Parveen Kumar, Ph.D.
Mob no. +919416371023, +91-9888550589

E-Mail: parveenkaushik7@gmail.com, parveenaksuhik@csio.res.in
http://scholar.google.co.in/citations?user=0hEu52APzjoC&hl=en

https://publons.com/researcher/2385612/parveen-kumar/

Area of interest

Biosensors, Bio-nanotechnology & immunology, e-waste management

R&D interest: Designing and developing screen printed electrodes for various biosensing applications, developing flexible conductive pattern and bands for biomedical applications

Waste management: Electronic waste management for novel waste like- solar cells, Lithium ion batteries and future devices which has not yet been considered in electronic waste. These are being considered as future technology. Reuse, Recovery, and Recycling (3R) of such waste.
Solid waste management: Segregation and 3R of the same, converting waste to wealth.

Ready for networking and consulting to industries in any fields, being at CSIR lab, one can expect solution to any problem pan India with our strong intra-lab and inter-lab networking.

Academics

Degree/diploma	Board/university	Institution	Specialization	Year	Division	Marks (%)
Ph.D*	Panjab University	Biochemistry Department	Bio-nanotechnology	March 2015	**Awarded**	--
M. Sc.	Kurukshetra university, Kurukshetra	Kurukshetra University	Bio-technology	2007	1st	67
B.Sc.	M.D.U. Rohtak	Hindu College, Sonipat	Biology	2005	1st	68.2

*Title of thesis: - Study on the interaction of some biomarkers with antibody conjugated quantum dots for breast cancer diagnosis

Honours and awards / Significant recognition

- Department of science and technology INSPIRE **Faculty** award
- **Dr D S Kothari** Post doc fellowship at Kurukshetra University, Kurukshetra, Haryana.
- MHRD Post doc fellowship at **IISER,** Mohali, Punjab
- Qualified **Indian Council of Medical Research – JRF 2008**
- Qualified **ICMR-JRF**, 2007.

Professional Experience

DST Inspire Faculty	September 2016 onwards	H-1, Ubiquitous analytical technique and R&D support facility division	CSIR-CSIO, Chandigarh.
Post Doc Fellow	July 2015- August 2016	Department of Biotechnology	Kurukshetra University, Kurukshetra
Post Doc Fellow	Nov 2014- July 2015	Immunology and immunopathology lab	IISER, Mohali, Punjab

Project status

Funding agency	Title	Duration	Amount in Rs
DST-INSPIRE	Graphene Based Electrochemical Detection of Breast Cancer Biomarkers	2016-2021	~90,00,000
Industry sponsored Co-PI	Characterization of electrodes	5 months, 2017	7,00,000
CSIR, Team member	Point of care devices for detection of cardiac biomarkers	March 2018-20	78,00,000
ICMR, Team member	Multiplexed point of care detection platform for ovarian cancer biomarkers	September 2019-22	75,00,000
PGIMER (Technology Support Project) Team Member	Cricoid pressure sensor device	Sept 2018-Sept 2021	2,00,000
CSIR, Co-PI	Diagnostic system for Circulating Tumour Cells (CTC) of Prostate cancer	Sept 2020- 22	80,00,000

Papers in National and International Journals

1. Kirandeep Kaur, **Parveen Kumar**, Preeti Kush. Amphotericin B loaded ethyl cellulose nanoparticles with magnified oral bioavailability for safe and effective treatment of fungal infection. Biomedicine & Pharmacotherapy. 128, 2020, 110297
2. Anirudh Sareen, Avirbhav Singh, Anupreet Sinha, Abhishek Arya, Atharv Arya, Gaurav Sapra, Rajesh Kumar, **Parveen Kumar**, Damanpreet Singh. Design and fabrication of prosthetic glove for hand rehabilitation. https://doi.org/10.1016/j.matpr.2020.04.849
3. Twinkle, Manpreet Kaur, J. K. Gowsamy, **Parveen Kumar**, Suresh Kumar. Synthesis and characterization of CNT/PVDF paper for electronic and energy storage applications. Emergent Materials volume 3, pages181–185. 2020.
4. Preeti Kush, Manjot Kaur, Monika Sharma, Jitender Madan, **Parveen Kumar**, Akash Deep and Ki-Hyun Kim. Investigations of potent biocompatible metal-organic framework for efficient encapsulation and delivery of Gemcitabine: biodistribution, pharmacokinetic and cytotoxicity study. Biomedical Physics & Engineering Express, Volume 6, Number 2, 2020.

5. Preeti Kush, Tania Bajaj, Manjot Kaur, Jitender Madan, Upendra Kumar Jain, **Parveen Kumar**, Akash Deep, Ki-Hyun Kim, Biodistribution and Pharmacokinetic Study of Gemcitabine Hydrochloride Loaded Biocompatible Iron-Based Metal Organic Framework. Journal of Inorganic and Organometallic Polymers and Materials. 2019 https://doi.org/10.1007/s10904-019-01417-4 (IF 1.64)
6. Preeti Kush, Jitender Madan, **Parveen Kumar**. Application of central composite design and response surface methodology for optimization of metal organic framework: novel carrier for drug delivery. Asian Journal of Pharmaceutical and Clinical Research, Vol. 12, no. 8, June 2019, pp. 121-127 (Scopus indexed)
7. Preeti Kush, Jitender Madan, and **Parveen Kumar**. Synthesis and optimization of Gemcitabine-loaded MIL-101NH_2 (Fe) nanocarriers: Response Surface Methodology approach. Asian Journal of Pharmaceutical and Clinical Research, Vol. 12, no. 8, June 2019, pp. 223-229, (Scopus indexed)
8. Gaurav Sapra, **Parveen Kumar**, Navin Kumar, Renu Vig, Manu Sharma. Effect of processing conditions on the electrical resistance of MWCNT/epoxy nanocomposite-based strain sensors. (sept 2018) Journal of material science: Materials in Electronics. DOI 10.1007/s10854-018-0053-6 (IF-2.3)
9. Manil Kukkar, Satish K. Tuteja, **Parveen Kumar**, Ki-Hyun Kim, Akhshay Singh Bhadwal, Akash Deepa. A novel approach for amine derivatization of MoS2 nanosheets and their application toward label-free immunosensor. Analytical Biochemistry Volume 555, 2018, Pages 1-8. (IF-2.5)
10. Manil Kukkar, Girish C.Mohanta, Satish K. Tuteja, **Parveen Kumar**, Akhshay Singh Bhadwal ,Pallabi Samaddar, Ki-Hyun Kim, Akash Deep. A comprehensive review on nano-molybdenum disulfide/DNA interfaces as emerging biosensing platforms. Biosensors and Bioelectronics. Volume 107, 1 June 2018, Pages 244-258 (IF 10)
11. Pawan Kumar Ki-Hyun Kim, Kowsalya Vellingiri, Pallabi Samaddar **Parveen Kumar**, Akash Deep, Naresh Kumar. Hybrid porous thin films: Opportunities and challenges for sensing applications. Biosensors and Bioelectronics Volume 104, 1 May 2018, Pages 120-137 (IF-10)
12. Pawan Kumar, Ki-Hyun Kim, Vasudha Bansal, **Parveen Kumar**. Nanostructured materials: A progressive assessment and future direction for energy device applications. Coordination Chemistry Reviews. Volume 353, 2017, Pages 113-141. **(I.F. 13)**
13. Manil Kukkar, Ashish Sharma, Parveen Kumar, Ki-Hyun Kim, Akash Deep. Application of MoS_2 modified screen-printed electrodes for highly sensitive detection of bovine serum albumin. Analytica Chimica Acta. Volume 939, 5 October 2016, Pages 101-107 (I F 5.2)

14. Akash Deep, Amit L. Sharma, Girish C. Mohanta, **Parveen Kumar**, Ki-Hyun Kim. A facile chemical route for recovery of high quality zinc oxide nanoparticles from spent alkaline batteries. Waste Management. Volume 51, May 2016, Pages 190–195 (IF 3.5)
15. Akash Deep, Amit L. Sharma, **Parveen Kumar**. Lipase immobilized carbon nanotubes for conversion of Jatropha oil to fatty acid methyl esters. Biomass and Bioenergy 2015, 81, 83-87. (IF 4.2)
16. **Parveen Kumar**, Sukesh C Sharma, Akash Deep. Bioconjugation of Anti Estrogen Alpha Antibody with CdSSe/ ZnS Quantum Dots for Molecular Sensing of a Breast Cancer Antigen. Sensors and Actuator:B chemical. Volume 202, 2014, Pages 404–409. **(IF 4.1)**
17. Rajnish Kaur, **Parveen Kumar**, Pawan Kumar, Akash Deep, A K Paul. Assembly of europium organic framework–gold nanoparticle composite thin films on silicon substrate. Thin Solid Films. Volume 565, 28 August 2014, Pages 7–10 **(IF 2.0)**
18. Satish K. Tuteja, Manil Kukkar, **Parveen Kumar**, A. K. Paul, Akash Deep. Synthesis and Characterization of Silica-Coated Silver Nanoprobe for Paraoxon pesticide Detection. BioNanoScience. June 2014, Volume 4, Issue 2, pp 149-156
19. Pawan Kumar, **Parveen Kumar**, L M Bharadwaj, Akash deep. Luminescent Nanocrystal Metal Organic Framework based Biosensor for Molecular Recognition. Inorganic Chemistry Communications Volume 43, May 2014, Pages 114–117 **(IF 2.0)**
20. **Parveen Kumar**, Pawan Kumar, Lalit M Bharadwaj, Sukesh C. Sharma, Preeti Kush, A. K. Paul, Akash Deep. Aqueous Synthesis of L-Cysteine Stabilized Water Dispersible CdS:Mn Quantum Dots for Biosensing Applications. Bionanoscience June 2013, Volume 3, Issue 2, pp 95-101.
21. Amit L Sharma, **Parveen Kumar**, Akash Deep. Thermal Evaporated Copolymer Films: Characterization and Application as Ammonia Sensing Material. Polymer-Plastics Technology and Engineering. Volume 52, Issue 7, 2013 page 737-742 **(I.F. 1.4)**
22. Akash Deep, Amit L Sharma, **Parveen Kumar**, Lalit M Bharadwaj. Nanostructured polyaniline–silicon substrate for protein biosensing. Sensors and Actuators: B.171– 172 (**2012**) 210– 215 **(IF 4.3)**
23. Amit L Sharma, **Parveen Kumar**, Akash Deep. Highly Sensitive Glucose Sensing With Multi-Walled Carbon Nanotubes – Polyaniline Composite. Polymer-Plastics Technology and Engineering, 51: 1–6, **2012 (IF 1.4)**
24. **Parveen Kumar**, Deepak Kukkar, Akash Deep, Sukesh C Sharma, Lalit M Bharadwaj. Synthesis of Mercaptopropionic Acid Stabilized CdS Quantum Dots For Bioimaging in Breast Cancer. Adv. Mat. Lett. **2012**, 3(6), 471-475 (**IF-1.93**)
25. **Parveen Kumar**, Akash Deep, Sukesh Chander Sharma, Lalit M. Bharadwaj.

Bioconjugation of InGaP quantum dots for molecular sensing. Analytical Biochemistry 421 (**2012**) 285–290. **(IF 2.7)**

26. Akash Deep, Umesh Tiwari, **Parveen Kumar,** Vandana Mishra, Subhash C Jain, Nahar Singh, Pawan Kapur, Lalit M Bharadwaj. Immobilization of Enzyme on Long Period Grating Fibers for Sensitive Glucose Detection. Biosensors and Bioelectronics 33 (**2012**) 190– 195 **(IF 10)**

27. Pawan Kumar, **Parveen Kumar**, Akash Deep, Lalit M Bharadwaj. Doped Zinc-Organic Framework for Sensing of Pesticide. Advanced Materials Research. Vols. 488-489 (**2012**) pp 1543-1546

28. Pawan Kumar, **Parveen Kumar**, Akash Deep, Lalit M. Bharadwaj. Synthesis and conjugation of ZnO nanoparticles with bovine serum albumin for biological applications. Applied Nanoscience, 2013, Volume 3, Issue 2, pp 141-144,

29. Preeti Kush, Deepak Kukkar, **Parveen Kumar**, Amit L. Sharma, Akash Deep, I. P. Kaur, Ranjit Singh, Lalit M. Bharadwaj. Development and Evaluation of Novel Biodegradable Docetaxel Loaded Microspheres of Poly (D, L-Lactide-Co-Glycolic acid) and Poly (ε-Caprolactone) for Controlled Drug Delivery. Journal of Pharmaceutical Research & Clinical Practice, Jul-Sept **2011**; 1(3):12-35

30. Akash Deep, Kamal Kumar, **Parveen Kumar**, Pawan Kumar, Amit L Sharma, Bina Gupta, and Lalit M Bharadwaj. Recovery of Pure ZnO Nanoparticles from Spent Zn-MnO2 Alkaline Batteries. Environ. Sci. Technol. **2011**, 45, 10551–10556 **(IF 7.8)**

31. Akash Deep, **Parveen Kumar**, Jorge M.R. Carvalho. Recovery of copper from zinc leaching liquor using ACORGA M5640. Separation and Purification Technology 76 (**2010**) 21–25. **(IF 3.5)**

Book published

Overview of Cancer Diagnosis Demonstration Method based on Quantum Dot: Fluorescence Based Cancer Diagnosis. Pawan Kumar, **Parveen Kumar**, Akash Deep. Lap Lambert publishing. 2012

Book Chapter: Development of disposable sensor strips for point of care testing of environmental pollutants. Chapter 6, Satish Kumar, Girish Chander Mohanta**, Parveen Kumar.** Advances in Nanosensors for Biological and Environmental Analysis. ISBN: 978-0-12-817456-2, Elsevier.

Patent filed: - A Direct and Efficient Process for Protein Immobilization on Optical Fibers" filed. File No. 201711030710 dated 30.08.17

Technology Transfer: -

Sr No	Name of the technology	Company name	Year
1	Separation of phosphor material from CFL	**Exigo Recycling Pvt.**	2017

	Waste	**Ltd.,** New Delhi	
2	Safe disposal of waste mercury-based lamps and separation of its phosphor and glass	**ADV Metal Combine Pvt Ltd**, New Delhi	2020
3	SURAKSHA (Microorganism Decontamination Box in COVID-19 era)	Amesys India, Ambala Cantt.,	2020

Students supervised: - 6 M.Sc./M.tech, 12 B.tech..

Currently supervising 4 Ph.D.

Declaration

I hereby declare that all the information furnishes above is true to the best of my knowledge.

Date: 11.6.2020

Place: Chandigarh **(PARVEEN KUMAR)**