kumar, Vikas & Anjoo Bala  
Der Pharma Chemica, 2016, 8(19) pp. 268-278. ISSN 0975-413X (**IF : 0.21**) H=16 (Scopus)
- 16) Enzyme based Electrochemical biosensor for food safety: A Review  
Harish Kumar and Neelam Rani  
**Nanobiosensors in Disease Diagnosis**, Vol. 5, 2016 pp. 29-39. ISSN: 2230-6153 **IF: 2.077**
- 17) Antibacterial activity of copper oxide nanoparticles against gram-negative bacterial strain synthesized by reverse micelle route  
Renu Rani, Harish Kumar, Raj Kumar Salar, Sukhvinder Singh Purewal  
Int. J. Pharmaceutical Res. Development, 06(01), (2014) pp. 72-78. **IF 2.01** ISSN: 0974-9446 (ICI Listed)
- 18) Development of Biosensor for the detection of Biological Warfare Agents: Its Issues & Challenges  
Harish Kumar and Renu Rani  
**Science Progress**, 96(3), (2013) pp. 294-308 ISSN: 0036-8504, **IF: 1.20**  
Doi:10.3184/003685013X13777066241280 (Scopus)
- 19) Thermodynamic study of binary liquid mixtures of toluene and 1,2-dichloroethane at T = 303.15 K  
Harish Kumar, Dheeraj Kumar & Suman Yadav  
**Physical Chemistry-An Indian J.**, 8(2), (2013) 41-50. ISSN: 0974-7524. **IF0.35** (UGC Listed)
- 20) Thermodynamic study of binary liquid mixtures of Benzene and 1,2-dichloroethane at T = 303.15 K  
Harish Kumar & Dheeraj Kumar  
**Intern. J. of Thermodynamics** 16(3) Sept. (2013) 123-131. (**IF: 1.08**) ISSN :1301-9724. (Scopus)
- 21) Development of Li-Ion Batteries from Micro-structured to Nanostructured Materials: its Issues and Challenges  
Harish Kumar, Sundar Rajan & Ashok K. Shukla  
**Science Progress** 95(3) (2012) pp. 283-314. ISSN: 0036-8504, **IF: 1.20**  
Doi:10.3184/003685013X13777066241280 (Scopus)
- 22) Influence of 1-Hydroxyethylenedine-1,1-diphosphonic acid (HEDP) antiscalant on the corrosion of carbon steel in cooling water systems.  
Harish Kumar & R S Chaudhary  
**J. of Indian Chemical Soc.** 88 Oct. 2011 pp. 1589-1598. (**IF:0.145**) ISSN :0019-4522 (UGC listed)

- 23) Studies on thermodynamic properties of binary mixtures of acrylonitrile with aromatic ketones at T = 308.15K  
Harish Kumar & Savita Chahal  
**J. of Sol. Chemistry**, 40, (2011) pp. 165-181. (IF: 1.256) ISSN :0095-9782  
DOI 10.1007/s10953-010-9645-3 (Scopus)
- 24) Effect of Dopant Concentration on Structural, Optical and Magnetic Properties of Zn<sub>1-x</sub>Ni<sub>x</sub>O Nanocomposites  
Dharam Veer, Ramher Dixit and Harish Kumar  
Chemical Science Transaction, 7(3), 2018 pp. 464-476. ISSN : 2278-3458 IF : 0.875  
DOI:10.7598/cst2018.1507 (Thomson Reuters)
- 25) Current Progress in Electrochemical Biosensors: Its Issues and Challenges  
Harish Kumar  
Avid Science Monograph Series, Avid Science, Hyderabad. 2017 pp. 01-33. ISSN: 978-93-86337-57-3.
- 26) Synthesis and Characterization of Pure Co and Ni doped CoO / SiO<sub>2</sub> Nanocomposites Using Sol-gel Technique  
Harish Kumar, Dharm Veer and Ram Mehar Dixit  
Chemical Science Transaction, 7(1), 2018 pp. 95-100 ISSN : 2278-3458 IF : 0.875  
DOI:10.7598/cst2018.1462 (Thomson Reuters)
- 27) Fabrication of Novel Amperometric sensor for the detection of Zinc metal as an Environment Pollutant  
Harish Kumar and Neetu  
Chemical Science Transaction, 7(1) 2018 pp. 137-145 ISSN : 2278-3458 IF : 0.875  
DOI:10.7598/cst2018.1444 (Thomson Reuters)
- 28) Synthesis, Characterization and Antibacterial study of Copper oxide-graphene nanocomposites  
Harish Kumar and Manisha  
Asian J. of Chemistry, Vol. 30(1), 2018 pp. 59-62 ISSN: 0970-7077 IF : 0.14 (Scopus)
- 29) Corrosion Inhibition for Mild Steel in Acidic Medium by Using Hexadecylamine as Corrosion Inhibitor  
Pradeep Kumar, Vikas Kalia, Harish Kumar and Hariom Dahiya  
Chemical Science Transaction, 6(4), (2017) pp. 497-512 ISSN : 2278-3458 IF : 0.875 (Thomson Reuters)
- 30) Inhibition of Mild Steel Corrosion in 1.0 M HCl Solution by Octadecylamine as Corrosion Inhibitor  
Pradeep Kumar, Harish Kumar, Vikas, Hari Om  
Der Pharma Chemica, 2017, 9(12), pp. 100-108  
ISSN: 0975-413X (IF : 0.21) H=16 (Scopus)
- 31) *Aloe vera L.* as Green Corrosion Inhibitor for Mild Steel in 5.0 M Hydrochloric Acid Solution  
Harish Kumar and Vikas Yadav  
Asian J. of Chemistry, 30(3), (2018) pp. 474-478 ISSN: 0970-7077 IF : 0.14 (Scopus)
- 32) Structural and Optical Characterization of Zn-TiO<sub>2</sub>Nanocomposites Using Sol-gel Technique  
Harish Kumar, Rammehar dixit and Dharm Veer  
Asian J. of Chemistry, Vol. 29(11), 2017 pp. 1-5 ISSN: 0970-7077 IF : 0.14 (Scopus)
- 33) Synthesis, Characterization and Antibacterial study of Zinc oxide-graphene nanocomposites  
Harish Kumar and Manisha  
Asian J. of Pharmaceutical & Clinical Res. 10(9) 2017 pp. 206-209 ISSN- 0974-2441  
IF: 0.40 (Scopus)

## CONFERENCE/SEMINAR/WORKSHOP ATTENDED: 56

- 1) International Conference on recent Researches and Innovations in Sciences, Management, Education and Technology organized by JCD PG College of Educ., Sirsa from 27-28 March 2018 presented a paper and **Chaired the Technical Session** "Azardirachta Indica as environment friendly corrosion inhibitors for mild steel in 5.0 M HCl solution".
- 2) National Conference of Recent advances in chemical sciences (NCRACS-2018) organized by Dept. of Chemistry, MDU Rohtak on 07.03.2018 presented a paper entitled "**Amperometric biosensor for the detection of Mercury as an Environment pollutant**"
- 3) National Conference on Chemical and Environmental Sciences: Innovation and Advances-2018 organized by Dept. of Chemistry, Punjabi University, Patiala from 15-16 Feb., 2018 presented a paper on "Development of amperometric biosensor for the detection of formaldehyde as an environment pollutant".
- 4) National Seminar at CMK College, Sirsa presented a paper entitled on 19.01.2018.
- 5) National Conference on Organic, Metallorganics and Thermodynamics (NCOMT-2017) organized by Dept. of Chemistry, GJU S & T, Hisar from 17-18 Nov., 2017 delivered an **Invited Talk** on the topic "Amperometric sensor .....environment pollutant"
- 6) International Conference on recent innovations in Engg & Technology (ICRIET) organized by Maharishi Arvind College of Engg. & Research Centre, Jaipur, India & Co-organized by Intern. Institute of Engg & Research (TheIIER), Kaula Lumpur, Malasia from 18-19 Feb., 2017 presented paper "Corrosion Study of Mild Steel using Dithizone as corrosion inhibitor in HCl solution at 50 °C"
- 7) National Conference on Advanced Physical Methods in Chemical Sciences (NCAPMCS-2017) organized by Dept. of Chemistry, GJU S & T, Hisar from 22-23 Feb., 2017 delivered an **Invited Talk** on the topic "Advanced electroanalytical technique .....environment pollutant"
- 8) National Conference on Science & Technology for National Development held at Gurukul Kangri Vishwavidyalaya, Haridwar from 20-22 Nov., 2016 delivered **Invited Talk** entitled "Amperometric biosensor .... Biological warfare agents".
- 9) Seven days National Workshop on Research Methodology organized by Dept. of Pub. Administration, CDLU, Sirsa from 01-07 Sept., 2016.
- 10) International Conference on Recent Innovations in Sciences, Management, education and Technology, ICRISMET-16 at JCD Memorial College, Barnala Road, Sirsa on 27<sup>th</sup> August, 2016 presented paper entitled "Synthesis of Metal Nanoparticles & their use in Electrochemical Biosensors for the detection of Microbes" and **Chaired the Session**.
- 11) National Conference on Global Challenges-Role of Science & tech. in imparting their solution at TITS, Bhiwani from 23-24 April, 2016 presented a paper entitled "Electrochemical biosensor for the detection of biological weapon" and **Chaired the Technical Session**.
- 12) 5<sup>th</sup> National Conference Chemical Sciences: Emerging Scenario & Global Challenges at Arya PG College, Panipat delivered **Invited talk** on the topic "Development of Amperometric biosensor for the detection of Biological Warfare agents" held on 26<sup>th</sup> March, 2016.
- 13) Patent Awareness Workshop organized by Dept. of Biotechnology, CDLU, Sirsa on 08.03.2016.
- 14) State level Seminar on Issues of Environment Health & Toxicology organized by CMK National Post Graduate Girls College, Sirsa on 20.01.2016 Entitled "Level of water pollution in ground water & tap water of two colonies of Sirsa".
- 15) National Conference on Organic Synthesis & Catalysis, NCOSC-2016, Dept. of Chemistry, GJU S & T, Hisar from 17-18 Feb., 2016. Delivered **invited talk** on the topic "Electrochemical biosensors for.....weapon".
- 16) 103<sup>rd</sup> **Indian Science Congress** held at University of Mysore, Mysore from 03-07 Jan., 2016. Entitled "Green Corrosion inhibitors..... acid medium".

- 17) National Conference on Science & Technology for indigenous Development of India held at Gurukul Kangri Vishwavidyalaya, Haridwar from 28-30 Sept., 2015 entitled “Development of Electrochemical biosensor .... Biological weapon”.
- 18) 102<sup>nd</sup> **Indian Science Congress** held at University of Mumbai, Mumbai from 03-07 Jan., 2015. Entitled “Nanocomposites ..... electric vehicles”.
- 19) National Conference on Emerging trends in Chemical Science & Technology at Dept. of Chemistry, CDLU, Sirsa on 25<sup>th</sup> Feb., 2015.
- 20) National Conference on Science & Technology for indigenous development in India organized by The Indian Science Congress Association : Haridwar Chapter & Faculty of Engg. Technology, Gurukul Kangri University, Haridwar from 28-30 Sept., 2015 **delivered an invited talk** on the topic “Development of Electrochemical biosensors for the detection of S. epidermis as biological weapon”.
- 21) International Conference on Nascent Development in Chemical Sciences: Opportunities for Academia-Industry Collaboration organized by Dept. of Chemistry, Birla Institute of Technology & Science, BITS, Pilani from 16-18 October 2015 and presented a paper on “Aloe vera L. Extract as a Green Corrosion Inhibitor for Mild Steel in 5.0 M Hydrochloric Acid Solution”
- 22) International Conference on “Innovative Trends in Applied Physical, Chemical, Mathematical Sciences and Emerging Energy Technology for Sustainable Development” (APCMET-2014) organized by “**Krishi Sanskriti**” on 19-20<sup>th</sup> April, 2014 at Jawaharlal Nehru University, New Delhi. Entitled “Synthesis and Characterization of Cobalt oxide nanoparticles by Sol-Gel Method”
- 23) 101<sup>st</sup> Indian Science Congress held at University of Jammu, Jammu from 03-07 Feb. 2014. Entitled “Fabrication of Fe/Fe<sub>3</sub>O<sub>4</sub>/CuO nanocomposite electrode material for Ni/Fe rechargeable batteries for hybrid electric vehicles.
- 24) National Seminar on **Emerging Trends in Chemistry** (NSETC-2014) at Jat College, Rohtak from 12-13 March 2014 delivered **invited talk** Entitled “Ni/Fe Rechargeable Batteries for Hybrid Electric Vehicles”.
- 25) One Day workshop of Women Cell Coordinates organized by Directorate of Youth Welfare on 08<sup>th</sup> March 2014 at Chaudhary Devi Lal University, Sirsa.
- 26) National Conference on "**Recent Developments in Chemical Sciences**" [NCRDCS-2014], held at GJU S & T, Hisar from 25-26 February, 2014 Entitled “Fe/Fe<sub>3</sub>O<sub>4</sub>/CuO/Graphene Nanocomposite Electrode Mat. for Rechargeable Ni/Fe Batteries in Hybrid Electric Vehicles”.
- 27) National Conference on ‘**Advances in Chemical Sciences**’ (ACS-2013) at Dept. of Chemistry, MDU Rohtak from 1-3 March, 2013 Entitled Corrosion “Characteristics of vapour phase corrosion inhibitors under atmospheric conditions”.
- 28) International Conference on **Recent Advances in Chemical Sciences** (ICRACS-2013) at Arya P. G. College, Panipat from 24-26 Feb., 2013 Entitled “Study of vapour phase corrosion inhibitors for mild steel under atmospheric conditions”.
- 29) Refresher Course in Chemistry, at Academic Staff College, H. P. University, Shimla from 19 Nov. to 08 Dec. 2012.
- 30) One Day Orientation/Training Prog. of NSS Functionaries at CDLU, Sirsa on 28<sup>th</sup> March 2012.
- 31) National Seminar on “**Environment Degradation : Issues & Remedies**” at DN College Hisar from 28<sup>th</sup> Feb., 2012 Entitled “Benzalkonium chloride as antiscalant & Corrosion inhibitor for Carbon steel in industrial cooling water system”.
- 32) National conference on **Global Challenges-Role of Sciences & Technology in Giving Their Solutions** at TITS Bhiwani from 03-04 March, 2012 Entitled “Comparative study of antibacterial property of some nanoparticles transition metal.
- 33) International Conference on **Energy-Water-Waste Nexus for Environment Management**, Dept. of EVS, CDLU, Sirsa from 28-30 Jan., 2012 Entitled “Management of New Emerging Wastes of Aluminium Metal by protecting it from Corrosion”.



- 34) One day District Level Training for Blood Donor Motivators/Organizers organized by Indian Red Cross Society, District Branch, Sirsa on 02.09.2011 at Panchayat Bhawan, Sirsa.
- 35) National Seminar on **Communal Harmony Piece & Social Justice**, Organized by UGC Coaching Cell, CDLU, Sirsa 06<sup>th</sup> Dec. 2011.
- 36) 6<sup>th</sup> National Conference on **“Thermodynamics of Chemical and Biological Systems”** (NCTCBS-2011) Dept. of Chemistry, MDU, Rohtak Nov. 02-04, 2011 Entitled **“Thermodynamic study of some binary liquid mixture at 303.15 K”**.
- 37) 36<sup>th</sup> Annual National Conference of **“Indian Society of Blood Transfusion and Immuno-Hematology”** at Sec 05, Inderprasth Auditorium, Panchkula, 30<sup>th</sup> Oct. to 01<sup>st</sup> Nov., 2011.
- 38) National Workshop on Patent Awareness vis-a-vis Intellectual Property Rights at GJU S & T, Hisar on 09 August, 2011.
- 39) National Workshop on Patent Awareness & Intellectual Property Rights at CDLU, Sirsa on 10 August, 2011.
- 40) National Workshop on Distance Education in India: Issues & Challenges at CDLU, Sirsa on 29<sup>th</sup> June, 2011.
- 41) Prof. Ram Chand Paul International Conference on Emerging Trends in Chemistry, ETC-11, 11-12 Feb., 2011, Dept. of Chemistry, Punjab University, Chandigarh Entitled **“Synthesis & Characterization of Nickel nanoparticles”**.
- 42) National Seminar on Recent Advances in Chemistry & their Impact on Environment, NSRACE-11, 15-16 Feb., 2011, Dept of Chemistry, Punjabi University, Patiala presented a paper entitled **“Study of Surfactants as corrosion inhibitors for carbon steel in HCl solution”**.
- 43) Refresher Course in Chemistry, at Academic Staff College, Punjabi University Patiala from 08-28 Dec., 2010.
- 44) National Conference on Environment Degradation: Effects, Challenges & Remedies, EDECR-10, 25-27 Feb., 2010, JCD Vidyapeeth, Sirsa Entitled **“Separation of 16 Environment Pollutants Polymeric Aromatic Hydrocarbons using Micellar Capillary Electrophoresis”**.
- 45) Orientation Prog. at Acad. Staff College, GJU S & T, Hisar from 17 June to 14 July, 2009.
- 46) National Workshop on Research Methodology in Management, RMM-09, Dec. 12-13, 2009, Dept. of Business Management, CDLU, Sirsa.
- 47) National Workshop on Nanotech. & Applied Sci., NAS-09, Nov. 28-29, 2009, Kaithal Entitled **“Synthesis & Characterization of Metal nanoparticles by Sol Gel Method”**
- 48) Indo Russian Workshop on Nanotechnology & Laser Induced Plasma, IRNANO-09, 24-26 Nov., 2009, University of Delhi, New Delhi.
- 49) National Seminar on Recent Trends in Chemistry, NSRTC-09, 21-22 Jan., 2009, Panjabi University, Patiala, Punjab Entitled **“Template Synthesis and Characterization of Cryptand”**.
- 50) Annual Conference, Haemcom-09, 24-25 October, 2009, CMK Girls College, Sirsa.
- 51) National Conference on Environment Degradation-Challenges & Remedies, EDCR-08, 13-14 March, 2008, Maharshi Markandeshwar University, Mullana – Ambala Entitled **“Polymeric anionic surfactant for Micellar Capillary Electrophoresis: Separation of 16 Priority PAH pollutants”**.
- 52) National Conference, Information Technology: Setting Trends in Modern Era, N.C. College of Engg., Israna-Panipat, during 18-20 March, 2006 presented paper entitled **“Nanotechnology-Quantum Dots (QDS) in biological labeling”**.
- 53) Patent Awareness Workshop, Deptt. of Biosciences, MDU, Rohtak on 30<sup>th</sup> Dec., 2005.
- 54) National Workshop on Spectroscopic Techniques, N.C. College of Engg., Israna-Panipat, during 05-06 August, 2004.
- 55) National Convention on Corrosion & East Asia Pacific Regional Conference, CORCON-2002 held at Goa during 28-30 Nov., 2002 Entitled **“Corrosion Characteristics of nitrogen containing steel alloys”**.

56) National Convention on Corrosion & East Asia Pacific Regional Conference, CORCON-2002 held at Goa during 28-30 Nov., 2002 Entitled “New technique to find antiscalant efficiency in industrial cooling water”.

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The information given above is true to the best of my knowledge.

(Harish Kumar)