Publication Details

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1. Research Interest

Advanced Functional Nanomaterials for **Energy Generation & Storage** (Water Splitting-HER/OER), **Sensing/bio-sensing**, **Bio-Medical** (Disease Diagnosis & Drug delivery) applications and **Opto-Electronic Devices** (LEDs & Solar Cells) etc.

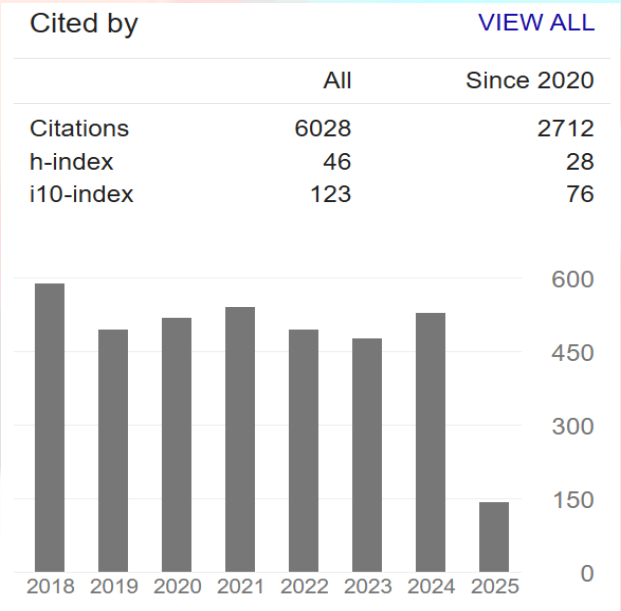
2. **Patents:** Intellectual property, technological innovations, new products etc. : **11**

3. **Books/Book Chapters/Monographs** published : **21**

4. **Publications in International Journals/Proceedings** : **115**

A. Peer Reviewed Research Articles

Citation till March 2025 (Google Scholar)



Publications in International Journals/Proceedings: 115

Q1 Journals: 56,
Q2 Journals: 16,
Q3 Journals: 09,
Q4 Journals/others: 14/20

No. of Q1 publications as First Author: 14

No. of Q2 publications as First Author: 01

No. of Q1 publications as Corresponding Author: 23

No. of Q2 publications as Corresponding Author: 07

B. Patents (Granted/Publhed/Applied)

S.N.	BibID / Ref. / Title / Authors / (Year wise sorted)/ Special note, if any
1.	**PP2025| Patent Application No.: 202531020217** Co_3S_4 dodecahedrons coupled with MoO_2 microspheres for water splitting application and the preparation method thereof Piyanshu Chaubey and **Prashant Kumar Sharma**
2.	**PP2024| Patent Application No.: 202431066933** A multi-interface heterostructure SnO 2 -Co 3 O 4 -Mo 2 S 3 nanocomposite for water splitting application and the preparation method thereof Piyanshu Chaubey and **Prashant Kumar Sharma**
3.	**RSREP2016| Patent Application No.: 20163110351117** Triple signaling mode carbon dots-based biodegradable molecularly imprinted polymer as multi-tasking visual sensor for rapid and "on-site" monitoring of silver ion Rashmi Madhuri, Santanu Patra, Raksha Choudhary, Ekta Roy, **Prashant K. Sharma**
4.	**PA2010| Patent Number: 608/DEL/2010** Developement of Zinc Oxy-Sulphide Ternary Nanocrystal: A new hope for tunable white light LED nanophosphors **Prashant K Sharma** and Avinash C Pandey,
5.	**PA2010|Patent Number: 607/DEL/2010** Performance Enhancement of Large Area Solar Cells by Incorporating Nanocrystals **Prashant K Sharma** and Avinash C Pandey,
6.	**PRA2010|Patent Number: 610/DEL/2010** A Novel Up-scalable Solution Combustion Synthesis of Bright Blue Luminescent BAM:Eu^{2+} Nanophosphors for PDP Applications **Prashant K Sharma**, Ranu K Dutta and Avinash C Pandey.
7.	**PRA2010|Patent Number: /DEL/2010** Combustion Synthesis and Fluorescent Properties of Eu^{3+} and Tb^{3+} Doped YBO_3 Nanorods under VUV excitations **Prashant K Sharma**, Ranu K Dutta and Avinash C Pandey,
8.	**PRA2010|Patent Number: 609/DEL/2010** Reverse Micelles Synthesis of Quantum Confined Rare-Earth Ortho-botare Nanocrystals for High-Definition Display Devices **Prashant K Sharma**, Ranu K Dutta and Avinash C Pandey,
9.	**PRA2010|Patent Number: /DEL/2010** Enhanced Luminescence Characteristics of YBO_3:Eu^{3+} Nanophosphors co-doped with Gd^{3+} under VUV and UV excitation **Prashant K Sharma**, Ranu K Dutta and Avinash C Pandey,
10.	**PRA2010|Patent Number: 1077/DEL/2010** Vitamin Encapsulated Magnetofluores as Target Specific MRI Contrast Agents Ranu K Dutta, **Prashant K Sharma** and Avinash C Pandey,

11.	**RPA2009| Patent Number: 1072/DEL/2009** Luminescent Magnetic Quantum Dots (LMQDTs): Synthesis Method and corresponding functional properties Ranu K Dutta, **Prashant K Sharma** and Avinash C Pandey.

C. Book Publications

S.N.	BibID / Ref. / Title / Authors / (Year wise sorted)/ Special note, if any
1.	"Study of Nanomaterials for Opto-electronics and DMS Based Applications" **Prashant K. Sharma** and Avinash C. Pandey, ***LAP Lambert Academic Publishing***, 244 Pages, **2012**. **ISBN 978-3-8473-7963-8**

D. Book Chapters

S.N.	BibID / Ref. / Title / Authors / (Year wise sorted)/ Special note, if any
2.	"Quality control of beverages for health safety: Starting from laboratory to the point-of-care detection techniques", Santanu Patra, Raksha Choudhary, Rashmi Madhuri, **Prashant K. Sharma**, Book: Quality Control in the Beverage Industry (Volume 17: The Science of Beverages), **2019**, Chapter 2, page no. 1-45, ***Publisher: Elsevier***.
3.	"Stimuli-responsive polymers for treatment of Diabetes Mellitus, Book: Stimuli Responsive Polymeric Nanocarriers for Drug Delivery Applications" Santanu Patra, Rashmi Madhuri and **Prashant K. Sharma**, **2019**, Chapter 18, page no 491-518, ***Publisher: Elsevier***.
4.	"Materials Characterization using Scanning Tunneling Microscopy: From Fundamentals to Advanced Applications" Suryakanti Debata, Trupti R. Das, Rashmi Madhuri, **Prashant K. Sharma** Handbook of Materials Characterization, **2018**, pp 217-261, DOI: 10.1007/978-3-319-92955-2_6. ***Publisher: Springer***
5.	"Graphene-Based Multifunctional Magnetic Nanocomposites and Their Multimode Biomedical Applications" in the book titled Complex Magnetic Nanostructures, Editor: Surender K. Sharma, TR Das, S Debata, R Madhuri, **Prashant K. Sharma**, Chapter No. 10, Page numbers: 359-392, Publication date: **2018**, ***Publisher: Springer***, **ISBN 978-3-319-52086-5 (eBook)**
6.	"Graphene-Based Portable, Flexible, and Wearable Sensing Platforms: An Emerging Trend for Health Care and Biomedical Surveillance", Santanu Patra, Raksha Choudhary, Rashmi Madhuri, **Prashant K. Sharma**, Chapter 13: Book: Graphene Bioelectronics, **2018**, Pages 307-338. DOI:10.1016/B978-0-12-813349-1.00013-5, ***Publisher: Elsevier***.
7.	"Functionalization of Carbon Nanostructures, Book: Reference Module in Materials Science and Materials Engineering"

	Paramita Karfa, Shrabani De, Kartick C. Majhi, Rashmi Madhuri, **Prashant K. Sharma** **2018**, DOI: 10.1016/B978-0-12-803581-8.11225-1. ***Publisher: Elsevier***.
8.	"Role of Nanomaterials as an Emerging Trend Towards the Detection of Winged Contaminants" in the book entitled, "Nanotechnology in Oil and Gas Industries" S Patra, R Madhuri, **Prashant K. Sharma** Chapter No. 9, 245-289, ***2018*** ***Publisher: Springer***, **https://doi.org/10.1007/978-3-319-60630-9_9** **Print ISBN978-3-319-60629-3; Online ISBN978-3-319-60630-9**
9.	"Role of Magnetic Nanoparticles in Providing Safe and Clean Water to Each Individual" in the book titled: Complex Magnetic Nanostructures, Editor: Surender K. Sharma, E Roy, S Patra, P Karfa, R Madhuri, **Prashant K. Sharma**, Chapter No. 8, Page numbers: 281-316, Publication date: **2017**, ***Publisher: Springer***,, **ISBN 978-3-319-52087-2 (eBook).**
10.	"A genuine combination of solvent-free sample preparation technique and molecularly imprinted nanomaterials", in the book titled: Advanced Molecular Imprinting Materials, Editors: Ashutosh Tiwari, Lokman Uzun, Santanu Patra, Ekta Roy, Rashmi Madhuri**, Prashant K. Sharma**, Chapter number: 02, Page numbers: 29-88, Publication date: **2016**, Publisher: ***WILEY-Scrivener Publishing, USA***, **ISBN: 978-1-119-33629-7**.
11.	"Imprinted carbonaceous nanomaterials: A tiny looking big thing in the field of selective and specific analysis", in the book titled: Advanced Molecular Imprinting Materials, Editors: Ashutosh Tiwari, Lokman Uzun, Ekta Roy, Santanu Patra, Rashmi Madhuri, **Prashant K. Sharma**, Chapter number: 05, Page numbers: 165-216, Publication date: **2016** Publisher: ***WILEY-Scrivener Publishing, USA,*** **ISBN: 978-1-119-33629-7**
12.	"A technique comes to life for security of life: The food contaminant sensors", in the book titled: NanoBioSensors, Editor: Alexandru Mihai Grumezescu, Santanu Patra, Ekta Roy, Rashmi Madhuri, **Prashant K. Sharma**, Chapter number: 17, Volume: 08, Page numbers: 773-772, Book Publication date: **2016**, Publisher: ***Elsevier***, **ISBN: 978-0-12-804301-1**
13.	"Combination of Molecular Imprinting and Nanotechnology: Beginning of a New Horizon" in "Advanced Materials" book series. Rashmi Madhuri, Ekta Roy, Kritika Gupta and **Prashant K. Sharma** ***WILEY-Scrivener Publisher***, **2013/14**
14.	"Functionalized Biocompatible Nanoparticles for Site Specific Imaging and Therapeutics" in book entitled "Advances in Polymer Science: Polymers in Nanomedicine"

	Ranu K Dutta, **Prashant K Sharma**, Hisatoshi Kobayashi and Avinash C Pandey, ***Springer-Verlag Berlin Heidelberg*** 1-43, DOI: 10.1007/12(2011)155, **2012**, **ISBN 978-3-642-27855-6**
15.	"High Resolution Transmission Electron Microscopic Investigations of Nanocrystals Growth and Defect Formation", in book entitled 'Current microscopy contributions to advances in science and technology (Microscopy Book Series, number #5)', **Prashant K. Sharma** and Avinash C Pandey, ***Formatex Publications***, Spain **2012**.
16.	"Multifunctional core-shell luminescent magnetic nanocrystals for targeted imaging and therapy", in book entitled "Nanobiomaterials for Intelligent Medical Devices", **Prashant K. Sharma** and Avinash C Pandey, ***WILEY-Scrivener Publishing LLC***, USA, Chapter 16, (**2012**).
17.	"Advancement in Semiconducting Nanomaterials Based Solar Cell Applications", In book entitled 'Nanomaterials and Nanotechnology" **Prashant K. Sharma** and Avinash C Pandey, ***VBRI Press***, India, **2012**. **ISBN 978-81-920068-33**
18.	"II-VI Semiconductor Nanocrystals for Energy Securing 'Green' Technology and Solid State Lighting", in book entitled "Intelligent Nanomaterials", **Prashant K. Sharma** and Avinash C. Pandey, ***Scrivener Publishing LLC***, USA, Chapter 7, (**2011**).
19.	"Rare-Earth Based Insulating Nanocrystals: Improved Luminescent Nanophosphors for Plasma Display Panels", in book entitled "Intelligent Nanomaterials", **Prashant K. Sharma** and Avinash C. Pandey, ***Scrivener Publishing LLC***, USA, Chapter 3, (**2011**),
20.	"Potential Advancement of the Nanomedicines in Cancer Theragnosis", in book entitled "Recent Advances in Nanomedicine", **Prashant K Sharma**, Ranu K Dutta and Avinash C Pandey, ***VBRI Press***, India, Chapter 8, (**2011**). **ISBN 978-81-920068-03**
21.	"Recent Advances in Biomedical Applications of Multifunctional Nanocomposites" In book entitled "Recent Developments in Bio-Nanocomposites for Biomedical Applications", Avinash C. Pandey, **Prashant K. Sharma**, Ranu K. Dutta, ***Nova Science Publishers***, Inc, Chapter 20, pp.409-432, **2010**. **ISBN 978-1-61761-008-0**