




CURRICULUM VITAE

Name:	Dr. Rajanish N. Tiwari	
Designation:	Assistant Professor	
School:	Physical Sciences	
Department:	Chemistry	
Specialisation & Research Interests:	<ul style="list-style-type: none"> • Development of carbon based Materials (Diamond, Graphene, Carbon Nanotubes, Graphene Oxide and reduced Graphene oxide) • Synthesis of nano-materials • Crystal growth of thin film • III-V semiconductor materials • Fuel Cells, Solar Cells • Flexible devices • Field Emission • Ceramic Superconductors 	
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Address:	Mahatma Gandhi Central University, Temp Camp Zila School, Motihari, East champaran, Bihar 845401 (INDIA)	

2. ACADEMIC QUALIFICATION (in reverse Chronological order):

Degree	Year	University / Board
Ph.D.	2010	National Chiao Tung University, Taiwan
M.Sc.	2004	H.N.B. Garhwal University
B.Sc.	2002	H.N.B. Garhwal University
12 th	1999	U.P. Board
10 th	1997	U.P. Board

3. ANY OTHER QUALIFICATION:

M.Tech. (Material Science)	2007	Barkatullah University, Bhopal
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4. PROFESSIONAL EXPERIENCE:

Organisation/Institute/University	Position Held	Duration
Mahatma Gandhi Central University, Bihar	Assistant Professor	06.10.2016 to Till date
Central University of Himachal Pradesh, Kangra, H.P.	DST Inspire Faculty Assistant Professor	21.10.2014 to 04.10.2016
Saga University, Saga, Japan	Postdoctoral Fellow	01.02.2014 to 20.10.2014
Toyota Technological Institute, Nagoya, Japan	Visiting Faculty Cum Postdoctoral Fellow	14.02.2011 to 31.01.2014

5. COURSES TAUGHT:**P.G. Courses**

- Characterization of Materials (PAS 517)
- Polymer Ceramics and Composites (PAS 515)
- Analytical Chemistry
- Project Seminar

U.G. Courses

- | | |
|---|---|
| <ul style="list-style-type: none">• Inorganic Chemistry I• Inorganic Chemistry II• Physical Chemistry II• Environmental Studies• Environmental Chemistry• Chemistry I (CCS 101T)• Chemistry II (CCS 102T) | <ul style="list-style-type: none">• Chemistry I (CCS 101L)• Chemistry I (CCS 101L)• Atomic Structure, Bonding & General Organic Chemistry• Thermodynamics, Equilibria & Functional Organic Chemistry I |
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6. RESEARCH SUPERVISION:

Non-Degree Oriented (Master's Level Dissertation): Awarded : 03

7. CONTRIBUTION TO CORPORATE LIFE OF THE UNIVERSITY:

- Coordinator of badminton competition, MGCU (2019)
- Member, School Board of School of Physical and Material Sciences, Mahatma Gandhi Central University (2017-till date)
- Member, Board of studies, Department of Chemistry, MGCU (2017-till date)
- Organising Secretary of One day National Symposium on Recent Trends in Chemical Sciences (RTCS-2019).
- Question paper setting for external Examinations
- Member Secretary, Committee for NIRF, MGCU (2017)
- Member, Frisking Committee, MGCU (2017)
- Member Departmental NAAC Committee, Department of Physics and Astronomical Sciences, CUHP, H.P. (2016-17)
- Member, Sports Committee, Mahatma Gandhi Central University, (2016-17)
- Coordinator of Seminar and Project, Department of Physics and Astronomical Sciences, CUHP, H.P. (2016)
- Coordinator of UG Laboratories, Department of Physics and Astronomical Sciences, CUHP, H.P.(2016)
- Member of a Departmental Level Purchase Committee, Department of Physics and Astronomical Sciences (2015-16) CUHP, H.P.
- Member, Admission Committee for M.Sc. and B.Sc., Department of Physics and Astronomical Sciences (2015-16), CUHP, H.P.

8. PUBLICATIONS :

- i. **Rajanish N Tiwari**, M. Tripathi, M. Yoshimura and A. Kumar, "Low vacuum annealing of polymer at low temperatures towards direct and scalable growth of graphene", *Materials Research Bulletin*, 107 (2018)147. [I.F.; **2.873**]
- ii. D. D. Nguyen, **Rajanish N Tiwari**, Y. Matsuoka, G. Hashimoto, E. Rokuta, Y. Z. Chen, Y. L. Chueh, M. Yoshimura, "Low Vacuum Annealing of Cellulose Acetate on Nickel Towards Transparent Conductive CNT-Graphene Hybrid Films", *ACS Applied Materials & Interfaces*, 6 (2014) 9071-9077. [I.F.; **8.097**]
- iii. J. N. Tiwari, K. Mahesh, L. H. Nhien, K. C. Kemp, R. Timilsina, **Rajanish N. Tiwari**, K. S. Kim, "Reduced graphene oxide-based hydrogels for the efficient capture of dye pollutants from aqueous solutions", *Carbon* 56 (2013) 173. [I.F.; **7.082**]
- iv. J. N Tiwari, K. Nath, S. Kumar, **Rajanish N Tiwari**, K. C. Kemp, N. H. Le, D. H. Youn, J. S. Lee, K. S. Kim, "Stable platinum nanoclusters on genomic DNA-graphene oxide with a high oxygen reduction reaction activity", *Nature Communications*, 4:2221 (2013) 1. [I.F.; **12.353**]
- v. X. Xue, S. Uechi, **Rajanish N. Tiwari**, Z. Duan, M. Liao, M. Yoshimura, T. Suzuki, and Y. Ohishi, "Size-Dependent Upconversion Luminescence and Quenching Mechanism of LiYF₄: Er³⁺/Yb³⁺ Nanocrystals with Oleate Ligand Adsorbed", *Optical Materials Express* 3 (2013) 98. [I.F.; **2.566**]
- vi. J. N. Tiwari, K. C. Kemp, K. Nath, **Rajanish N Tiwari**, H. G. Nam, K. S. Kim, "Interconnected Pt-nanodendrite/DNA/reduced-graphene-oxide hybrid showing remarkable oxygen reduction activity and stability", *ACS Nano* 7 (2013) 9223. [I.F.; **13.079**]
- vii. **Rajanish N. Tiwari**, M. Ishihara, J. N. Tiwari, and M. Yoshimura, "Thermal Transformation of Carbon Hybrid Materials to Graphene Films", *ACS Applied Materials & Interfaces*, 5 (2013) 6522. [I.F.; **8.097**]
- viii. X. Xue, M. Liao, T. Suzuki, **Rajanish N. Tiwari**, M. Yoshimura, and Y. Ohishi, "Luminescence Properties of α -NaYF₄:Nd³⁺ Nanocrystals Dispersed in Liquid: Local Field Effect Investigation" *J. Phys. Chem. C* 116 (2012) 22545. [I.F.; **4.484**]
- ix. J. N. Tiwari, **Rajanish N. Tiwari** and K. S. Kim, "Zero-dimensional, one-dimensional, two-dimensional and three-dimensional nanostructured materials for advanced electrochemical energy devices", *Progress in Materials Science* 57 (2012)724. [I. F.; **23.750**]
- x. **Rajanish N. Tiwari**, M. Ishihara, J. N. Tiwari, and M. Yoshimura, "Flame-annealing assisted Synthesis of Graphene films from adamantane", *J. Mater. Chem.* 22 (2012) 15031. [I.F.; **6.626**]
- xi. **Rajanish N. Tiwari**, M. Ishihara, J. N. Tiwari and M. Yoshimura, "Synthesis of graphene film from fullerene rods", *Chemical Communications* 48 (2012) 3003. [I.F.; **6.290**]
- xii. **Rajanish N. Tiwari**, J. N. Tiwari, L. Chang and M. Yoshimura, "Enhanced Nucleation and Growth of Diamond Film on Si by CVD Using a Chemical Precursor", *J. Phys. Chem. C* 115 (2011) 16063. [I.F.; **4.484**]

- xiii. J. N. Tiwari, **Rajanish N. Tiwari** and K.-L. Lin, "Controlled synthesis and growth of perfect platinum nanocubes using a pair of low-resistivity fastened silicon wafers and their electrocatalytic properties", *Nano Res.*4 (2011) 541. [I.F.; 7.994]
- xiv. **Rajanish N. Tiwari**, W.-C. Chen, J. N. Tiwari, W.-L. Wang and L. Chang "Diamond plates on dome-like particles: preparation, characterization and field emission properties", *J. Appl. Cryst.* 43 (2010) 883. [I. F.; 3.422]
- xv. **Rajanish N. Tiwari**, J. N. Tiwari and L. Chang "The synthesis of diamond films on adamantane-coated Si substrate at low temperature", *Chem Eng. J.* 158 (2010) 641. [I. F.; 6.735]
- xvi. J. N. Tiwari, F.-M. Pan, T.-M. Chen, **Rajanish N. Tiwari** and K.- L. Lin "Electrocatalytic activity of Pt nanoparticles electrodeposited on amorphous carbon coated silicon nanocones", *J. Power Sources* 195 (2010) 729. [I.F.; 6.945]
- xvii. J. N. Tiwari, **Rajanish N. Tiwari** and K.-L. Lin, "Synthesis of Pt nanopetals on High Ordered Silicon Nanocones for Enhanced Methanol Electrooxidation Activity", *ACS Appl. Mater. Interfaces* 2 (2010) 2231. [I.F.; 8.097]
- xviii. J. N. Tiwari, J. S. Meena, C.-S. Wu, **Rajanish N. Tiwari**, M.-C. Chu, F.-C. Chang and F.-H. Ko, "Highly reliable, nanoscale and eco-friendly thin film composite materials as a gate dielectric layer for next generation flexible MIM capacitors", *ChemSusChem* 3 (2010) 1051. [I.F.; 7.411]
- xix. J. N. Tiwari, **Rajanish N. Tiwari**, Y.-M. Chang and K.-L. Lin, "A Promising Approach to the Synthesis of 3D Nanoporous Graphitic Carbon as a Unique Electrocatalyst Support for Methanol Oxidation", *ChemSusChem* 3 (2010) 460. [I.F.; 7.411]
- xx. J. N. Tiwari, F.-M. Pan, **Rajanish N. Tiwari** and S. K. Nandi, "Facile synthesis of continuous Pt island networks and their electrochemical properties for methanol electrooxidation", *Chem. Commun.* 48 (2008) 6516. [I.F.; 6.290]

9. INVITED TALKS:

- a. **Rajanish N. Tiwari**, "Thermal Transformation of Fullerene Molecules into Graphene Films" *Nagoya Institute of Technology*, Oct 18th 2012, Nagoya, Japan.

10. RESEARCH PROJECTS (COMPLETED / ONGOING):

- ✓ **Rajanish N. Tiwari**, "Development of carbon based nanomaterials for water desalination and purification", (From 21-10-2014 to 20-10-2019) INR 35 lakhs grant received from DST Government of India [PI, Project Ongoing]

11. PARTICIPATION & PRESENTATIONS IN SEMINARS/SYMPOSIA/WORKSHOPS/CONFERENCES:

International Conferences:

1. **Rajanish N. Tiwari** and Masamichi Yoshimura, "Direct Growth of Graphene from PMMA at Low Temperatures", *IUMRS-2014* (Aug 24-30, 2014), Fukuoka, Japan.

2. **Rajanish N. Tiwari** and Masamichi Yoshimura, "Formation of bilayer graphene on dielectric substrate by a solid carbon source", *RPGR 2013*, (September 9-13, 2013), Tokyo, Japan.
3. **Rajanish N. Tiwari**, Masahiro Ishihara, Masamichi Yoshimura, "Fabrication of graphene from solid carbon source", *ACSIN-12 & ICSM21 2013*, (November 4-8, 2013) Tsukuba, Japan
4. XiaojieXue, Shinya Uechi, **Rajanish N. Tiwari**, ZhongchaoDuan, Meisong Liao, MasamichiYoshimura,Takenobu Suzuki, YasutakeOhishi, "Size-dependent Upconversion Luminescence in Er³⁺/Yb³⁺ Codoped LiYF₄ Nano/Microcrystals", *CLEO-PR & OECC/PS 2013*, (June 30-July 4, 2013) Kyoto, Japan.
5. XiaojieXue, Takenobu Suzuki, **Rajanish N. Tiwari**, Masamichi Yoshimura, and YasutakeOhishi, "Size-dependent Luminescence of Nd³⁺-doped LiYF₄ Nanocrystals", *Frontiers in Optics 2013*, (October 6 -10, 2013) Orlando, Florida, USA.
6. **Rajanish N. Tiwari**, S. R. Sahoo, L. Chang, and M. Yoshimura, "Synthesis of ultrananocrystalline diamond film by CVD using a chemical precursor", *ISPLASMA 2013*, (January 28 -February 1, 2013) Nagoya, Japan
7. **Rajanish N. Tiwari**, M. Ishihara, and M. Yoshimura "Thermal transformation of polymer to graphene films at partially low temperature", *JRSSS 2012*, (September 26 - 28, 2012) Tokyo, Japan.
8. **Rajanish N. Tiwari**, M. Ishihara, and M. Yoshimura, Transformation of carbon black to graphene, *20th International Colloquium on Scanning Probe Microscopy 2012* (December 17-19, 2012) Okinawa, Japan.
9. **Rajanish N. Tiwari**, G. Rius, and M. Yoshimura, "Transfer Free Graphene Films from Polymer at Relatively Low Temperatures", *20th International Colloquium on Scanning Probe Microscopy 2012* (December 17-19, 2012) Okinawa, Japan.
10. **Rajanish N. Tiwari**, M. Ishihara, and M. Yoshimura, "Thermal transformation of carbon hybrid materials to graphene films", *20th International Colloquium on Scanning Probe Microscopy 2012* (December 17-19, 2012) Okinawa, Japan
11. **Rajanish N. Tiwari** and M. Yoshimura, "A green approach to the synthesis of graphene from different carbon sources", *International Conference on Nanoscience + Technology 2012*, (July 23-27, 2012) Paris France.
12. **Rajanish N. Tiwari**, G. Rius and M. Yoshimura, "Thermal transformation of Fullerene to Graphene film by Nickel foils catalysis" *ICTF-15 2011*, (November, 8-11, 2011) Kyoto, Japan.
13. **Rajanish N. Tiwari** and M. Yoshimura, "Transformation of composite materials to graphene" *ICNANO-2011*, (December 18 - 21, 2011) New Delhi, India.
14. **Rajanish N. Tiwari** and M. Yoshimura, "Synthesis of graphene films from adamantane by flame-annealing method" *ISSS-6 2011*, (December 11-15, 2011) Tokyo, Japan.
15. **Rajanish N. Tiwari**, W.-C. Chen and L. Chang, "Formation of polycrystalline globular diamond particles on TiC/Si", *NDNC-2008*, (26-29 May, 2008) Taipei, Taiwan.
16. W.-C. Chen, **Rajanish N. Tiwari** and L. Chang, "Growth and characterization of diamond films on TiN/Si(100) by MPECVD", *NDNC-2008*, (26-29 May, 2008) Taipei, Taiwan.

International Training:

1. Participated and completed one week (Jan22th – 26th, 2007) VLSI Training Course- Advance Processing for VLSI technology held at National Nano Device Laboratories, Hsinchu, Taiwan
2. Participated and completed Two days (Jan31th – Feb 1, 2007) VLSI Laboratory Course- Advanced Processing Equipments held at National Nano Device Laboratories, Hsinchu, Taiwan.

National Seminar/Workshop:

1. Participated and Presented in two days (Nov. 22-23, 2019) National Conference on Physics & Chemistry of Advanced materials (NCPCAM-2019) at Mahatma Gandhi Central University, Motihari, Bihar
2. Participated and Presented in two days (Jan 16-17, 2017) DST-INSPIRE Faculty Monitoring –cum-Interaction Meet (Chemical & Material Sciences) at KIT University, Bhubaneswar, Odisha, India
3. Participated in two week (Feb 29th–March12th, 2016) School on “gravitation and Astroparticle Physics” at Central University of Himachal Pradesh organized by Department on Physics & Astronomical Science, Kangra, H.P. India
4. Participated in two days (April 04th-05th, 2016) workshop on “Experimental Physics” at Central University of Himachal Pradesh organized by Department on Physics & Astronomical Science, Kangra, H.P. India
5. Participated in three days (March 17th-19th, 2016) workshop on “Computerisation Experiments in Physics” at Central University of Himachal Pradesh organized jointly by Department on Physics & Astronomical Science, Kangra, H.P. and Inter University Accelerator Center, New Delhi, India.
6. Participated in one week (Nov3 0th-Dec5th, 2015) Yog Shivir at Central University of Himachal Pradesh organized by Yog-Dhara Club, CUHP, Kangra, H.P. India
7. Participated and delivered talk in two days (Aug 11-12th, 2015) workshop on “Recent Trends in Modern Materials” at Central University of Himachal Pradesh organized by Department on Physics & Astronomical Science, Kangra, H.P. India
8. Participated in One week (Nov 11th-17th, 2014) workshop on “Analytical Aspects of Dynamics” at Central University of Himachal Pradesh organized by The Mathematical Society & Department of Mathematics, Kangra, H.P. India.

12. AWARDS, FELLOWSHIPS & OTHER DISTINCTIONS:

- ✓ DST Inspire Faculty Award, India
- ✓ Postdoctoral Fellowship, Toyota Foundation, Japan
- ✓ Best Poster Award, ICSPM20, Okinawa, Japan (2012)
- ✓ Certificate of Award for Encouragement of Research in Thin Films, ICTF-15 Kyoto, Japan (2011)

(Rajanish N. Tiwari)

(Ph.D.)