CURRICULUM VITAE

Dr. Harish Kumar
Professor
Dept. of Chemistry, School of Basic Sciences,
Central University of Haryana, Mahendergarh – 123 029 (Haryana)
Ph. 072060 77870
Email: harishkumar@cuh.ac.in, **Scopus ID: 57220702245**
https://orcid.org/0000-0002-8559-2302 **WoS Res. ID: AAM-5383-2021**
https://scholar.google.co.in/citations?user=69fNAqoAAAAJ&hl=en
https://cuh.irins.org/profile/235607

ACADEMIC PROFILE

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

EXPERIENCE [Teaching & Research]: 19+ Years

- Working as **Professor**, Dept. of Chemistry, School of Basic Sciences, Central University of Haryana, Mahendergarh since August 14th 2021 to till date.
- Worked as Associate Prof., Dept. of Chemistry, School of Basic Sciences, CUH, Mahendergarh since August 14th 2021 to 13 August 2021.
- Worked as **Assistant Prof.**, Dept. of Chemistry, CDLU, 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 29th August 2003 to 31 March 2004.
- Worked as a **Lecturer** at Jat College Rohtak, from 01 Jan. 2003 to 28 August 2003.

RESEARCH AREAS

- Electrochemistry, Chemical Sensor & Biosensors,
- Protection of metals and their alloys from corrosion,
- Chemistry of nanoparticles and nanocomposite materials,
- Material Science and Computational Chemistry.

RESEARCH SUPERVISION

Ph.D.	13 (Awarded)
M. Phil.	42 (Awarded)
Ph.D. pursuing	05
M.Sc. dissertation	35 (Awarded)

RESEARCH FUNDING

Major Research Projects completed: 02

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

SCHOLASTIC ACHIEVEMENTS

- **Patent Granted: 01** (A method of removal of pollutants from atmosphere using green technology**,** Patent No. 380774).
- Patent Published: 03, Submitted: 01
- **Best Paper Award** by the Conference World in International Conf. on Recent Innovations in Sciences, Management, Education & Tech. organized by JCD Vidyapeeth, Sirsa on 27th 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 Europeon Union during the period 02.03.15 to 01.04.15.
- **Awarded Summer Research Fellowship -2012** by Indian Institute of Science, IISC, Bangalore from 01st May to 26th June 2012.
- Qualified **NET/LS** (Lectureship) Exam. **Consecutive 05 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.
- **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. Member of the Editorial Board of Advances in Material Chemistry.
4. Reviewer of **J. of Electrochem. Society**.
5. Reviewer of **Arabian J. of Chemistry**.
6. Member of the Editorial Board of Journal **Current Physics**, Bentham Science Pub.
7. **Life Member** of **Indian Science Congress** Association (Membership No. L-23023)
8. **Life Member** of the **Indian Council of Chemists** (Membership No. LF/1799)
9. **Life Member** of **The Indian Thermodynamic Society** (Membership No. LM-323)

PUBLICATIONS

BOOK PUBLISHED: 04, Research Papers: 122, Book Chapters: 06

- **Text Book of Physical Chemistry** by Prentice Hall India, N. Delhi. (1st edition 2010 ISSN no. 978-81-203-4088-6, 2nd 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.

RESEARCH PUBLICATIONS

Papers Published:	**125**	Conferences/Seminars/workshops attended:	67
Review Articles:	04	Delivered Invited Talks:	09
Monograph:	01	Judgment of Poster Sessions:	02
Total Impact Factor:	**169.9**	Total Citations :	**1696**
Highest Impact Factor:	07.46	h-index :	18
Patent granted:	**01**	Projects Completed :	02

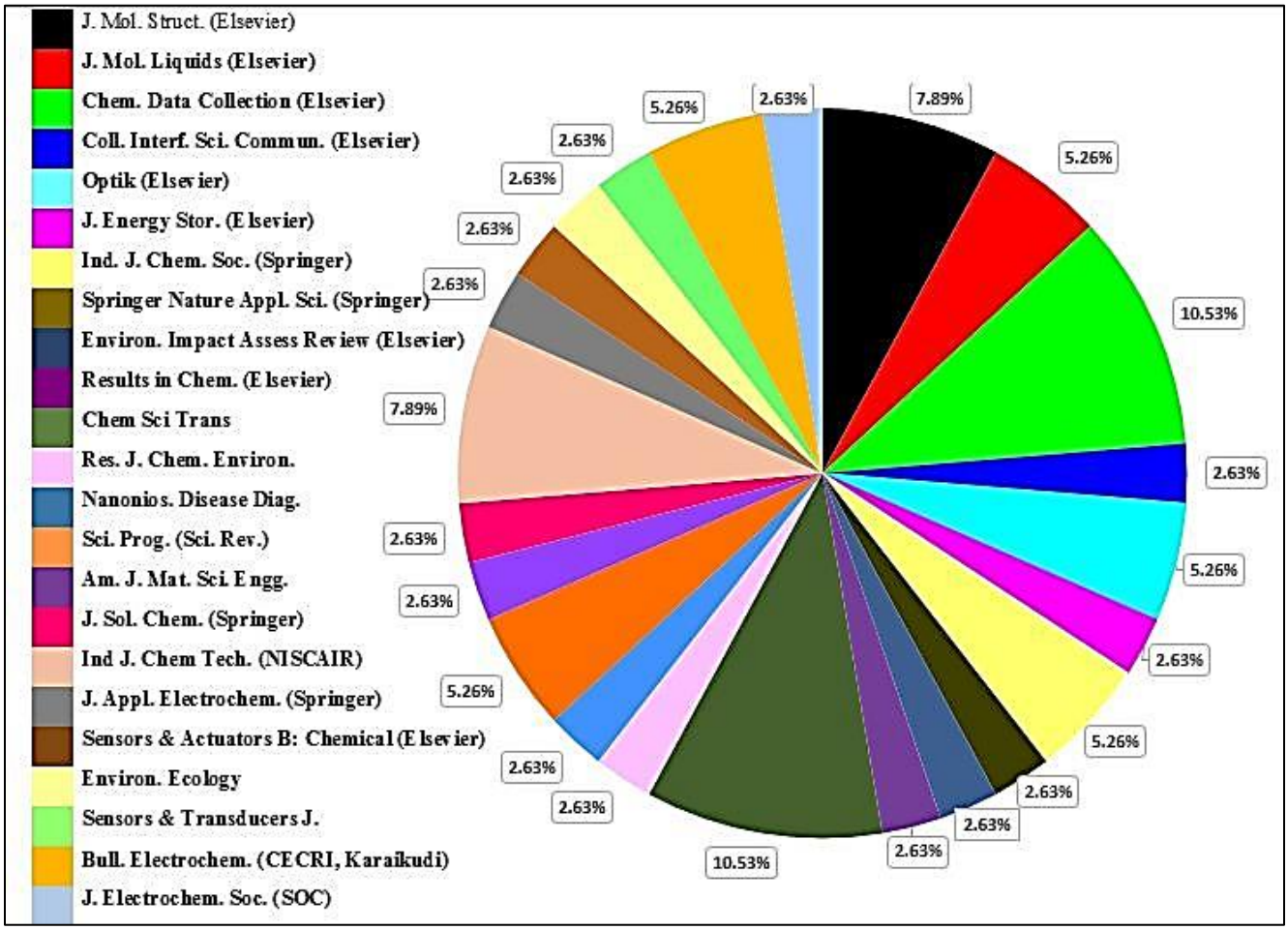
ADMINISTRATIVE WORK/DUTY PERFORMED

- 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 28th Feb. 2013, 2014 and 2015.
- Acted as Programme Officer, NSS, CDLU, Sirsa.
- Acted as Nodal Officer, Election and Nodal officer, Aadhar Card, CDLU, Sirsa.

MEMBER OF ACADEMIC BODIES

- Member of Academic Council, CUH, Mahendergarh.
- Member of the University Court, CUH, Mahendergarh.
- Member of PGBOS & R (Post Graduate Board of Studies & Research): 11 years
- Member of BOS, CUH, Mahendergarh.
- Member of School Board, CUH, Mahendergarh.
- Member of DRC (Dept. Research Committee): 10 years.
- Convener, CPC, CUH, Mahendergarh.
- Convener, Promotion of Sustainable Materials, CUH, Mahendergarh.
- Course Coordinator M. Phil. Chemistry (Distance mode), CDLU, Sirsa.
- Organized a National Conference and acted as **Organizing Secretary** and **Co-Convener** of National Conference **Emerging Trends** in **Chemical Science & Technology**.
- Member of Governance & Leadership Committee, CDLU, Sirsa.
- Member of Literacy Club and Fine Art Club, CDLU, Sirsa.

PERCENTAGE OF PAPERS PUBLISHED IN DIFFERENT JOURNALS



SELECTED PUBLICATIONS

1) Self-assembled quantum dots decorated Polypyrrole based multifunctional nanocomposite
Ankita Yadav and **Harish Kumar**
RSC Advances, **2022** (Communicated) **Royal Soc. Chem.**

2) Development of highly efficient dual-purpose gas hydrate and corrosion inhibitors for flow assurance application: An experimental and computational study
M. Omidvar, A. Farhadian, L. Cheng, A. Berisha, A. Rahimi, F. Ning, **H. Kumar**, K. Peyvandi
Energy & Fuels, 2022, Communicated **IF: 3.6** **ACS Pub.**

3) Progress in the development of metal nanoparticles encapsulated with Polypyrrole plastic nanocomposites: Antibacterial and photocatalytic properties
A. Yadav, **H. Kumar**, R. Kumari and R. Sharma
Mat. Sci. Engg. B., 2022, 116085**.** **IF: 3.14** **Elsevier**
https://doi.org/10.1016/j.mseb.2022.116085

4) Synthesis, spectral, biological and computational study of template engineered macrocyclic metal complexes
J. Kumar, D. Singh, A. Jangra, **H. Kumar**, P. Kumar, S. Kumar, R. Khanna, R. Kumar
J. Coordination Chem., 2022, Accepted. **IF: 1.75** **Elsevier**

5) Perovskite $GdAlO_3:Dy^{3+}$ nanophosphors: A gel-combustion synthesis, phase evaluation and down conversion luminescent characteristics for lighting applications
P. Kumar D. Singh, I. Gupta, S. Singh, V. Kumar, **H. Kumar,** S. K. Chhikaa,
J. Luminescence, 252, 2022, 119409**.** **IF: 4.171** **Elsevier**
https://doi.org/10.1016/j.jlumin.2022.119409

6) Cool green light emitting $GdAlO_3:Tb^{3+}$ perovskite nanomaterials: Crystal structure and spectroscopic characteristics for advance display appliances
P. Kumar, D. Singh, I. Gupta, S. Singh, V. Kumar, **Harish Kumar**, S. K. Chhikara
Inorganic Chem. Commun., 145, **2022,** 110064. **IF: 3.428** **Elsevier**
https://doi.org/10.1016/j.inoche.2022.110064

7) Polyaniline Plastic Nanocomposite as multi-functional Nanomaterial
Ankita Yadav and **Harish Kumar**
Chemistry Select (2022) e202201475, 01-10. **IF: 2.307** **Wiley-VCH**
https://doi.org/10.1002/slct.202201475

8) Quantum dots decorated polyaniline plastic nanocomposites as a novel amperometric sensor for formaldehyde: Experimental and theoretical approach
Harish Kumar, Neetu Kumari, and Devender Singh
Talanta Open, **(2022)**, 100141. **Elsevier**
https://doi.org/10.1016/j.talo.2022.100141

9) Quantum dots decorated polyaniline plastic as a multifunctional nanocomposite: Experimental and theoretical approach
Ankita Yadav, **Harish Kumar**, Rahul Sharma, Rajni Kumari, and Mony Thakur
RSC Advances, 12 **(2022)**, 24063 **IF: 4.03** **Royal Soc. Chem.**
https://doi.org/10.1039/d2ra03554e

10) Reduced Graphene Oxide-Based Metal Nanocomposites as Advanced Functional Electrode Material for Ni/Fe Rechargeable Batteries, Chapter 14, Book Title "Renewable Energy and Storage Devices for Sustainable Development", **Springer**, **(2022)** ISBN: 978-981-16-9279-6
Harish Kumar, Rahul Sharma, and A. K. Shukla

11) Adsorption, corrosion inhibition mechanism and computational studies of *Azadirachta indica* extract for mild steel: Sustainable and green approach
Harish Kumar, Vikas Yadav and Anu Kumari
J. Phys. & Chem. of Solids, 165 **(2022)** 110690 March, **IF: 3.995** **(Elsevier)**

https://doi.org/10.1016/j.jpcs.2022.110690

12) Ag_2O@PANI nanocomposites for advanced functional applications: A sustainable experimental and theoretical approach
Harish Kumar, Manisha Luthra, Manisha Punia, Devender Singh
Colloid and Surf. A: Physiol. & Engg. Aspects, Feb. **(2022) 128464. IF: 4.539** **(Elsevier)**
https://doi.org/10.1016/j.colsurfa.2022.128464

13) Corrosion inhibition and adsorption mechanism of *Morus nigra* on mild steel in acidic medium: A sustainable and green approach
Harish Kumar, Shalu Sharma, Rajni Kumari
Vietnam J. of Chemistry, 60, 2022 **(Wiley-VCH)**
https://doi.org/10.1002/vjch.202100166

14) Preparation and luminescence characteristics of Eu(III) activated Forsterite for optoelectronic applications
V. Tanwar, S. Singh, I. Gupta, P. Kumar, **Harish Kumar**, B. Mari, D. Singh
J. Mol. Struct. 1250 part 2 **(2022)** 131802. Nov., **IF: 3.196**. **(Elsevier)**
https://doi.org/10.1016/j.molstruc.2021.131802

15) Corrosion inhibition and adsorption mechanism of PVP for mild steel in 1.0 M H_2SO_4: Experimental and theoretical approaches.
Harish Kumar, Hans Raj, Sahil Sharma, Rajni Kumari
Current Physical Chemistry, 12 (2022). **IF: 0.81** **(Bentham Sci. Pub.)**
http://dx.doi.org/10.2174/1877946812666220117125537

16) Electrical conductivity of intermetallic and nanocomposites: A comparative experimental and theoretical study
Harish Kumar, A. Bhateria, B. Singh and P. Kaur
Chemical Data Collection (2021) 100788. October **IF: 0.98**. **(Elsevier)**

17) Corrosion inhibition and adsorption studies of Ammonium oxalate for mild steel by computational and experimental techniques: A sustainable approach
Harish Kumar, Hans Raj, Sahil Sharma, Hariom Dahiya
Chemical Data Collection 36 **(2021)** 100785. October **IF: 2.218**. **(Elsevier)**
https://doi.org/10.1016/j.cdc.2021.100785

18) Highly efficient and multi-functional corrosion inhibitor for carbon steel at different temperatures: Experimental and theoretical study
Harish Kumar and Manju
J. Bio- & Tribo-Corrosion 7 **(2021)** 159. October **IS: 3.11** **(Springer)**
https://doi.org/10.1007/s40735-021-00596-3

19) Co_3O_4/PANI nanocomposites as a photocatalytic, antibacterial and anticorrosive agent: Experimental and theoretical approach
Harish Kumar and Manisha Luthra, Manisha Punia, Ram Mehar Singh
Colloid & Interface Sci. Commun. **(2021)** 100512. **IF: 4.915**. **(Elsevier)**
https://doi.org/10.1016/j.colcom.2021.100512

20) Adsorption and inhibition mechanism of efficient and environment friendly corrosion inhibitor for mild steel: Experimental and theoretical study
Harish Kumar, Vikas Yadav, Anu, Sourav Kr. Saha, Namhyun Kang
J. Mol. Liquids 338 **(2021) 116634.** Sept., **IF: 6.165**. **(Elsevier)**
https://doi.org/10.1016/j.molliq.2021.116634

21) Acyclic and cyclic hydrocarbons as acid corrosion inhibitor for carbon steel: A comparative (experimental and theoretical) study
Harish Kumar and Manju
J. Mol. Struct. 1239 **(2021)** 130523. **IF: 3.196**. **(Elsevier)**
https://doi.org/10.1016/j.molstruc.2021.130523

22) Highly efficient and eco-friendly acid corrosion inhibitor for mild steel: Experimental and

theoretical study
Harish Kumar and Vikas Yadav
J. Mol. Liquids 335 **(2021)** 116220. **IF: 6.165**. **(Elsevier)**
https://doi.org/10.1016/j.molliq.2021.116220

23) 5-Aminotetrazole a highly efficient corrosion inhibitor for mild steel in 0.1 M sulphuric acid: Experimental & theoretical study
Harish Kumar and Tilak Dhanda
Chemical Data Collection, **(2021)** Accepted. **IF: 2.218**. **(Elsevier)**

24) 1-Benzylimidazole a highly efficient anti-pitting and anti-cracking agent for Mild Steel in 0.1 N H_2SO_4 at normal and elevated temp.: Experimental and theoretical (MDS and FMO) study
Harish Kumar and Tilak Dhanda
J. Mol. Struct. 1231 **(2021)** 129958 **IF: 3.196**. **(Elsevier)**
https://doi.org/10.1016/j.molstruc.2021.129958

25) Synthesis and photoluminescence behavior of $SrMg_2Al_{16}O_{27}:Eu^{2+}$ nanocrystalline phosphor
S. Singh, V. Tanwar, A. P. Simantilleke, **Harish Kumar**, D. Singh
Optik (Int. J. Light & Electron Optics) 225 **(2021)** 165873. **IF: 2.187**. **(Elsevier)**
https://doi.org/10.1016/j.ijleo.2020.165873

26) Recent advancement made in the field of reduced Graphene oxide-based Nanocomposites used in the energy storage devices: A Review
Harish Kumar, Rahul Sharma, Ankita Yadav, and Rajni Kumari
J. Energy Storage (2021) 102032. **IF: 6.58**. Quartile = Q1 (**Elsevier**)
https://doi.org/10.1016/j.est.2020.102032

27) Cyclohexyl amine an effective corrosion inhibitor for mild steel in 0.1 N H_2SO_4: Experimental and Theoretical (Molecular Dynamics Simulation and FMO) study
Harish Kumar and Tilak Dhanda
J. Mol. Liquids (2020) 114847. **IF: 6.165**. **(Elsevier)**
https://doi.org/10.1016/j.molliq.2020.114847

28) Experimental and Theoretical investigation of 3,3′-diamino dipropyl amine: Highly efficient corrosion inhibitor for carbon steel in 2 N HCl at normal and elevated temperatures
Harish Kumar and Manju
J. Mol. Struct. **(2020)** 129598. **IF: 3.196**. **(Elsevier)**
https://doi.org/10.1016/j.molstruc.2020.129598

29) Influence of Polyaniline on the photocatalytic properties of metal nanocomposites: A review
Ankita Yadav, **Harish Kumar**, Rahul Sharma, Rajni Kumari
Colloid & Interface Sci. Commun. 40 **(2020)** 100339 **IF: 4.915**. **(Elsevier)**
https://doi.org/10.1016/j.colcom.2020.100339

30) Trisodium phosphate an efficient anti-pitting and anti-cracking agent for mild steel in 0.1 N sulphuric acid: Experimental & molecular dynamics study
Harish Kumar, Rajni Kumari, Ankita Yadav, Rahul Sharma, Tilak Dhanda
Chemical Data Collection, 30 **(2020)** 100575. **IF: 2.218**. **(Elsevier)**
https://doi.org/10.1016/j.cdc.2020.100

31) Agaricus bisporus (Green Corrosion Inhibitor) as Anti-pitting agent for Mild Steel in 5.0 M HCl as Corroding medium
Harish Kumar and Vikas Yadav
Chemical Data Collection 30 **(2020)** 00552. **IF: 2.218**. **(Elsevier)**
https://doi.org/10.1016/j.cdc.2020.100

32) Synthesis, characterization and antibacterial activity of iron oxide nanoparticles against Staphylococcus Epidermidis
Poonam Sangwan and **Harish Kumar**
Asian J. Pharmaceutical & Clinical Res. 13 **(2020)** 1-4. (**IF: 0.48**)
https://doi.org/10/22159/ajpcr.2020.v13i9.36938

33) Hexamine as corrosion inhibitor for mild steel in 0.1 N H_2SO_4 medium
Harish Kumar and Tilak Dhanda
Ind. J. Chemical Soc. 97 **(2020)** 65-74. (**IF: 0.15**)

34) Development of novel electrochemical sensor for the detection of biological warfare agents: Enzyme, antibody and DNA free
Harish Kumar and Bhawana Gupta
Springer Nature Appl. Sci. 2 **(2020)** 1957. **(Springer)**
https://doi.org/10.1007/s42452-020-03706-x

35) Structural and spectroscopic properties of $CaMgSi_2O_6$:RE^{3+} (Eu^{3+} and Tb^{3+}) nanophosphors under UV-illumination
S. Singh, V. Tanwar, A. P. Simantilleke, **Harish Kumar**, D. Jakhar
Optik (Int. J. Light & Electron Optics) 221 **(2020)** 165364. (**IF: 2.187)**. **(Elsevier)**
https://doi.org/10.1016/j.ijleo.2020.165364

36) Musa acuminate (Green Corrosion Inhibitor) as anti-pit and anti-cracking agent for Mild Steel in 5.0 M Hydrochloric Acid Solution
Harish Kumar and Vikas Yadav
Chemical Data Collection, 29, **(2020)** 100500. **(IF: 2.218)**. **(Elsevier)**
https://doi.org/10.1016/j.cdc.2020.100500

37) Synthesis, characterization and influence of reduced Graphene Oxide (rGO) on the performance of mixed metal oxide nano-composite as optoelectronic material and corrosion inhibitor
Harish Kumar, Raj Rani, Rahul, Ankita Yadav, Rajni
Chemical Data Collection, 29 **(2020)** 100527 **(IF: 2.218)**. **(Elsevier)**
https://doi.org/10.1016/j.cdc.2020.100527

38) Nanocomposites (Conducting Polymer and Nanoparticles) based Electrochemical Biosensor for the detection of Environment Pollutant: Its Issues and Challenges
Harish Kumar, Neetu and Rahul
Environment Impact Assessment Review, 85 **(2020)** 106438. **(IF: 4.59**). **(Elsevier)**
https://doi.org/10.1016/j.eiar.2020.106438

39) Polyaniline-metal oxide-nano-composite as a nano-electronics, opto-electronics, heat resistance and anticorrosive material
Harish Kumar, Anurag Boora, Ankita Yadav, Rajni, Rahul
Results in Chem. 2 **(2020)** 100046. **(Elsevier)**
https://doi.org/10.1016/j.rechem.2020.100046

40) Wet chemical synthesis, characterization, and antibacterial activity of molybdenum oxide nanoparticles against staphylococcus epidermidis and enterobacter aerogenes
Poonam Sangwan, **Harish Kumar**, Renu Rani
Asian J. Pharmaceutical & Clinic Res. 12(4), **(2019)** 59-63. **IF:0.65.**
https://doi.org/10.22159/ajpcr.2019.v12i4.30644

41) Cetyl Trimethyl Ammonium Bromide as Anti-Pit Agent for Mild Steel in Sulfuric Acid Medium
Harish Kumar and Tilak Dhanda
Current Physical Chem. 10, **(2020)** 1-14. **IF: 0.81**. (**Bentham Sci. Pub**.)
https://doi/10.2174/1877946809666191011162351

42) Synthesis and Characterization of Pure Co and Ni doped CoO / SiO_2 Nanocomposites Using Sol-gel Technique
Harish Kumar, Dharm Veer and Ram Mehar Dixit
Chemical Sci. Transaction, 7(1), **(2018)** 95-100. **IF: 0.875**
https://doi.org/10.7598/cst2018.1462 **(Thomson Reuters)**

43) Fabrication of Novel Amperometric sensor for the detection of Zinc metal as an

Environment Pollutant
Harish Kumar and Neetu
Chemical Sci. Transaction, 7(1), (2018) 137-145. **IF:0.875**.
https://doi.org/10.7598/cst2018.1444 **(Thomson Reuters)**

44) Effect of Dopant Concentration on Structural, Optical and Magnetic Properties of $Zn_{1-x}Ni_xO$ Nanocomposites
Dharam Veer, Ramher Dixit and **Harish Kumar**
Chemical Sci. Transaction, 7(3), (2018) 464-476. **IF: 0.875**
https://doi.org/10.7598/cst2018.1507 **(Thomson Reuters)**

45) Synthesis, Characterization and Antibacterial study of Copper oxide-graphene nanocomposites
Harish Kumar and Manisha
Asian J. Chem. 30(1), (2018) 59-62. **IF: 0.14**
https://doi.org/10.14233/ajchem.2018.20853

46) *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) 474-478. **IF: 0.14**
https://doi.org/10.14233/ajchem.2018.20852

47) Non-enzymatic Amperometric sensor for the detection of Hydrazine as an Environment Pollutant
Harish Kumar and Neetu
Res. J. of Chem. & Environ., 21 (6), (2017) 01-07. IF: 0.636.

48) Synthesis, characterization, and antibacterial activities of chromium oxide nanoparticles Against *klebsiella pneumonia*
Poonam Sangwan and **Harish Kumar**
Asian J. Pharmac. & Clinical Res. 10(2), (2017) 01-04. IF 0.48.
http://dx.doi.org/10.22159/ajpcr.2017.v10i2.15189

49) 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.

50) Structural and Optical Characterization of Zn-TiO_2 Nanocomposites Using Sol-gel Technique
Harish Kumar, Rammehar dixit and Dharm Veer
Asian J. of Chemistry, 29(11), (2017) 1-5. IF: 0.14
https://doi.org/10.14233/ajchem.2017.20690

51) Synthesis, Characterization and Antibacterial study of Zinc oxide-graphene nanocomposites
Harish Kumar and Manisha
Asian J. of Pharmaceutical & Clinical Res. 10(9), (2017) 206-209. **IF: 0.4.**

52) 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. **IF: 0.875.** **(Thomson Reuters)**

53) Corrosion inhibition of mild steel by using Hexylamine as corrosion inhibitor in acidic medium
Hari Om, **Harish Kumar**, Pradeep Kumar, Vikas and Anjoo Bala
Der Pharma Chemica, 8(19), (2016) 268-278. **IF: 0.21**.

54) Enzyme based Electrochemical biosensor for food safety: A Review
Harish Kumar and Neelam Rani
Nanobiosensors in Disease Diagnosis, 5, (2016) 29-39. **IF: 2.077**

55) 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) 72-78. **IF 2.01**. **(ICI Listed)**

56) Development of Biosensor for the detection of Biological Warfare Agents: Its Issues & Challenges
Harish Kumar and Renu Rani
Science Progress, 96(3), (2013) 294-308. ISSN: 0036-8504. **IF: 1.20**
https://doi.org /10.3184/003685013X13777066241280 **(Scopus)**

57) Thermodynamic study of binary liquid mixtures of toluene and 1,2-dichloroethane at T = 303.15 K
Harish Kumar, Dheeraj Kumar and Suman Yadav
Physical Chemistry-An Indian J., 8(2), (2013) 41-50. **IF: 0.35.** **(UGC Listed)**

58) Thermodynamic study of binary liquid mixtures of Benzene and 1,2-dichloroethane at T = 303.15 K
Harish Kumar and Dheeraj Kumar
Intern. J. of Thermodynamics 16(3) Sept. (2013) 123-131. **IF: 1.08.** **(Scopus)**

59) Development of Li-Ion Batteries from Micro-structured to Nanostructured Materials: its Issues and Challenges
Harish Kumar, Sundar Rajan and Ashok K. Shukla
Science Progress 95(3) (2012) pp. 283-314. ISSN: 0036-8504. **IF: 1.20.**
https://doi.org /10.3184/003685013X13777066241280 **(Scopus)**

60) Influence of 1-Hydroxyethylenedine-1,1-diphosphonic acid (HEDP) antiscalant on the corrosion of carbon steel in cooling water systems.
Harish Kumar and R S Chaudhary
J. Ind. Chem. Soc. 88 Oct. (2011) pp. 1589-1598. **IF: 0.145**. **(UGC listed)**

61) Studies on thermodynamic properties of binary mixtures of acrylonitrile with aromatic ketones at T = 308.15K
Harish Kumar and Savita Chahal
J. of Sol. Chemistry, 40, (2011) pp. 165-181. **IF: 1.256.**
https://doi.org/10.1007/s10953-010-9645-3 **(Springer)**

62) Biosensor based on Enzyme coupled PVC reaction cell for Electrochemical Measurement of serum total Cholesterol.
Vikas**, Harish Kumar** and C. S. Pundir
Sensors & Actuators B: Chemical, 136 (2009) 235-241. **IF: 7.1.** **(Elsevier)**
https://doi.org/10.1016/j.snb.2008.09.047

63) Influence of Trisodium phosphate (TSP) antiscalant on the corrosion of Carbon Steel in Cooling Water Systems
Harish Kumar, Vishal Saini, Dheeraj Kumar and R. S. Chaudhary
Ind. J. Chem. Tech. 16, Sept. (2009) 401-410. **IF: 0.491**. **(Scopus & ICI)**

64) Refining of Psophocarpustetragonolobus (L.D.C.) Seed Oil
Anil Duhan, Yeshwant, T R Ahlawat, K S Ahlawat and **Harish Moudgil**
Environment & Ecology, 27(3), (2009) 1146-1152. **(ICI listed)**

65) Influence of Sodium hexameta phosphate (SHMP) antiscalant on the corrosion of carbon steel in cooling water systems.
Harish Kumar and R S Chaudhary
Ind. J. Chem. Tech. 17(5) **(2010)** pp. 181-190. IF: 0.491. **(Scopus & ICI)**

66) Synergistic effect of some antiscalants as Corrosion inhibitor for Industrial Cooling Water System.
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