

## JITENDRA KUMAR PANDEY, Ph.D.

Professor & Associate Dean Research  
Research and Development  
University of Petroleum & Energy Studies-UPES  
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### Work Experience:

2014/1-Present	<i>University of Petroleum and Energy Studies (UPES), Dehradun-248007, India</i>
2012/11-2013 /12	<b>Research Assistant Professor,</b> School of Mechanical & Aerospace Engineering, Seoul National University, Seoul, <b>South Korea</b>
2010/09-2012/10	<b>JSPS (Japan Society for Promotion of Sciences) Fellow</b> Advanced Material Institute of Technology and Science, The University of Tokushima 770-0815 <b>Japan</b>
2009/02-2010/08	<b>Max Planck Research Fellow,</b> Max Planck Institute of Colloid and Interfaces Department of Biomaterials Wissemshafpark, Golm-14476 <b>Germany</b>
2007/06-2009/01	<b>Postdoctoral Researcher ,</b> BK21 Post-Doctoral Fellow School of Mechanical and Aerospace Engineering, Seoul National University, Seoul <b>South Korea</b>
2006/02-2007/5	<b>Business Development Manager-International Business</b> SRL Ranbaxy Ltd., Andheri-East, Mumbai-400069 <b>India</b>
2002/05-2005/12	<b>Senior Research Fellow , CSIR , Govt. of India</b> Department of Polymer Science and Engineering National Chemical Laboratory <b>India</b>
1999/06–2002/04	<b>Project Associate ,</b> IFCPAR and Industry funded projects Department of Polymer Science and Engineering National Chemical Laboratory, Pune-411008, <b>India</b>

**Research Areas:** Polymer nanocomposites, biocomposites, natural nano-particles, water treatment

Jitendra Kumar Pandey

2014 /1- Present

College of Engineering Studies, UPES Bidholi, Dehradun-248007, India

2012/11-2013/12:

School of Mechanical Science and Engineering, Dept. of Aerospace Eng., Seoul National University, Seoul, South Korea [ 1 lecture / week ]

2006/07- 2007/5

Janta College Bakewar (Affiliated to CSJM Univ., Kanpur), Etawah, Uttar Pradesh, India [Industrial Chemistry Department]

**Training:**

Executive Transformational Leadership Program, Indian Institute of Management (IIMA)-Ahmedabad, June-July 2017.

**Education:**

- Ph.D. in Chemistry (Polymer Science), 2007, in **National Chemical Laboratory**-Pune,India  
**Topic:** Degradability of Polymer Composites from Renewable Resources.
- Master of Science (Organic Chemistry), 1998, University of Kanpur, India **(68 %)**
- Bachelor of Science ( Bio-Chemistry), 1996, University of Kanpur, India **(78 %)**
- Intermediate (Science subjects), 1992, UP Board Allahabad. **(61 %)**
- High school (Science subjects), 1990, UP-Board Allahabad. **(65 %)**

**Member:**

- **2017-Present:** National Academy of Sciences India ( NASI), Allahabad, India
- **2016-Prsent:** Member, International Water Association ( IWA)-UK
- **2011-present:** Organizing committee member of International Symposium on Green Manufacturing and Applications, ISGMA 2011 (Korea), 2012 (Korea), 2013 (Hawaii, USA), 2014 ( Korea), 2015 ( China), 2016 ( Indonesia), 2017 ( Busan-Korea)
- **Member of Reviewer panel:** RSC-Advances, Materials Letter, Polymer Degradation and Stability, Starch / Strake, Journal of composites material, International Journal of Precision Engineering and Manufacturing Carbohydrate Polymers, Materials Letters, Journal of Renewable and Sustainable Energy etc.

### Editor / Editorial board :

- **2012- Editor-in-Chief:** Special Issue of Journal of Bio-based Material and Bioenergy, Academic Scientific Publisher, California, USA
- **2013- Editor-in-Chief:** Journal of Bio-based Material and Bioenergy Academic Scientific Publisher, California, USA
- **2012- 2017 Editor-**Handbook Springer-Handbook of Polymer Nanocomposites ( 4 books)
- **2012-present:** Editorial Board of International Journal of Precision Engineering and Manufacturing (IJPEM), Springer, Netherlands.
- **2014-present:** Editorial Board of International Journal of Precision Engineering and Manufacturing-Green Technology. (IJPEM-GT), Springer, Netherlands

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### Organizer: National & International conferences

- **2017-Chief-Convener:**  
International conference on Nano for Energy and Water-2017 ' 300+ participants including 28+ foreign speakers at University of Petroleum and Energy Studies, UPES-Dehradun, [**Chief patron: Bharat Ratna Prof. C.N.R. Rao**], [www.new2017.org](http://www.new2017.org) , 22-24 Feb.
- **2016- Coordinator- Science Congress:**  
10th Utrakhand State Science Technology Congress. 1300 + participant, Vigyan Dham, Uttarakhand Council of Science and Technology, UCOST, Dehradun.  
[ **Patron: Prof. S.J. Chopra, Chancellor, UPES** ] [www.ucost.in](http://www.ucost.in), 10-12 Feb.

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### Awards:

- 2015: Best Research Paper by Bharat Ratna Prof. CNR Rao: University of Petroleum and Energy Studies, Dehradun
- 2009: Most cited article award, International Journal of Precision Engineering and Manufacturing Most Cited Articles Award, 2008 to 2009," Springer, Netherlands May 18, 2010 (IJPEM Vol.9, No. 2, pp. 81-83, 2008)
- 2002: Young Student Award by Society for Polymer Science of India in symposia – MACRO 2002, held at Indian Institute of Technology, Kharagpur, India
- 2002, 2003, 2004: Winner, debate competition held at National Chemical Laboratory, Pune, India
- 1996: V.K Rathore Medal by the Vice-chancellor of Kanpur University for obtaining the second highest position in graduate school

**Research Grants:**

<b>Funding Agency</b>	<b>Title</b>	<b>Status &amp; Approx. amount</b>
India-France	“SWACHH NEER - UNE VIE MEILLEURE, Combating Water Issues through Indo-French Networking”	Ongoing 30 Lakh
Indo-French Center for Pure and Applied Research (IFCPAR)	PI: Dr. Jitendra Pandey, UPES, India Co-PI: Dr. Benoit Teychene, ENSIP, France	Role :PI
MAY 2015		
DST	“Feasibility of harnessing concentrated solar thermal energy to produce and store pyrolysed biofuels for automotive engine applications”.	Ongoing 58 Lak
APRIL 2014	PI: Dr. Suresh Kumar, Co-PI: Dr. Jitendra K Pandey, Dr. Venkateswarlu Chintala	Role :Co-PI
DST	“Sustainable Grey Water (GW) Treatment Technology for Community Buildings”	Ongoing 132 Lakh
NOV.2016	PI: Dr. Jitendra Pandey, UPES, India Co-PI: Dr. P. Mondal, IIT-R, Dr. S. Pal, NEERI	Role :PI
UPES Internal Research Grant	“ 3D printing devices for various applications”	Completed 5 Lakh
FEB.2014	PI: Dr. Jitendra Pandey, UPES, India	Role : PI
India-Slovenia	“Immobilization of enzymes on various nanostructures for the fabrication of bio-sensors for agricultural and water applications”	Ongoing 18 Lakh
DST	PIs: Dr. Jitendra Pandey, UPES, India Dr. Zeljko Knez, University of Maribor, Slovenia	Role :PI
JUNE 2015		
MNRE	Establishment & Demonstration of Hydrogen Production and Utilization Facility through Solar Photovoltaic – Electrolyser system at Solar Energy Centre (SEC)”	14 Crore Role : PI
FEB 2012		( July 2015)

**Publications:**

	Title	Authors	Journal	IF
1.	UV Irradiated biodegradability of EP copolymers, LDPE and PP in composting and culture environments,	<b>Jitendra K. Pandey</b> and R. P. Singh	<i>Bio macromolecules</i> , 2, 880, (2001).	5.7
2.	Synthesis, Characterization and performance evaluation of polymeric HALS in styrene polymers,	A. Vishwa Prasad and <b>Jitendra K. Pandey</b> , R. P. Singh	<i>Macromolecular Chemistry and Physics</i> , 202, 672, (2001).	2.61
3.	A novel photo additive for polyolefin photo-stabilization: Surface Grafted Hindered Amine Light Stabilizers,	Shrojal M. Desai, <b>Jitendra K. Pandey</b> , R. P. Singh	<i>Macromolecular Symposia</i> , 169, 121, (2001).	0.91
4.	Biodegradation of packaging materials: composting of polyolefin,	<b>Jitendra K. Pandey</b> , A.Pratheep Kumar, R.P.Singh	<i>Macromolecular Symposia</i> , 197,411, (2003).	0.91
5.	Synthesis of new polymeric hindered amine light stabilizers: Performance evaluation in styrene polymers,	R. P. Singh, A. N. Patwa, S.M.Desai, <b>Jitendra K. Pandey</b> , S. S. Solanki,	<i>Journal of Applied Polymer Science</i> , 90, 1126, (2003).	1.67
6.	Ecofriendly behavior of host matrix in composites prepared from PP and agro waste,	<b>Jitendra K. Pandey</b> , A. Ahmed, R.P.Singh	<i>Journal of Applied Polymer Science</i> , 90, 1009, (2003)	1.87
7.	Biodegradation of poly (ε-caprolactone)/Starch blends and composites in composting and culture environments: effect of compatibilization on inherent biodegradability of host polymer,	R.P.Singh, <b>Jitendra K. Pandey</b> , D. Rutot, Ph. Degree, Ph. Dubois	<i>Carbohydrate Research</i> ,338, 1759, (2003).	1.93
8.	On the durability of LDPE nano-composites,	<b>Jitendra K. Pandey</b> , R.P.Singh	<i>e-polymers</i> , 051, (2004).	0.81
9.	Green nanocomposites form renewable resources : effect of plasticizer on the structure and material properties of clay filled starch,	<b>Jitendra K. Pandey</b> and R.P.Singh	<i>Starch/Starke</i> , 57, 8, (2005).	1.62
10.	An overview on the degradability of nanocomposites,	<b>Jitendra K. Pandey</b> , P.A.Kumar, K.R.Reddy and R.P.Singh	<i>Polymer Degradation and Stability</i> , 88,234, (2005).	3.64
11.	Recent Advances in	<b>Jitendra K. Pandey</b> , A.P.	<i>Journal of Nanoscience and</i>	1.25

biodegradable nanocomposites,	Kumar, M.Misra, Amar K. Mohanty, L. T. Drzal and Raj Pal Singh	<i>Nanotechnology</i> , 5, 497, (2005).	
<b>12.</b> Photo-/Bio-degradability of Agro Waste and Ethylene–Propylene Copolymers Composites Under Abiotic and Biotic Environments	A.P.Kumar, <b>Jitendra K. Pandey</b> , B..Kumar, R.P.Singh,	<i>Journal of Polymer and Environment</i> , 14, 203, (2006).	1.96
<b>13.</b> Cellulose Nano whiskers from grass of Korea,	<b>Jitendra K. Pandey</b> , J.W.Lee, W.S Chu, C.S.Kim,C.S. Lee, S.H.Ahn	<i>Macromolecular Research</i> , 16,396 (2008).	1.35
<b>14.</b> Bio nanocomposites of Grass,	<b>Jitendra K. Pandey</b> ,C.S.Kim, W.S Chu, C.S. Lee, S.H.Ahn	<i>Advance Material Research</i> , 47-50, 435 (2008).	0.23
<b>15.</b> Nanostructure evaluation of cellulose in Grass,	<b>Jitendra K. Pandey</b> ,C.S.Kim, W.S Chu, C.S. Lee, S.H.Ahn	<i>e-polymers</i> , 102, 1618 (2009).	0.81
<b>16.</b> Surface Modification of Polyethylene (PE) by deposition of titanium dioxide (TiO <sub>2</sub> ) nano- particles to enhance the photo-catalytic activities,	<b>Jitendra K. Pandey</b> , M.H.Kim, D.M.Chun,C.S.Lee, S.H.Ahn,	<i>Surface Review Letters</i> , 16, 259 (2009).	0.20
<b>17.</b> Bio-nano reinforcement of environmentally degradable polymer matrix by cellulose whiskers from grass,	<b>Jitendra K. Pandey</b> ,C.S.Kim, W.S Chu, C.S. Lee, S.H.Ahn	<i>Composites Part B: Engineering</i> , 40, 676 (2009).	3.85
<b>18.</b> Mechanical properties and sound insulation effect of ABS/carbon black composites,	J.W. Lee, J.C.Lee, <b>Jitendra K. Pandey</b> , S.H.Ahn, Y.J.Kang,	<i>Journal of composite Material</i> , 44, 1701 (2010).	1.30
<b>19.</b> Preparation and properties of bio-Nano reinforced composites from biodegradable polymer matrix and cellulose whiskers,	<b>Jitendra K. Pandey</b> , C.S.Lee, S.H.Ahn	<i>Journal of Applied Polymer Science</i> , 115, 2493 (2010).	1.87
<b>20.</b> Recent advances in the application of natural fiber based composites,	<b>Jitendra K. Pandey</b> , S.H.Ahn, C.S.Lee, A.K.Mohanty, M.Mishra,	<i>Macromolecular Materials and Engineering</i> , 295, 975 (2010).	2.83
<b>21.</b> Self-Healing potential of green composites from crystalline cellulose,	<b>Jitendra K. Pandey</b> , H.Takagi,	<i>Inte.Journal of Modern Physics B</i> ,25,4216 (2011)	1.70

<b>22. Preparation and structural evaluation of nano reinforced composites from cellulose whiskers of grass and biodegradable polymer matrix,</b>	<b>Jitendra K. Pandey,</b> C.S.Kim, W.S.Chu, W.Y.Choi, S.H.Ahn	<i>Journal of composite Material</i> , 46, 653 <b>(2012)</b>	1.30
<b>23. Re-orientation of cellulose Nano whiskers in hydrogels under tensile loading</b>	Anayancy Osorio-Madrado, Michaela Eder, Markus Ruedgeger, <b>Jitendra K. Pandey</b> , Matt Harrington, Yoshiharu Nishiyama, Jean-Luc Putaux, Cyrille Rocha, Ingo Burgert	<i>Bio macromolecules</i> , 13, 850 <b>(2012)</b>	5.7
<b>24. Preparation and properties of crystalline cellulose-modified layered silicate and compatibilized polypropylene composites,</b>	<b>Jitendra K. Pandey,</b> Sena Lee, Hyun-Jong Kim, Hitoshi Takagi, C.S.Lee, S.H.Ahn,	<i>Journal of Applied Polymer Science</i> , 125, 651 <b>(2012)</b>	1.87
<b>25. An overview on the cellulose based conducting composites</b>	<b>Jitendra K. Pandey,</b> H.Takagi, D.R.Saini, A.N.Nakagaito, S.H.Ahn	<i>Composites Part B</i> ,43,2822 <b>(2012)</b>	3.85
<b>26. Cellulose nanofibers from waste news papers</b>	<b>Jitendra K. Pandey,</b> M.S.A.Subttman, H.Takagi,	<i>J. Bio based Mater. Bioenergy</i> 6, 115 <b>(2012)</b>	0.74
<b>27. A Review on Fabrication and processing of cellulose nanofiber based composites,</b>	<b>Jitendra K. Pandey,</b> A.N.Antonio, H.Takagi,	<i>Polymer Science and Engineering</i> , 1, 18-24, <b>(2012)</b>	
<b>28. A Special Issue on Manufacturing and Applications of Bio-Based Composites</b>	<b>Jitendra K. Pandey,</b> S.H.Ahn,	<i>Journal of Bio based Materials and Bioenergy</i> 7 (1), 1-2 <b>(2013)</b>	0.74
<b>29. Soundproofing Properties of Polypropylene/Clay/Carbon Nanotube Nanocomposites ,</b>	Kim, M. S., Yan, J., Kang, K.M., Joo, K.H., <b>Jitendra K. Pandey,</b> Kang, Y.J. and Ahn, S. H.	<i>Journal of Applied Polymer Science</i> , 130, 1, 504–509, <b>(2013)</b>	1.87
<b>30. Synergistic Effects of Carbon Nanotubes and Exfoliated Graphite Nano platelets for Electromagnetic Interference Shielding and Soundproofing</b>	Kim, M. S., Yan, J., Kang, K.M., Joo, K.H., <b>Jitendra K. Pandey,</b> Kang, Y.J. and Ahn, S. H.	<i>Journal of Applied Polymer Science</i> ,130,6, 3947-3951 <b>(2013)</b>	1.87
<b>31. Fabrication of Bio-composite Scaffold for Implantable Drug Delivery System (DDS)</b>	Chu, W. S., <b>Jitendra K. Pandey,</b> and Ahn, S. H	<i>Journal of Bio based Materials and Bioenergy</i>	0.74

<b>32. Cellulose nanofiber assisted deposition of titanium dioxide on fluorine-doped tin oxide glass</b>	<b>Jitendra K. Pandey, Jung-Oh Choi, Hyun-Taek Lee, Chung-Soo Kim, Hyun-Joong Kim, Sera Jeon and Sung-Hoon Ahn</b>	<i>RSC Adv</i> , 4, 987 ( <b>2014</b> )	3.29
<b>33. Bio-inspired deposition of silver nano-particles (AgNPs) on silicon substrate.</b>	<b>Jitendra K. Pandey, Hyun Taek Lee, Chung-Soo Kim, Sung-Hoon Ahn,</b>	<i>Materials Letters</i> 116, 175–177 ( <b>2014</b> )	2.59
<b>34. Bio-Based Technologies in Composites and Energy Applications.</b>	<b>Jitendra K. Pandey, Sung-Hoon Ahn</b>	<i>Journal of Bio based Materials and Bioenergy</i> , 8, No. 2 115-279 ( <b>2014</b> )	0.74
<b>35. Fabrication of Bio-composite Scaffold for Implantable Drug Delivery System (DDS)</b>	<b>Chu, W.S., Pandey, J.K., and Ahn, S.H</b>	<i>Journal of Biobased Materials and Bioenergy</i> , Volume 8, Number 2, 230-239(10), ( <b>2014</b> )	0.74
<b>36. Application of electrochemical impedance spectroscopy in bio-fuel cell characterization: A review</b>	<b>Diwakar Kashyap, Prabhat K. Dwivedi, Jitendra K. Pandey, Young Ho Kim, Gyu Man Kim, Ashutosh Sharma, Sanket Goel</b>	<i>International Journal of Hydrogen Energy</i> 39, 35, 20159-20170 ( <b>2015</b> )	3.59
<b>37. Fabrication of Vertically Aligned Copper Nanotubes as a Novel Electrode for Enzymatic Biofuel Cells</b>	<b>Diwakar Kashyap, Raghvendra Singh Yadav, Smita Gohil, Venkateswaran, P.S., Jitendra K. Pandey, Gyu Man Kim, Young Ho Kim, Prabhat Dwivedi, Ashutosh Sharma, Pushan Ayyub, Sanket Goel</b>	<i>Electrochemical Acta</i> 167, 113-118, ( <b>2015</b> )	4.81
<b>38. Hydrogen: A Sustainable Fuel for Future of the Transport Sector</b>	<b>Sonal Singh, Shikha Jain, Venkateswaran S Pedinti, Avanish K Tiwari, MR Nouni, Jitendra K. Pandey and Sanket Goel</b>	<i>Renewable and Sustainable Energy Reviews</i> , 8, 623 ( <b>2015</b> )	8.67
<b>39. Formation of intermediate band and low recombination rate in ZnO-BiVO<sub>4</sub> heterostructured photocatalyst: Investigation based on experimental and theoretical studies</b>	<b>Sonal Singh, Girdhar Joshi, Jitendra K. Pandey</b>	<i>Korean Journal of Chemical engineering</i> . DOI: 10.1007/s11814-016-0284-2. ( <b>2016</b> )	1.3

<b>40. Microwave enhanced alcoholysis of non-edible (algal, jatropha and pongamia) oils using chemically activated egg shell derived CaO as heterogeneous catalyst</b>	<i>Girdhar Joshi, Devendra S. Rawat, Amit Kumar Sharma, Jitendra K. Pandey</i>	<i>Bioresource Technology</i> , 219, 487-492 (2016)	4.5
<b>41. Assessment of performance, combustion and emission characteristics of a direct injection diesel engine with solar driven Jatropha biomass pyrolysed oil</b>	<i>V. Chintala, Suresh Kumar and Jitendra K. Pandey</i>	<i>Energy Conversion and Management</i> , (2017)	4.2
<b>42. Challenges and opportunities for the application of biofuel</b>	<i>G. Joshi, Jitendra K. Pandey, Sravendra Rana, D.P. Rawat</i>	<i>Renewable and Sustainable Energy Reviews</i> , 79, 850-866 (2017)	7.8
<b>43. Solar thermal pyrolysis of non-edible seeds to biofuels and their feasibility assessment</b>	<i>V Chintala, S. Kumar, Jitendra K. Pandey, S. Kumar, A.K. Sharma</i>	<i>Energy Conversion and Management</i> 1531, 482. (2017)	
<b>44. 3D Printing: It's Microfluidic Functions and Environmental Impacts</b>	<i>Abhishek Sharma, Surajit Mondal, Amit Kumar Mondal, Soumadeep Baksj, Ravi Kumar Patel, Won-Shik Chu, Jitendra K. Pandey</i>	<i>International Journal of Precision Engineering and Manufacturing</i> (2017)	3.7
<b>45. Thermochemical pyrolysis of biomass using solar energy for efficient biofuel production: a review</b>	<i>S.Mondal, A. Mondal, S.M.Tuaseef, V.Chintala, Suresh Kumar, Jitendra K. Pandey</i>	<i>Biofuels</i> , 10.1080/17597269.2018.1461512 (2018)	2.0
<b>46. A comparative assessment of single cylinder diesel engine characteristics with plasto-oils derived from municipal mixed plastic waste</b>	<i>Venkat Chintala, Ghodke Praveen, Shirish R, Suresh Kumar, Jitendra K. Pandey</i>	<i>Energy Conversion and Management</i> , 166:579-589 (2018)	1.0
<b>47. An overview of cleaning and prevention processes for enhancing efficiency of solar photovoltaic panels</b>	<i>Jitendra K. Pandey, S Mondal, A K Mondal, A Sharma, V Devalla, S Rana, S Kumar</i>	<i>Current Sciences</i> , 115, 6, 25 (2018)	1.1
<b>48. Algal biodiesel stabilization with lower concentration of 1:3 ratios of binary antioxidants – Key factors to achieve the best synergy for maximum stabilization</b>	<i>D.S.Rawat, G.Joshi, Jitendra K. Pandey, B.Y.Lamba, Pankaj Kumar</i>	<i>Fuel</i> 21, 4, 79 (2018)	3.5

<b>49. A technical review on waste heat recovery from compression ignition engines using organic Rankine cycle</b>	V.Chintala, S. Kumar, <b>Jitendra K. Pandey</b>	<i>Renewable and Sustainable Energy Reviews</i> 81:493-509 (2018)	7.9
<b>50. Elimination of Fluoride, Arsenic, and Nitrate from water through adsorption onto nano-adsorbent: A Review</b>	Ravi K. Patel, Sanjay Kumar, A. Chawla, P. Mondal, Neelam Singh, Benoit Teychene, <b>Jitendra K. Pandey</b>	<i>Current Nano-Science.</i> 10.2174/1573413715666190101113651 (2019)	1.8
<b>51. Dispersion and stability study of carbon nanotubes in pH and temperature responsive polymeric matrix: Experiment and dispersion-corrected DFT study</b>	S.Pandey, P. Sankta, N.G.Sahoo, A. Shrivastava, <b>Jitendra K. Pandey</b>	<i>Material Today Communication</i> , 17, 182-197 (2019)	
<b>52. Feasibility Study of a 200 kw Solar Wind Hybrid System</b>	Jeffy Johnson, Surajit Mondal, Amit Kumar Mondal, Sravendra Rana, <b>Jitendra K Pandey</b>	<i>Applied Solar Energy</i> (2019)	
<b>53. Solar Thermal Pyrolysis of Karanja Seed for a sustainable approach towards liquid biofuel utilization</b>	Surajit Mondal, <b>Jitendra K Pandey</b> , Suresh Kumar	<i>Nature Environment Pollution Technology</i> (2019)	

#### **Books:**

1. Handbook of Polymer nanocomposites. Processing, Performance and Application Volume A: Layered Silicates: Editors: Pandey, J.K., Reddy, K.R., Mohanty, A.K., Misra, (Eds.) ISBN 978-3-642-38649) Publisher: Springer Verlag GmbH. (<http://www.springer.com/gp/book/9783642386480>),2015
2. Handbook of Polymer Nanocomposites. Processing, Performance and Application, Volume B: Carbon nanotubes based polymer composites, Editors: Kamal K. Kar, Jitendra K. Pandey, Sravendra K. Rana (Eds.) ISBN 978-3-642-45229) Publisher: Springer Verlag GmbH (<http://www.springer.com/gp/book/9783642452284>),2015
3. Handbook of Polymer Nanocomposites. Processing, Performance and Application, Volume C: Polymer Nanocomposites of Cellulose Nanoparticles. Editors: Pandey, J.K., Takagi, H., Nakagaito, A.N., Kim, H.-J. (Eds.) ISBN 978-3-642-45232-1 Publisher: Springer Verlag GmbH (<http://www.springer.com/gp/book/9783642452314>)2015
4. Biocomposites, Design and Mechanical performance, Editors: Majusri Mishra, Jitendra K. Pandey, Amar K. Mohanty, Wood head publishing Ltd. ISBN:978-1-78242-394-2 (2015)

- Handbook of Polymer Nanocomposites. Processing, Performance and Application  
Volume D: Metal Matrix. Editors: Pandey, J.K., D.M.Chun, S.H.Ahn (Eds.) Publisher:  
Springer Verlag GmbH In progress (to be completed in 2017)

### Book Chapters

- Pollution Abatement and control , Chapter 8- Activated Carbon : An adsorbent for  
Pollution Control : Editors: Vinay K Srivatsav, Jitendra K. Pandey , D.R. Saini, ISBN  
9789351304616, Publisher: Daya Publishing House ( 2014 )
- Waste Treatment Processes in Environmental Engineering- Volume 1 , Chapter 1 , Water  
Quality Management in Reuse and Recycling and R&D. Editors : S.N. Kaul, J. K. Pandey,  
Vinay Prakash, D.R. Saini, P. Kaul, ISBN :9789351243175( 2014 )
- Waste Treatment Processes in Environmental Engineering- Volume 1, Chapter 16, Scale  
Up Formulations for Anaerobic Systems. Editors: S.N. Kaul, D.R.Saini, J.K. Pandey, Vinay  
Prakash, P. Kaul, ISBN: 9789351243175( 2014 )
- Waste Treatment Processes in Environmental Engineering- Volume 1, Chapter 19,  
Future Research Needs in Anaerobic Processes. Editors: S.N. Kaul, D.R.Saini, J. K. Pandey,  
Vinay Prakash, P. Kaul, ISBN : 9789351243175 ( 2014 )

### Patents:

	<b>Authors</b>	<b>Application No.</b>	<b>Title</b>
<b>1.</b>	<b>Jitendra K. Pandey</b> , W.S.Chu, C.S.Kim, S.H.Ahn	<b>10-2007-0112407,</b> <b>Korean Patent</b>	Micro / Nano Crystalline Cellulose Fiber from Grass of Korea for Fiber-reinforced Composite materials
<b>2.</b>	J.S.Kim, <b>Jitendra K. Pandey</b> , W.S.Chu, S.H.Ahn	<b>10-2008-0053371,</b> <b>Korean Patent</b>	Fuel cell end plate from nano reinforced Epoxy composites
<b>3.</b>	Diwakar Kashyap, Venkateswaran PS, <b>Dr. Jitendra Kumar Pandey</b> , Dr. Sanket Goel	<b>#1231/DEL/2015,</b> <b>Indian Patent</b>	Fabrication of Vertically aligned Copper Nanotubes (CuNTs) as a Novel Electrode for Enzymatic Biofuel Cells (EBFCs)
<b>4.</b>	Amitabh Yadav, Vivek Kaundal, Abhishek Sharma, Amit Kumar Mondal, Ravi Kumar Patel, Vindhya Devalla, <b>Jitendra Kumar Pandey</b>	<b>201611039333,</b> <b>Indian Patent</b>	Patient Health Monitoring and Tracking System
<b>5.</b>	Revant Pandey, Ayush Agrahari, <b>Jitendra K Pandey</b> , Vinay Chowdary, Vivek Kaundal, Mukul Kumar Gupta, Paawan Sharma	<b>201611038340,</b> <b>Indian Patent</b>	A System For Monitoring Vehicle-Driving

6.	Nikhil Raj, Rajesh Singh, <b>Jitendra Kumar Pandey</b> , Surajit Mondal, Anita	<b>201611036646,</b> <b>Indian Patent</b>	Design and Development of Wireless Power Distribution Area Network
7.	Mayank Gajendra, Puneet Sharma, Shivalika Shrivastava, Wimanyu Singh, Dr. Pasupuleti Subrahmanya Ranjit, Vivek Kaundal, Roushan Kumar, Dr. Suresh Kumar, <b>Dr. Jitendra Kumar Pandey</b>	<b>201711037914,</b> <b>Indian Patent</b>	System for control and avoid collision in a vehicle and method thereof
8.	Pranay Mittal, Prashant Singh, Raghav Budhiraja, Dr. Pasupuleti Subrahmanya Ranjit, Vivek Kaundal, Roushan Kumar, Surajit Mondal, Prashant Shukla, Swapnil Bhurat, <b>Dr. Jitendra Kumar Pandey</b>	<b>201811010769,</b> <b>Indian Patent</b>	Retrofit System to Convert a Sequential Manual Transmission into a Semi-Automatic Transmission
9.	Dr. Venkateswarlu Chintala, Ranjit Karunanithi, Surajit Mondal, <b>Dr. J. K. Pandey</b>	<b>201811010242,</b> <b>Indian Patent</b>	A Portable Vehicle Washing System
10.	Rishabh Chaudhary, Prakhar Prakash, Rahul Nag, Dr. Pasupuleti Subrahmanya Ranjit,, Roushan Kumar, Vivek Kaundal, Prashant Shukla, <b>Dr. Jitendra Kumar Pandey</b>	<b>201811009532,</b> <b>Indian Patent</b>	System for Generation of Electricity form the Rotating Wheel Assembly of an Automobile Vehicle
11.	Dr. Pasupuleti Subrahmanya Ranjit, Puneet Sharma, Wimanyu Singh, Shivalika Shrivastava, Mayank Gajendra, Vivek Kaundal, Roushan Kumar, Prashant Shukla, <b>Dr. Jitendra Kumar Pandey</b>	<b>201811009447,</b> <b>Indian Patent</b>	Implementing of Wheel Alignment Monitoring System and There of
12.	Dr. Pasupuleti Subrahmanya Ranjit, Kunal Chetwani, Mahish Guru, Raghav Pathak, Roushan Kumar, Vivek Kaundal, Prashant Shukla, <b>Dr. Jitendra Kumar Pandey</b>	<b>201811009448,</b> <b>Indian Patent</b>	An Implementation of On-Board Diagnostics of Pre-Failure in Clutch and Brake Wires
13.	Nikhil Raj, Amarnath Bose, <b>Dr. Jitendra Kumar Pandey</b> , Surajit Mondal, Krishna Kant Dixit, Piniseti Swami Sairam	<b>201811009262,</b> <b>Indian Patent</b>	Apparatus For Energy Harvesting by Utilizing the Weight of Vehicles Passing Over Road
14.	Dr. Pasupuleti Subrahmanya Ranjit, Puneet Sharma, Wimanyu Singh, Shivalika Shrivastava, Mayank Gajendra, Vivek Kaundal, Roushan Kumar, Prashant Shukla, <b>Dr. Jitendra K Pandey</b>	<b>201811008146,</b> <b>Indian Patent</b>	System and Method to Prevent an Accident from a Sudden Door Opening of Vehicle

### Invited Speaker:

- Jitendra K.Pandey, ' Nano-particle in nature', Nature Nano and Springer Materials Summit, Goa, 18-19 May 2017
- Jitendra K.Pandey, "Opportunities and challenges in Natural Nanoparticles" NANOCON14, 3rd International Conference on Nanotechnology, Bharti Vidya Peeth, 14-15 Oct. 2014.
- Jitendra K. Pandey, Hitoshi Takagi, and Hiroaki Genta, Bio-inspired reinforcement of natural fiber matrix by surface modified nano-cellulose, International Symposium on Green Manufacturing and Applications, ISGMA 2012, Jeju, Korea, Aug. 27-29, 2012.
- Jitendra K. Pandey, Fabrication of cellulose nanoparticle based composites with hydrophobic polymers, International Symposium on Green Manufacturing and Applications, ISGMA 2011, Seoul, Korea, Oct 6-7, 2011.
- Jitendra K.Pandey, Hitoshi Takagi, Self-Healing potential of green composites from crystalline cellulose, Advanced Materials Development and Performance, AMDP 2011, Tokushima, Japan, July 15-18, 2011

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- Biogas generator: feasibility and installation: Intelligent Use of Resources for Rapid Induction of Renewable Sources of Energy. Ashish Khare, A Kartik, Prasenjit Mondal, Jitendra K. Pandey, RENCON-IIT Roorkee (2016).
- Graphene promoted self-healing nanocomposites, Sravendra Rana and Jitendra K. Pandey, 2nd International Conference on Recent Advances in Nanosciences and Nanotechnology-2016" ICRANN-2016, JNU-18-20DEC. (2016)
- Feasibility of biofuel production along with bioremediation of sewage water through Chlorella spp. Amit kumar sharma, Shailley singhal, Jitender kumar Pandey, Venkateswarlu Chintala, NCAERG-2016 at DIT University, Dehradun (2016).
- Kartik Arunachalam, Venkateswaran, P.S., Jitendra K. Pandey and Sanket Goel, Examination of Smart Grid Architectures, Technology Demonstrations, Demand Response and their relevance in the Indian Context, India Smart Grid Week, India Smart Grid Forum, Bangalore-India. 2015.
- Kartik Arunachalam, Venkateswaran, P.S., Jitendra K. Pandey and Sanket Goel, India's Energy Security: Challenges, Policies and Opportunities, Bridging Development Divide for Inclusive Growth through Science, Technology and Innovation-International Workshop, Lucknow-India. 2015
- Jitendra K.Pandey, Hitoshi Takagi, Effect of surface polarity of cellulose nano-fibers on the mechanical performance of starch based composites,18th International Conference on Composite Materials, ICCM 18, Jeju, Korea, Aug. 21-26, 2011.
- Michaela Eder, Anayancy Osorio-Madrado, Markus Rueggeberg, Jitendra Kumar Pandey, Matt Harrington, Yoshiharu Nishiyam, Jean-Luc Putaux, Cyrille Rochas, Ingo Burgert, Creating an anisotropic cellulose Nano whisker reinforced agarose hydrogel Annual Meeting of the International Academy of Wood Science, Novel Materials from Wood or Cellulose , Stockholm, Sweden, Aug.31 to Sept. 2, 2011.

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- Kiyoshi Nakano, Antonio Norio Nakagaito, Hitoshi Takagi and Jitendra Kumar Pandey : Alternative process of cellulose nanofiber extraction from agricultural waste, Proceedings of the 8th Korea-Japan Joint Symposium on Composite Materials, pp.55--56, Changwon, Korea, Nov. 2011
- Hikaru Kondo, Antonio Norio Nakagaito, Hitoshi Takagi and Jitendra Kumar Pandey : Aerogels obtained by freeze drying aqueous suspensions of micro fibrillated cellulose, Proceedings of the 8th Korea-Japan Joint Symposium on Composite Materials, pp.51--52, Changwon, Korea, Nov. 2011
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- Jitendra K. Pandey, Won-Shik. Chu, Chung-Soo Kim, Caroline S. Lee, Sung-Hoon Ahn, Influence of different modifications on the morphology of bio-nanocomposites from starch, International Conference on Future Trends in Composite Materials and Processing, Indian Institute of Technology, IIT, Kanpur, India, Dec. 12-14, 2007.
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- Jitendra K.Pandey, R.P.Singh, Environmental degradability of composites prepared from Agro waste and isotactic polypropylene, Eco-friendly Biodegradable Polymers organized by Biodegradable Polymer Society of India at Cuttack, Orissa, Dec.13-14, 2002, India.
- Jitendra K.Pandey, S.M.Desai, A.Ahmed, M.I.Khan, R.P.Singh, Biodegradation mechanism in polyolefin, International Symposium on Biodegradable Polymers and Packaging Materials, IICT, Hyderabad, India, Nov. 17-18,2001.

#### Doctoral Students:

Name	Topic/ Area of reseach	Status
<b>Ms. Sonal Singh</b>	Photo catalytic and Photo electrochemical Property of Zink Oxide and Bismuth Vanadate for pollutant degradation and water splitting	Thesis submitted. Viva voce-August.2017
<b>Mr. Surajit Mondal</b>	Application of solar thermal technology for biofuel production	Registered-Expected year of completion 2019
<b>Mr. Ravi Kumar Patel</b>	3 D printer nano-material filled filter for fluoride removal	Registered-Course work completed Expected year of completion 2020
<b>Mr. P. Sai Ram</b>	Nano bubble based effluent removal from waste water	Registered-Course work completed Expected year of completion 2020
<b>Crd. R. Raajiv Menon</b>	Designing and Performance Optimization of sustainable Air Independent Propulsion system for extended endurance of submarines	Registered-Synopsis cleared Expected year of completion 2018

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**Mr. Mukesh  
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Registered- Course  
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